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Resilient India - Disaster Free India

TIDINGS

NIDM Newsletter–13/2021
(October-December, 2021)

Theme: Preparing for Omicron Wave









NATIONAL INSTITUTE OF DISASTER MANAGEMENT

(Ministry of Home Affairs, Government of India)

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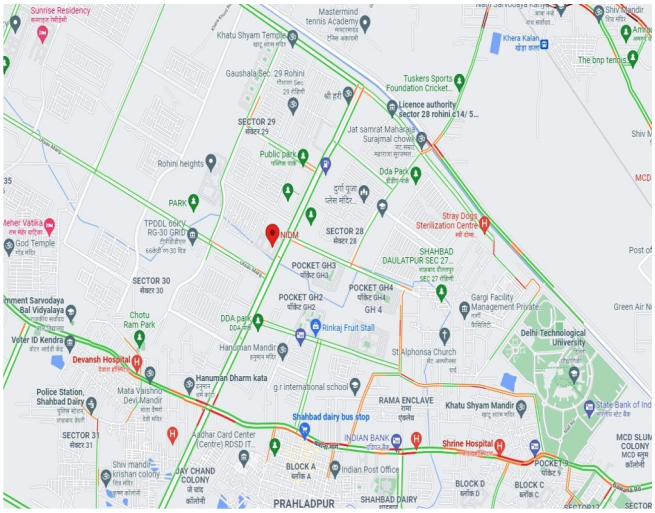
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About NIDM

The National Institute of Disaster Management (NIDM) was constituted under an Act of Parliament with a vision to play the role of a premier institute for capacity development in India and the region. The efforts in this direction that began with the formation of the National Centre for Disaster Management (NCDM) in 1995 gained impetus with its re-designation as the National Institute of Disaster Management (NIDM) for training and capacity development.

Under the Disaster Management Act 2005, NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation and policy advocacy in the field of disaster management.

Both as a national Centre and then as the national Institute, NIDM has performed a crucial role in bringing disaster risk reduction to the forefront of the national agenda. The Institute believes that disaster risk reduction is possible only through promotion of a "Culture of Prevention" involving all stakeholders. The Institute works through strategic partnerships with various ministries and departments of the central, state and local governments, academic, research and technical organizations in India and abroad and other bi-lateral and multi-lateral international agencies.

NIDM is proud to have a multi-disciplinary core team of professionals working in various aspects of disaster management. In its endeavour to facilitate training and capacity development, the Institute has state-of-the-art facilities like class rooms, seminar hall and video-conferencing facilities etc. The Institute has a well-stocked library exclusively on the theme of disaster management and mitigation.

NIDM provides Capacity Building support to various National and State level agencies in the field of Disaster Management & Disaster Risk Reduction. The Institute's vision is to create a Disaster Resilient India by building the capacity at all levels for disaster prevention and preparedness.

From the NIDM

Executive Director's Desk



Dear Readers,

As we are marching towards disaster resilience in the last quarter of this year, the threat of latest Omicron variant of coronavirus continued unabatedly. Though the virus, as reported by the experts, was less virulent, it had affected our lives in all aspects.

During the period, NIDM, a nodal institute for capacity building for disaster risk reduction, has been conducting training through webinars, online training programmes, etc., regarding the importance of prevention and preparedness to deal with the ongoing pandemic.

I congratulate the team members of NIDM for their endeavor for capacity building particularly in terms of disaster risk reduction against the onslaughts of pandemic and I also urge people at large to follow the Government's directions on social distancing and other protocols in order to protect oneself from the pandemic.



Sh. Taj Hasan, IPS
Executive Director

Face to Face Programmes

Psychosocial Care in Disaster Management, 08-12 Nov 2021

Key Takeaway/Recommendations

a) Psycho-social support in the context of disasters refers to comprehensive interventions aimed at addressing a wide range of psychosocial and mental health problems arising in the aftermath of disasters.

b) These interventions help individuals, families and groups to build human capacities, restore social cohesion and infrastructure along with maintaining their independence, dignity and cultural integrity.

c) Psycho-social support helps in reducing the level of actual and perceived stress and in preventing adverse psychological and social consequences amongst the disaster-affected community.

d) The common mental health disorders reported after disasters are normal and pathological grief (Bereavement), acute stress reaction, depression, generalised anxiety disorder, Post Traumatic Stress Disorder (PTSD), alcohol and drug abuse rather than the issues related to psycho-social well-being.

e) Emotional reactions such as guilt, fear, shock, grief, Hyper-vigilance, numbness, intrusive memories, and despair are universal responses in people experiencing unforeseen disastrous events beyond their coping capacity

f) It is estimated that nearly 90% of survivors undergo these emotional reactions immediately after the disaster.

g) It reduces to 30% over a period of time with psychological reactions to stress, leading to a change in behavior, relationships and physical or psycho-social situations.

Formulation of City Disaster Management Plan, 08-12 Nov 2021

Key Takeaway/Recommendations



a) There is a need at ULB level for understanding and implementing contacts of Disaster Management Act 2005.

b) Importance of Emergency Operation Center for Effective communication and Coordination.

c) Development of Urban Area in isolation will not be sufficient, due care need to be taken for Peri Urban Areas.

d) Climate Change is impacting Health, Transportation Infrastructure, Lifeline Facilities in addition increasing intensity and frequency of disasters. This necessitates superimposing climate change impact on traditional impact of disaster.

e) The city needs to be assessed for capacity, vulnerabilities, and available resources.

f) Limited land resources in cities has led to sprawling of urban cities at unsuitable terrains like floodplains, unstable slopes, reclaimed land prone to natural hazards.

g) Fast-growing cities contain increasing numbers of poorly constructed or badly maintained buildings, leading to unnecessary deaths. Urbanization is inevitable but there is a need to have effective urbanism.

Multi Hazard Risk Management in Changing Climate: Sustaining Economic Development & Livelihood in Western Himalaya, 08-12 Nov 2021

Key Takeaway/Recommendations



a) Inclusion of more practical/fieldwork aspects such as exposure visits to disaster sites in order to give the participants first-hand experience of identifying problems and providing solutions to them.

b) Advanced or specialized training is key for developing trainers who can then propagate or spread their experiences at the grassroots level to build capacity.

c) Establish monitoring mechanisms for snow, ice, and water; downscaling climate models; applying hydrological models to predict groundwater availability - by taking water demand and socioeconomic development into account as well as livelihood opportunities.

d) Promote the use of Earth observation technology assess the risks from multi-hazards.

e) Promote research on monitoring & management of risks by employing all-hazard approach

f) Develop multi-hazard early warning systems by involving multi-stakeholders.

g) Longer duration training programmes that should include participants across India so that the best practices are discussed and there is exchange of ideas.

Management of Crowd at Large Congregation, 09-13 Nov 2021

Key Takeaway/Recommendations

a) Crowd related emergencies must be looked into as behavioural aspect of participating crowd. Hence, behavioural expert may also be included in crowd management team.

b) Crowd related issues need focused attention and a team effort.



c) Use of technology in various aspects such as records of footfall, monitoring of crowd movement and residential places, sanctorum area must be stressed upon.

d) Tapping of leaders from within the crowd helps in management of crowd in a better way.

e) Administration along with event organizers must have advance information about number and profile of congregating crowd so that they may plan accordingly.

f) Incident Response System must be put in place to address every response activity.

g) The base camp where crowd may be congregated before reaching the actual site. Basic facilities must be ensured at the base camp.

h) Clear-cut roles and responsibilities must be defined for every stakeholder and persons undertaking the work must be trained in their respective jurisdictional area.

Chid Centric Disaster Risk Reduction, 15-19 Nov 2021

Key Takeaway/Recommendations



a) Avoid Touching Eyes, Nose and Mouth / Maintain respiratory hygiene / wash hands frequently and thoroughly.

b) Wearing a mask helps contain any potentially infectious respiratory droplets that may be released while breathing, talking, or coughing especially when social distancing is more challenging and even if the person doesn't yet know they're sick.

c) Do not chew tobacco, khaini etc. or spit in the public places which may become a cause of spreading the deadly virus. Regularly clean and disinfect frequently touched surfaces to prevent the further spread of the novel corona virus which stays on the surfaces.

d) Avoid unnecessary travel / Do not discriminate against anyone / Discourage Crowd Encourage Safety.

e) Promote social distancing (a term applied to certain actions that are taken to slow down the spread of a highly contagious disease, including limiting large groups of people coming together).

Faculty Development/ToT Programme on Disaster Management, 22-26 Nov 2021

Key Takeaway/Recommendations



a) For disaster risk reduction and resilience is not only of the infrastructural preparations that one has to focus but also of the mind-set and of culture.

b) We need to building character and value system at all times for strengthening the resilience against disasters.

c) We need to understand the importance of disaster risk reduction being mainstreamed in education at all levels and we should take all necessary steps to help establish a culture of safety and resilience in the country by introducing disaster management as a full fledged course right from the primary level of education.

d) Comprehensive approach to disaster management will ensure a balance between the reduction of risk and the enhancement of community resilience, while ensuring effective response and recovery capabilities.

e) It is high time that we Endeavour to understand the 'science' of nature.

f) Understanding what can happen is one of the first steps in developing plans for preparedness and mitigation for a jurisdiction, such as a state, district or a municipality.

g) Besides using modern science and technologies for the DRR we need to develop mechanism to incorporate the wisdom and knowledge of the local communities in decision making.

h) Policies, programme, projects and events in disaster management can be more effective in making communities, especially those in hilly areas, safer in the long term if these start with the premise of an understanding of the risk and the actual impacts of the actualization of that risk.

i) Saving Himalayas and the planning and policy for Himalayan system is not only for the local community but the millions of people that have been depending the Himalaya or using its different resources.

Institutionalizing Sustainable Community Based Disaster Risk Management (CBDRM), 22-26 Nov 2021

Key Takeaway/Recommendations



a) Community-Based Disaster Risk Management (CBDRM) is a way of analyzing risks and conducting DRM that both originates from, and is organized by, local communities. The key for successful CBDRM lies in maintaining interest in and motivation for DRM at the community level, and incorporating CBDRM approaches at the national policy level.

b) Children occupy a position of both unique vulnerability and capability when it comes to disasters and disaster risk. Although they are often seen as passive victims, many international treaties recognize that children have distinct power, abilities and rights.

c) Communities have critical knowledge, experience and capacities with regards to building resilience, and have developed innovative approaches to reducing the everyday risks they face.

d) The communities can work together to fight disasters and save lives, property and livelihoods simply by making intuitive use of the resources at their disposal and using traditional wisdom to put the bravest defense up before aid from the state machineries arrives.

e) During the programme, villagers worked with anganwadi workers, ASHA workers and government school teachers. They also communicated with core government bodies like the District Disaster Management Authority, Agriculture department, Public Health Engineering Department for sustainable solution.

f) Community-based disaster risk management (CBDRM) aims to actively engage at-risk communities in the process of identification, analysis, treatment, monitoring and evaluation in order to reduce vulnerabilities to disasters and to increase their coping capacities thus limiting the negative impact to life, property, livelihoods and the environment.

g) The mechanism was shown to have been linked with seven specific outcomes: increased education and awareness; increased incomes, outputs and enhanced livelihoods; increased resilience; decreased vulnerability; increased community coping capacity; increased capacity of community organisations; and decreased incidence of psychosocial concerns.

h) Improved organisational and community capacities; increased resilience; enhanced livelihoods; improved education and awareness; decreased vulnerability; reduced morbidity and improved

Community Based Disaster Risk Management CBDRM, 22-26 Nov 2021

Key Takeaway/Recommendations



a) Under the CBDRM approach, the local community not only becomes part of creating plans and decisions but also becomes a major player in its implementation.

b) Communities are the best judges of their own vulnerability and are capable of making the best decisions regarding their well-being.

c) Preparedness to face disasters is required at all levels right from the household to the State Government to minimize the impact of disasters.

d) The community is the first responder of any disaster and develops some traditional coping mechanisms to reduce their vulnerabilities. Such communities living in a common territory comprise women, men, elders, students, teachers and children.

e) To generate preparedness and response within the people, Community Based Disaster Preparedness Plans (CBDP) has to be developed in all the vulnerable areas.

f) The components of the CBDP Plan include community profile, resource inventory, risk map through community maps, future mock drills and final community maps.

g) The logic behind the Community Based Disaster Preparedness Plans is to involve communities in identifying and mapping their own hazards, vulnerable sections, resources available, and safe evacuation routes.

h) The planning process is divided into three major sections; i) Identification of Community unit and preparation of Community Profile ii) Preparation of Community map showing vulnerable areas, resources, and evacuation routes; and iii) Preparation of Taskforces, Committees, and Emergency Response Team.

i) Current disaster planning and response emphasize the need for an all-hazards approach.

Child centric Disaster Risk Reduction 22-26 Nov 2021

Key Takeaway/Recommendations

a) Avoid Touching Eyes, Nose and Mouth / Maintain respiratory hygiene / wash hands frequently and thoroughly.

b) Wearing a mask helps contain any potentially infectious respiratory droplets that may be released while breathing, talking, or coughing especially when social distancing is more challenging and even if the person doesn't yet know they're sick.



c) Do not chew tobacco, khaini etc. or spit in the public places which may become a cause of spreading the deadly virus.

d) Regularly clean and disinfect frequently touched surfaces to prevent the further spread of the novel coronavirus which stays on the surfaces.

e) Avoid unnecessary travel / Do not discriminate against anyone / Discourage Crowd – Encourage Safety.

f) Promote social distancing (a term applied to certain actions that are taken to slow down the spread of a highly contagious disease, including limiting large groups of people coming together).

Understanding the Vulnerability and Risk associated with Urban Areas, 23-27 Nov 2021

Key Takeaway/Recommendations

a) The workshops provided the participants a training ground for capacity building and sensitize individuals and the college community to understand their risk and vulnerabilities.

b) This programme also marked the first physical activity of the newly launched Centre for Environmental Studies and Disaster Management of Miranda House.

c) The college has decided to formulate a Disaster Management Plan based on a multidisciplinary

approach. It plans to take help from experts from NIDM and other institutes engaged in disaster planning.



d) The college will also invest in resource mapping and preparation of evacuation maps.

e) All risk prone areas or hots-spots will be identified and a detailed inventory of the structural safety within the college premises will be undertaken. Vulnerability mapping can be done for identifying the population and areas at risk.

f) The college will not only engage the students and teachers but also the non-teaching staff to be part of its resilience building activities. It will organise skill development programmes from time to time on various topics like- fire safety, first aid, road safety, handling hazardous substances in the lab and conduct evacuation mock drills.

g) The college under the centre will develop teaching learning material and design short term certificate programmes on environment and disaster management.

h) Short-to-medium term and long-term response plans will be prepared based on suitable feedbacks in a phased manner.

Disaster Management with focuses on COVID-19 Pandemic, 07-08 Dec 2021

Key Takeaway/Recommendations



a) The way to prevent COVID-19, Wear a mask

b) Whenever you're outside in a public place, you should always wear a facemask.

c) Cover your mouth while coughing and sneezing

d) You should also cover your mouth with a tissue while coughing or sneezing.

e) The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January 2020, and a pandemic on 11 March 2020.

f) To address this important aspect of disaster management and provide recommendations on how to mitigate these effects.

g) The COVID-19 pandemic causes major emotional distress.

h) Lack of effective treatments and availability of the current vaccines for this virus increases the fear of being infected and infecting others.

i) Negative emotions are common and are related to adjustment but may progress in the long term to anxiety, depression, and post-traumatic stress syndrome.

j) There is an urgent need to be prepared and ready for COVID-19 progression in times to come.

k) An urgent need to focus on micro containment and monitoring and responding to the progression of pandemic leveraging on real time data and community testing.

Child Centric Disaster Risk Reduction, 06-10 Dec 2021

Key Takeaway/Recommendations



a) Avoid Touching Eyes, Nose and Mouth / Maintain respiratory hygiene / wash hands frequently and thoroughly.

b) Wearing a mask helps contain any potentially infectious respiratory droplets that may be released while breathing, talking, or coughing especially when social distancing is more challenging and even if the person doesn't yet know they're sick.

c) Do not chew tobacco, khaini etc. or spit in the public places which may become a cause of spreading the deadly virus.

d) Regularly clean and disinfect frequently touched surfaces to prevent the further spread of the novel coronavirus which stays on the surfaces.

e) Avoid unnecessary travel / Do not discriminate against anyone / Discourage Crowd – Encourage Safety.

f) Promote social distancing (a term applied to certain actions that are taken to slow down the spread of a highly contagious disease, including limiting large groups of people coming together).

g) Understand basic information about coronavirus disease (COVID-19), including its symptoms, complications, how it is transmitted and how to prevent transmission.

Multi-Hazard Risk Assessment & Management in Coastal Areas, 13-17 Dec 2021

Key Takeaway/Recommendations



a) Disaster risk, Hazards and vulnerabilities should be improved at the community level.

b) The learning of past's disastrous development activities to strengthen the resilience of infrastructures and structures.

c) Climate change is augmenting intensity and frequency of the extreme weather related events. The combat the challenges of these even to adopt holistic multi-hazard approaches.

d) Strong institutional framework and capacity development of the human resources are utmost important in chemical and industrial disaster management.

e) The coordination between the stakeholders should be in Disaster risk reduction system.

f) There is a need to proceed from hazard assessment to vulnerability analysis by ultimate generation of specific risk maps.

Child Centric Disaster Risk Reduction (CCDRR), 13-17 Dec 2021

Key Takeaway/Recommendations

a) Hazard and Vulnerability Profile of India.

b) Causes and impacts of various natural disasters: Tropical Cyclones, Tsunamis, Landslides, Storm Surge, Floods, Earthquakes and Drought.

c) Significant and Major disasters India has faced till the time.

d) Institutional Mechanism of Disaster Risk Management.

e) Salient features of Disaster Management Act 2005 at national, state and district level.

f) Role of government agencies; NDRF (national level), SDRF (state level) and local agencies in response to disasters.

g) Role of National Crisis Management Committee (NCMC); National Executive Committee (NEC); Armed Forces; Civil Administration and Central Armed Police Forces (CAPF) during an emergency.

h) The pre and post disaster management cycle and strategies undertaken



Crowd Management & IRS, 13-17 Dec 2021

Key Takeaway/Recommendations

a) Emergency Operations Centre (EOC) must be functional even at normal times in addition to emergency times.

b) EOC must be self-sustained in terms of facilities and gadgets for a certain period of time so that it can function without any break.

c) The EOC can be preferably ESF based or combination of ESF and IRS functions to enable smooth decision making.

d) EOC may function as facilitation centre and may manage effective response and the VIP visits.



e) EOC is an important spoke in the Incident Response System and hence must be activated when IRS is being implemented.

f) Officials at EOC must have powers to take decisions pertaining to mobilization and provisioning of resources from their corresponding departments.

g) EOC must facilitate coordination within the site operation teams and also with all stakeholders.

h) EOC must function as a bridge between any external information or changing conditions and the site operation teams and hence must be updated with relevant information and prevailing rules and regulations.

Capacity Enhancement for Disaster Risk Reduction and Resilience, 20-24 Dec 2021

Key Takeaway/Recommendations

a) Inclusion of more practical/fieldwork aspects such as exposure visits to disaster sites in order to give the participants first-hand experience of identifying problems and providing solutions to them.

b) Advanced or specialized training is key for developing trainers who can then propagate or spread their experiences at the grassroots level to build capacity.



c) An urgent need to focus on micro containment and monitoring and responding to the progression of pandemic leveraging on real time data and community testing.

d) Physical activity and relaxation techniques can be valuable tools to help you remain calm and continue to protect your health during this time. Self-quarantine can also cause additional stress and challenge the mental health of citizens.

e) Realize that the current pandemic will leave a tail of issues including mental, social, and economic behind.

f) To be sensitive to the fact that, minority population or socioeconomically deprived populations are often left behind in times of disaster.

Climate Resilient Infrastructure, 20-24 Dec 2021

Key Takeaway/Recommendations



a) Kerala State has already developed a State Action Plan on Climate Change. Active involvement and coordinated effort of the academic institutions, research institutions and the administrative mechanism is essential for responding to the impacts of climate change.

b) The changing temperature and rainfall disturb the agriculture sector which is one of the most important sectors of the State thereby increasing the issue of food insecurity and we need to find alternatives for food storage. When a disaster strikes the crops get damaged and the economy suffers so we need solutions to build it back better.

c) Community engagements will reduce the risk of disasters in the emerging scenario of climate change. Hence awareness creation among common people about disaster and climate-resilient construction works has to be promoted. The neighborhood groups can create a new change in their life, such as abandoning the usage of tissue paper, promoting the usage of ink pens instead of plastic pens or by taking public vehicles during travel. Everyone can reduce their own carbon footprint by taking such pledges in routine life

d) Effective usage of SDRF and SDMF has to be promoted. Planning process has to be strengthened and all stakeholder departments have to have their own financial components for their annual plan allocation. The interaction of academics, administration and research is an essential component in building resilience to climate contingencies.

Stress Management for First Responders in Disaster, 21-23Dec 2021

Key Takeaway/Recommendations

a) Stressors are the events, which create stress. Stress is common for all and everyone has to deal with it.



b) Stress can act as a creative, motivational force that can drive people to achieve incredible feats (eustress). Chronic or traumatic stress (distress) on the other hand, is potentially very destructive and can deprive people of physical and mental health, and at times even of life itself.

c) The major symptoms of mental illness are: i.) Disturbance in thoughts, emotions, behaviour and senses. ii.) Harming oneself or others and iii.) no Self-care

d) Mental health and well-being is a must. For mental health and wellbeing a person should: a) know his potentials, b) manage stress positively, c) be productive and fruitful, d) enjoy his work, e) contribute to society and f) help the elderly.

e) Emergency response personnel dedicate their time and energy to assisting persons during stressful times of their lives, for example, after disasters such as earthquakes, Landslides, floods, cloudbursts, cyclones etc. By doing this, however, they are repeatedly exposed to very stressful situations

Basics of Disaster Management and Fire Prevention in the Public Buildings in collaboration with Delhi Fire Safety Management Academy, 27-31 Dec 2021

Key Takeaway/Recommendations



a) Discussion on guidelines of Govt. of India, where it has been mentioned that, Fire Services has to work as Fire & Emergency Services, which will not only support the fire related mitigation, but also help in prevention and response and other emergencies.

b) Preparing the local individuals, mostly who are prone to any sort fire related disaster as they act as the first once to response.

c) Focused on prevention and precaution that are taken during disaster, before and after disaster.

d) Suggestions from the fire fighters and officers, creating imaginary fire emergency scenario.

e) Importance of using uniforms by the fire fighters during a major or minor disaster has been highlighted.

f) Importance, involvement and need of fire department during any kind of disaster have been highlighted.

Post Disaster Needs Assessment (PDNA) & Long, 27-31 Dec 2021

Key Takeaway/Recommendations



a) Technology has a major role to play in disaster management.

b) The Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework) was the first major agreement of the post-2015 development agenda and provides Member States with concrete actions to protect development gains from the risk of disaster.

c) Emphasizing the need for infrastructure rehabilitation and resilience.

d) India has to be more recovery- and reconstruction-oriented, and the government should be more concerned with achieving a rapid and all-encompassing recovery as well as catastrophe-resilient reconstruction.

e) An alternate assessment procedure may be more appropriate for smaller countries, smaller disasters, or atypical recovery requirements.

f) When we talk about the social sector the one thing should be noticed is the age of target population, the age gives us the opportunity to immunization and education; however, in disaster situations we lose out on that opportunity to consider the age factor.

Face to Face one week Capacity Development Programme on Disaster Risk Reduction and Resilience, 27-31 Dec 2021

Key Takeaway/Recommendations



a) We must always work to enhance our character and value system in order to be more resilient to disasters.

b) Each department of the Government of India is responsible for adhering to the mandate of the Disaster Management Act 2005 and developing their own Disaster Management Plan.

c) We must recognize the importance of disaster risk reduction being integrated into all levels of education.

d) A comprehensive disaster management strategy will strike a balance between risk reduction and community resilience, while also assuring effective response and recovery capabilities.

e) One of the first tasks in building preparedness and mitigation plans for a jurisdiction, such as a state or district, is to understand what can happen.

f) The primary concept of Disaster Risk Reduction and Resilience is to cultivate mental presence, knowledge, and capacities.

g) The Incident Response System is a modular, integrated organizational framework that can adapt to the complexities and needs of single or several occurrences while avoiding jurisdictional barriers.

Online Training Programmes

Climate Change and Disaster Management, 04-06 Oct 2021

Key Takeaway/Recommendations



a) Scientists predict that by the end of the 21st century, the sea level could rise by 1 meter under the worst-case scenario. In that case, 4.4% of Vietnam's area will be permanently flooded; 6 million people will be affected.

b) In 2012, Food and Agriculture Organization (FAO) of United Nations proposed 'Greening Economy with Agriculture' as the prime key message for Rio+20. Global Goal 2 of Sustainable Development Goals (SDGs) focuses on food and promotes sustainable agriculture. SDG-1 yells to reduce poverty with agriculture to play dynamic role in this regard. SDG-13 broaches an urgent call to combat climate change stress globally. The first Climate Change Action Plan of World Bank Group (2016-2020) with forthcoming update (2021-2025) is committed to climate-smart agriculture to augment productivity, enhance resilience and abate emission.

c) Ensuring that development plans include climate risks in the analysis in addition to catastrophe dangers would require 'hazard identification', i.e. bringing collectively and correctly disseminating facts on vulnerability and hazards.

d) There is a need to translate and trickle-down the macro-stage options (national level policies) into courses of motion at the micro-level, because ultimately the victims and sufferers of any calamity are the locals, so they are the ones who should be equipped and trained to deal with such calamities.

Urban Risk Management, 04-06 Oct 2021

Key Takeaway/Recommendations



a) Recent trends of increase in urban related disasters, have given rise to the need of proper focus on urban preparedness.

b) Urban risks pertaining to emerging residential colonies, density of population, migrant population need special focus as they may give rise to secondary hazards.

c) Urban flooding such as Mumbai 2005, Chennai 2015 have thrown open many areas which need to be addressed.

d) Community approach again becomes the key for preparedness and mitigation even in urban areas.

e) Safe construction practices must be ensured in urban areas for avoiding ripple effect of disasters.

f) Retrofitting of existing buildings and critical infrastructure in particular may also be taken up as a project.

g) Production disruption which is main contributor to disaster loss must be plucked at the source and its risk reduction must be acted upon.

h) Road designs and awareness for road safety must be taken in a big way to avoid life loss through road accidents.

i) Adoption of systematic and coordinated response system – IRS in particular – must be ensured

Media & Disaster Management, 04-06 Oct 2021

Key Takeaway/Recommendations



a) Finding reasons for individual's decisions-a better strategy than arguing over details.

b) Effective Teams foster commitment to team success.

c) Advance planning, logistics and resource management and trained manpower are pre-requisites for efficient handling of disasters

d) Pre-planning & quick response team should be formed to deal with such natural calamities

e) Preparedness before any incident always gives you confidence to tackle it.

f) People managing the response to a disaster might expect journalists to be there only to provide a public service and may not understand how the media works and that journalists have a job to do to.

g) After the initial breaking-news phase of a disaster, journalists can focus on more detailed reporting about whether the disaster could have been prevented and how its impacts will be dealt with. Were there, for instance, any early warning systems in place, did they work, and could they work better?

Disaster Risk Reduction in Urban Areas, 04-06 Oct 2021

Key Takeaway/Recommendations



a) Need to integrate / overlay impact of climate change in overall risk assessment and identification and implementation of adaptive measure to build resilience among urban communities.

b) Use of IRS as management tool for improving effectiveness in management of incident / event by adopting principle of centralized command and decentralization.

c) Investments in disaster risk reduction require strong political support as they do not necessarily generate tangible, immediate outcomes or produce positive revenue flows.

d) Focus on urban planning and on sustainable development to resist and reduce the risks with the help of strong infrastructure and funding systems and by understanding the vulnerabilities, potential causes, and effects, economic and social impacts, mitigation plans, preparedness and response.

e) The construction practices and building codes as per the standards set by government authorities need to be promoted to get awareness.

f) Risks can be minimized by adopting disaster risk management methods like the fire detection and safety alert system with automatic water sprinklers to put off the flame. Establishment of fire pumps in the potential sites to draw at emergency services.

g) Smaller cities are increasingly important priorities given their demographic importance and especially weak capacity. Investing in capacity to monitor and manage risk in cities of one million or less inhabitants will likely have the greatest aggregate impact on disaster reduction.

h) Disaster management must broaden its focus to address every day, small and large events, from chronic environmental health through frequent but low impact hazards to extreme events.

Quantifying Disaster Risks and Risk Reduction with Special Reference to SENDAI Framework and PM 10 Point Agenda, 05-07 Oct 2021

Key Takeaway/Recommendations



a) The SENDAI Framework of Disaster Risk management and its various provisions,

b) Status of implementation of Prime Minister's 10 Point Agenda in Kerala.

c) Role of Educational Institutions in Capacity Building at the district and sub-district level.

d) Role of higher educational institutions in developing the quantitative assessment tools for disaster risk assessment and impact evaluation at the local level and implementing the same with the help of local self-governments.

e) Promoting students to carry out UG and PG projects on disaster risk assessments using various quantitative tools employed by NIDM and other national agencies

Management of Crowd at Large Congregation, 06-08 Oct 2021

Key Takeaway/Recommendations



a) Crowd related issues need focused attention and a team effort.

b) Use of technology in various aspects such as records of footfall, monitoring of crowd movement and residential places, sanctorum area must be stressed upon.

c) Tapping of leaders from within the crowd helps in management of crowd in a better way.

d) Crowd management needs coordinated effort.

e) Community concerned must be taken into confidence before taking any activity.

f) Administration along with event organizers must have advance information about number and profile of congregating crowd so that they may plan accordingly.

g) Incident response system must be put in place to address every response activity.

h) The base camp where crowd may be congregated before reaching the actual site. Basic facilities must be ensured at the base camp.

i) Clear-cut roles and responsibilities must be defined for every stakeholder and persons undertaking the work must be trained in their respective jurisdictional area.

j) It is necessary that behavioral expert may also be included in crowd management team.

Climatic Hazards And Financial Resilience - A Special Focus on Lightning, 06-08 Oct 2021

Key Takeaway/Recommendations



a) Data collection and quality of data should be maintained about the Tropical Cyclone, its forecasting, related issues.

b) Lightning and its recent trends should be observed like losses and mitigation, about thunder storms, locations, lightning awareness programme.

c) Disaster Resilience CSR activities and how to overcome disaster with structural modelling approach in this and with sustainable development approach.

d) Lightning now casting using Ground Space Based Data and Numeric Models, heat islands in urban atmosphere, lightning details, aerosol effects, positive charge, possible mitigation, showed worldwide lightning distribution, characteristics, and how hailstorms associated with lightning, this can be detected with the sensors.

e) Application of Remote Sensing for monitoring Urban Heat Island is important and urban heat Islands emerges, thermal image concept, impact should be understood.

f) Climate Adaptive Housing in Coastal Bangladesh, where he discussed about coastal housing context, post cyclone(s) Recovery, and also suggested measures to recover it soon.

g) Another resourceful lecture was delivered by Dr. Abhisek Saha, Assistant Professor , Geography, Bankura University, West Bengal, on Climatic And Exo-Toxicologial Threats on Estuaries And Their Probable Mitigation Plan, where he evaluated the present status of threats, on coastal environments of Odisha and West Bengal, and the threats on biotic and a biotic community, scaling of the threats with scoring on the basis of the magnitude of the threats, and also about the development of conservation measures to preserve the fish population in coastal water.

POT on CCDRR, 07-09 Oct 2021

Key Takeaway/Recommendations



a) Important role of NDRF & NIDM and their specific roles related to disaster prevention, mitigation, preparedness, & response.

b) Importance measures to take for protecting the children along with ourselves from covid-19.

c) Comprehensive understanding about Do's and Don'ts during COVID 19.

d) Importance of comprehensive school safety programs.

e) Institutional mechanism such as NYKS, NSS, NCC and Civil Defense for engaging youths.

f) The importance of nutrition especially during covid times and problems regarding rehabilitation of children in continuing their education post-disaster.

g) How the COVID-19 pandemic impacted the mental health of children

Climate Induced Hydrological Disasters, Policies and Management, 07-09 Oct 2021

Key Takeaway/Recommendations



a) Need to develop an understanding in the field of climate change and climate induce disasters and the skills needed to work in this area.

b) Need to explore how to use research findings to address the problems of climate change and natural disasters.

c) It is required to learn how to develop an appropriate environment and to address the complexities and uncertainties occurring from climate change and frequent disasters.

d) Need to identify opportunities and recent strategies for mitigating and managing the various natural disasters.

e) There is a need to gain actionable insights into the hydrological disasters that are induced or triggered by weather extreme conditions.

f) Need to understand the latest technology and tools to evaluate the impact of human activities on environment, and established linkages between the climate change and increased disasters.

g) Need to explore ways to design and gauge impactful research that would lead to the sustainable solutions to the climate change and disasters.

POT on CCDRR, 11-13 Oct 2021

Key Takeaway/Recommendations



a) Sick students, teachers and other staff should not come to school.

b) Enforce regular hand washing with safe water and soap, alcohol rub/hand sanitizer or chlorine solution and, at a minimum, daily disinfection and cleaning of school surfaces.

c) Ensure water, sanitation and waste management facilities and follow environmental cleaning and decontamination procedures

d) Promote social distancing (a term applied to certain actions that are taken to slow down the spread of a highly contagious disease, including limiting large groups of people coming together).

e) Understand basic information about corona virus disease (COVID-19), including its symptoms, complications, how it is transmitted and how to prevent transmission.

f) Stay informed about COVID-19 through reputable sources such as UNICEF, WHO and national health ministry advisories. Be aware of fake information/myths that may circulate by word-of-mouth or online.

g) Update or develop school emergency and contingency plans.

h) Work with officials to guarantee schools are not used as shelters, treatment units, etc.

i) Consider cancelling any community events/meetings that usually take place on school premises, based on risk.

Empowering Youth and Leadership Building in DRR, 11-13 Oct 2021

Key Takeaway/Recommendations



a) Young people have the energy, creativity and idealism to challenge entrenched patterns of exclusion and injustice and should be at the forefront of global change and innovation. More than half of the world's population is under the age of 30.

b) While young people have every opportunity and right to participate fully in the lives of their societies, they are often left on society's margins: as a group, they are affected by discrimination and lack of access not only to employment and education but also to decision-making processes that define the course of their future.

c) Training programme fostered on dialogue and leadership among young people by offering a platform where they can express their ideas and propose solutions to major public issues.

d) Youth leadership supports youth in "developing the ability to analyze their own strengths and weaknesses, set personal and professional goals, and have the self-esteem, confidence, motivation, and abilities to carry them out Peer-to-peer education can take place on a large scale, such as an assembly or video, or it can be focused on small groups or individual persons.

e) For example, youth can make class presentations, run small discussion groups, or mentor younger youth.

f) Youth Leadership programs typically include activities such as travel, intercultural exchange, outdoor education, organizing events, sports, intergenerational knowledge exchange, work experience, public speaking, and life skills development. For skateboarding programs, a youth leadership program can provide motivated young people with the chance to take ownership

Women as Agents of Change for Disaster Risk Reduction: Strengthening Resilience, 12-14 Oct 2021

Key Takeaway/Recommendations



a) Basics of Disaster Management

b) Disaster Management differentiation

c) Women has more part of sharing the crisis

d) Disaster, Economic Instability and solution to overcome out of it

e) Stereotype mentality need to change

f) Women can be part of production and distribution process

g) Relocation the majority during disaster with discriminating gender.

h) Small steps can be taken to major potential changes flourish in future

Emergency Preparedness & Response Pilot Testing of MSC Handbook on Health-Kerala, 18-20 Oct 2021

Key Takeaway/Recommendations

a) Core Commitment for Children can be used as the key handbook for maternal and child health related response measures.

b) Establish effective management system in medical supply to ensure availability of safe essential medicines and medical device.

c) Develop a health information system that provides sufficient, accurate and up-to-date information for effective and equitable health response.

d) Strengthen disease Early Warning Alert and Response (EWAR) mechanisms for all hazards that require an immediate response.

e) Ensure mechanism to protect data to guarantee the rights and safety of individuals, reporting units and population.

f) Support the lead actor to compile, analyse, interpret and disseminate health information to all stakeholders in a timely and regular manner and to guide decision making for health program.



g) Bring together all significant stakeholders and analyse the available assessment information, discuss any projects proposed by member organizations, develop a consensual strategy to ensure that the appeal contains relevant, high priority, coordinated and feasible projects.

h) Avoid duplication, consult other sectors FNS and WASH to ensure complementarily

i) Hazard, Risk and Vulnerability and Capacity Analysis (HRVCA) exercise has to be carried out as an input into the planning process.

j) Incident Command Centre (ICC) need to be established, which will prompt mobilization and coordination of personnel, equipment and supplies.

Child Centric Disaster Risk Reduction, 20-22 Oct 2021

Key Takeaway/Recommendations

a) COVID-19 appropriate behavior.

b) Alphabetical learning of the precautions.

c) How to wear and remove a mask and how to be in other places.

d) Taking necessary precautions on how much time one should wash their hands and other things.

e) Basics of Covid-19 precautions and actions of the individual.

f) Maintaining social distance and importance of taking the Vaccination



Disaster Resilience and Coping Capabilities of Cities amidst COVID 19 Pandemic, 20-22 Oct 2021

Key Takeaway/Recommendations



a) There should be establishment of state/district level research and management cell under centre for landslide research studies and management.

b) Leveraging partnership for mainstreaming climate resilience in India's urban discourse should be encouraged.

c) Startup connect with cities should promote innovative solution for smart city innovation.

d) There should be a provision for research and funding options for capacity building.

e) Mainstreaming DRR&R strategies in all the development activities of the sector must be uplifted.

f) Invest in sustainable risk information systems and analytical tools, which allow for systematic and evidence based understanding and communication of risk.

g) Take the rapid expansion of urban built up areas as an opportunity to develop and manage new settlements in a way that they incorporate resilience at the outset into regular urban planning

h) To be effective, early warning systems must be people-centred.

i) As empower individuals and communities threatened by hazards to act in sufficient time and in an appropriate manner so as to reduce the possibility of personal injury, loss of life, damage to property and the environment and loss of livelihoods.

Developing Resilience to Climate Change, 20-22 Oct 2021

Key Takeaway/Recommendations



a) In countries around the world, climate change poses a significant risk threatening the lives and livelihoods of people.

b) These risks cannot be reduced to zero, which means governments must take decisive action to help firms and people manage them. Doing so requires planning ahead and putting in place proactive measures that not only reduce climate risk but also accelerate development, and cut poverty.

c) Poverty and the lack of access to basic services including infrastructure, financial services, health care, and social protection are strong predictors of vulnerability to climate change. To put it another way: the poorer communities are, the more climate change will affect them.

d) No adaptation strategy can be successful without ensuring high-vulnerability populations have the financial, technical, and institutional resources they need to adapt

e) Governments can make information on climate risks available, clarify responsibilities and liabilities, support innovation and access to the best technologies, and ensure financing is available to all especially for solutions that come with high upfront costs.

f) Urban and land use plans are also important responsibilities of the public sector, and they influence massive private investments in housing and productive assets, so it is vital these adapt to evolving long-term climate risks to avoid locking people into high-risk areas Coping with climate change impacts in one economic sector is already complicated. Coping with climate change impacts in all sectors at once requires strategic planning at the highest levels.

Enhancing the Capacities for the Resilience of Hills, 20-22 Oct 2021

Key Takeaway/Recommendations



a) Lack of sophistication in dealing with the housing in a post disaster environment is often seen, how you see the problem is that housing is often seen as a product rather than a process we tend to continue to ignore issues of financing or land tenure and land use and the question of capital flow within a disaster affected society.

b) The research also needs to be done to tackle some of the unresolved technical problems related to trying to use cheap local building materials for the seismicity resisting construction.

c) Work is also required to be done and publicized on whether attempts made so far to persuade people to go in for safer housing construction have been effective.

d) In particular, it needs to be examined to what extent government actions have influenced poor families who are not able to derive any benefit from the government machinery.

e) Youth need to have a deep knowledge of the consequences due to disasters as the future is in their hands.

f) Residents have to be responsible to take charge during pandemic as the response team will report after 4 to 12 hours.

g) More research needs to be done on what kind of education is best to convey construction ideas to a traditional rural population in the hills.

Disaster Resilience through Community Based Disaster Management in Himachal Pradesh, 21-23 Oct 2021

Key Takeaway/Recommendations



a) A detailed discussion was conducted on the various issues of building resilience in the communities amongst the participants and panelists.

b) It was observed that almost 20-25 farmers had joined the program and apart from those local school teachers, gram panchayat members and community leaders were part of the program.

c) They were inquisitive to know about how to prepare village DM Plan, School Plan and role of various institutions in raising awareness and training programs on Disaster Management.

d) A school teacher discussed about the issues related to preparedness of the school and also showed the building structure through his mobile video.

Disaster Risk Reduction and Resilience, 21-23 Oct 2021

Key Takeaway/Recommendations



a) It also focused on Disaster Management, its governance, and the institutional structure for management in India.

b) It also gave a detailed insight into hazard vulnerability across India with key data and illustrations on disaster response and relief, disaster preparedness, mitigation, and many 'to-dos'.

c) Efficient response to tackle disaster would be possible through partnership with educational institutions.

d) The integration of disaster studies as multidisciplinary subjects in New Education Policy would be important.

e) The major chunk of information gave insight on changing disaster management paradigm in India, what should be the priorities of action, the need for investing in Disaster Risk resilience, the need for enhancing disaster preparedness, and major ideal targets that should be achieved in a course of time.

f) The need for good infrastructure, training of personnel and availability of Early Warning system was highlighted.

g) Strengthening Disaster Risk Governance to manage risk and vulnerability of any disaster.

h) The Emergency Operation Centres (EOC) at national, state, district and sub-districts levels should be strengthened and need for awareness among citizens should be emphasized.

i) Community participation, hazard mapping through GIS and remote sensing and spatial interpretation of risks and resources were highlighted as major innovations in Disaster Risk Reduction.

Pilot Testing of MSC Handbook Ecosystem Based Disaster Risk Reduction Protection Sector Emergency Preparedness & Response – Manipur, 21-23 Oct 2021

Key Takeaway/Recommendations



a) Multi-sectoral Handbooks have been developed so that we can minimise the adhoc approaches and we can maximize the benefits of our efforts and that will eventually help in maximising the resources.

b) The roles and responsibilities including the capacities of the Non-Government actors including the civil society and other community based organisation, their roles and performance can be improved that would be great contribution in reducing the impact of disasters.

c) Irrespective of the gender, age, caste, faith, etc., a person should be treated with dignity and the basic human rights of the people should be protected.

d) Any response requires a well-coordinated, multi-sectoral and Inter agency approach that empowers the communities.

e) By Adapting the proper coordinating mechanism approach and processes, we can ensure to follow the chronologically right steps towards strategizing the future plan of action.

f) Community participation and local governance is important for holistic approach towards emergency preparedness and response.

g) Humanitarian actors should ensure that the relief or humanitarian assistance reaches to the last affected person and also emphasized upon awareness to the affected victims about the entitlements like ex gratia.

h) This book could act a guiding material to the humanitarian actors in the emergency times and will help in understanding the local dynamics.

i) Vulnerability mapping can help in identifying the vulnerable population of the risk prone area/community

River Hazards at Different Topographic Region and Safeguards, 25-27 Oct 2021

Key Takeaway/Recommendations



a) The Route analysis tool facilitates the user to find out the shortest route between the emergency facility and user interested location/disaster location.

b) NDEM data & map are allowed to viewers for multiple data adding and analysing for the decision making (through Multilayer analysis tool)

c) Evacuation tool aids Disaster Managers to identify the area extent. Village list & Shelters for evacuating people.

d) PDNA will help in scientific assessment of Recovery and Reconstruction for the victims.

e) Mean summer Ganga water is decreasing since 2010 onwards Ganga River and Ground water varies with Global climate cycles.

f) Increasing ground water pumping decreasing input to river base flow.

g) Present day summer base flow has decreased up to 59% of the year 1970s volume

h) The aquifer diagram shows that Ganga River is interacting to ground water.

Child Centric Disaster Risk Reduction, 25-27 Oct 2021

Key Takeaway/Recommendations



a) Increasing public awareness about mental health

b) Right to participation of the Children.

c) Importance of Engaging the adolescents and mechanism for Engaging youth.

d) Various Disasters happened and the role played by the NSS volunteers and youth.

e) Pre disaster Reduction Activities and methods, and post Disaster recovery activities.

f) Explanation of Activities with live examples and tasks.

Coastal Hazard Management: Way towards Resilience, 25-27 Oct 2021

Key Takeaway/Recommendations



a) Understanding of disaster risk, Hazards and vulnerabilities should be improved at the community level.

b) The coordination between the stakeholders should be Disaster risk reduction system.

c) There is a need to proceed from hazard assessment to vulnerability analysis by ultimate generation of specific risk maps.

d) The process of sharing information about hazards, vulnerabilities and adaptive mechanisms within organizations and public should be improved.

e) Need to promote programs and impact to the existing built development in vulnerable

f) Enhance preparedness and planning efforts to protect human life and welfare in coastal areas.

g) Understanding of disaster risk, Hazards and vulnerabilities should be improved at the community level.

h) The coordination between the stakeholders should be improved for a better Disaster risk reduction system.

i) There is a need to proceed from hazard assessment to vulnerability analysis by ultimate generation of specific risk maps.

j) The process of sharing information about hazards, cities and adaptive mechanisms within organizations and public should Need to promote programs and policies aimed at the avoidance/reduction of impact to the existing built environment, as well as to future growth & in vulnerable coastal areas

Pilot Session on Emergency Preparedness Response Food Security and Nutrition and Ecosystem based DRR, 25-27 Oct 2021

Key Takeaway/Recommendations

a) The mechanism of Multi-Sector Coordination must be tested prior to a disaster, as part of preparedness. Capacity Building in this regard is also important.

b) As part of preparatory work, there is a need for joint food security and nutrition assessment also, especially during disaster situations. About what population require support; who are the most vulnerable population; what supports are needed for them; what are the geographies that should be targeted. As well as it is important to analyse gaps in response strategies.

c) Beyond immediate relief, what is really required knows the short, medium and long term effects and ways to address them.

d) The response plans have to be in a coordinated way so that the IAGs, SDMAs and other stakeholders can come together and complement each other's effort so that most vulnerable population can be effectively supported.

e) The beneficiaries could better tell about the practical ways to involve different stakeholders in strategy planning and building and what are the challenges to it.

f) Food and security sector should be treated as one particular sector and not be dumped to other small sector. It has to have special focus and emphasis. Otherwise it is a slow emergency as well.

Earthquake and Cyclone Disaster Risk Mitigation, 26-28 Oct 2021

Key Takeaway/Recommendations



a) The participants are exposed to various methods for Repair of disaster affected structures.

b) Participants gained knowledge on retrofitting techniques for upgrading of R.C structures to withstand the anticipated seismic and wind loads

c) Vulnerable Structures/ structural elements have been highlighted from failure analysis of resent cyclonic winds along coastal areas.

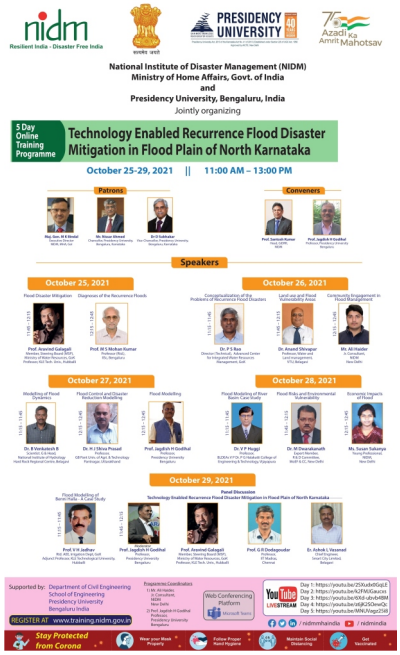
d) Participants are made to understand the wind effects on structures with different geometry. Also, IS 875 part 4 procedure for determination of wind load on structures is covered in detail.

e) Faulty construction, soft storey, floating column, poor quality and inadequate design are most common cause of failure in RCC structures.

f) For cyclones, design of buildings should involve evaluation of design wind loads and experiment wind tunneling effect in multi storied structures

Technology Enabled Recurrence Flood Disaster Mitigation in Flood plain of North Karnataka, 25-29 Oct 2021

Key Takeaway/Recommendations



a) Mitigation of flood by adopting SPRC Model.

b) Use of Remote Sensing and Geographic Information System to prepare inundation maps and assess the loss of lives and property.

c) Providing cushioning in dam to control flood and use of IoT & sensors to manage the outflow of water from dams automatically.

d) Use of Unmanned Aerial Vehicles such as drones to assess the loss of lives, loss of property, finding the people lost in floods and also to provide aid for the people.

e) Collection of data for preparing report. Perform analysis to arrive at suitable mitigation measures during the floods.

f) Documentation of loss of property and lives to provide the compensation.

g) Application of Aerial photo grammetry to preparing the flood maps.

POT on CCDRR, 27-29 Oct 2021

Key Takeaway/Recommendations



a) Disaster risk reduction planning is must in the time of Covid-19 outbreak.

b) Provide necessary ways for reconstruction, recovery, resilience approach to fight a post-disaster situation.

c) Re-plan one's institutional disaster response plan according to the government directives.

d) Make awareness among the participants on social distancing measures and avoidance of crowded places to contain the second wave of Covid-19.

e) Highlight that disaster risk can be best addressed if situation analysis for development programme formulation considers age and gender-related needs.

f) Identify the psychological problems among children is influenced by (i) type and intensity of exposure a disaster (ii) availability of family support during an event (iii) the degree of day-to-day life disruption and (iv) amount of social disorganization in the host community.

g) Restore the physical, social, and temporal environment of schools, a different plan of action can be implemented with the discussions with stakeholders of the schools. i.e. administration, staff, children, and parents.

Sustainable eco-tourism and Pandemics: A Case Study of Sikkim, 27-29 Oct 2021

Key Takeaway/Recommendations



a) Many participants felt this programme would be useful to understand the concept and significance of sustainable eco-tourism

b) Explores the possible ways to generate new carrier options in northeast states eco-tourism

c) Community engagement and intervention in carrying out sustainable eco-tourism process

d) This training program also inspired many of them to take up new research/study related to sustainable eco-tourism in north-eastern states.

e) The interaction with the resource persons and fellow participants benefitted many of them.

f) The participants understood the current scenario of vulnerable landscape, geographical climate action and eco-tourism potentials in Sikkim.

g) Capacity Building programme & community welfare programme can be conducted to increase the local community involvement since the participants were understood about its positive benefits.

h) All of the above, the overall impression of the program gained more votes which adds credit to this training program.

Building Resilience of Health Facilities, 27-29 October 2021

Key Takeaway/Recommendations



a) For fire safety, the dependency has to be on the built-in facilities rather than fire brigade and staff members around should be aware about how to manage a fire situation.

b) Smoke has been the biggest factor for mortality and is the most crucial point of concern.

c) There is a need for automatic facilities for fire suppression.

d) Early detection and response to the fire is important to save lives.

e) There is a need for safe evacuation routes.

f) Need of awareness and drills, else the best of plans can fail.

g) There is a need of alarm and suppression facilities.

Role of Youth in Disaster Risk Reduction, 28-30 Oct 2021

Key Takeaway/Recommendations

a) Use of technology in various aspects such as mapping of potential disaster in the area, available medical services and nearest aid centers should be made handy.

b) Formation of the Disaster Management Teams in every living residence, public complex or locality serves a practically applicable strategy to enable both the city and its civilians in encountering such disasters. This group of individuals must comprise of ordinary residents or office staff, who besides their daily duties, have also volunteered to receive the required DRM training modules to elevate safety and mitigate any possible hazards.



c) Community concerned must be taken into confidence before taking any activity. Traditional Knowledge and folklore should be taken into practice to spread awareness among various communities.

d) Incident response system must be put in place to address every response activity in a systematic way.

e) Mock drills and hands on training must be part of the University schedule and a separate cell for disaster management must be formed in every institution.

f) Clear-cut roles and responsibilities must be defined for every stakeholder and persons undertaking the work must be trained in their respective jurisdictional area.

g) It is necessary that behavioral expert may also be included in disaster management team.

Fluvial Disasters and Strategies in Risk Reduction, 28-30 Oct 2021

Key Takeaway/Recommendations



a) Assessment of flooding and mobility spaces will help to understand the complex process-form interactions of large rivers.

b) Peninsular rivers are mostly regulated; hence awareness should be facilitated to comprehend the mobility space. In large rivers like Brahmaputra, technical understanding and well planned multidisciplinary research are required to evaluate freedom space.

c) Advanced Remote Sensing Measurements like satellite altimetry, microwave remote sensing and integration with hydrological models like WRF Hydro model can be extremely helpful for early prediction of floods and mitigation strategies.

d) Advanced river surveying equipments could provide unique data set for understanding river discharge, velocity and hydrodynamics, suspended sediment mapping and bathymetry data. Integration of field data with advanced remote sensing observations can be helpful for large scale mapping of river characteristics.

Pilot Training on Emergency Preparedness & Response (Education) Including Ecosystem-Based DRR-Madhya Pradesh, 09-11 Nov 2021

Key Takeaway/Recommendations



a) Need to create awareness among people to reduce the impact of natural disasters by increasing preparedness.

b) Children's safety should be taken care of while preparing the safety plans for Schools. Schools should not be placed next to the hazard prone areas.

c) School emergency preparedness drills should be conducted on regular basis.

d) Emergency contact numbers for search and rescue and DDMAs should be easily available.

e) Media need to play a better role in Disaster Risk Reductions in the education sector.

f) During disasters, special attention should be given to underprivileged and physically handicapped children.

g) Need to increase funding in the education sector from government and UN agencies.

h) Require to develop a pool funding mechanism for the education sector.

i) Need to identify case studies from other states having similar regional and geographical characteristics to contextualize for Madhya Pradesh.

j) Need to mainstream Eco DRR into Govt. schemes like Mahatma Gandhi NREGS.

k) Require guidance document on NbS standards and concepts for consistent results.

l) Need a robust framework for designing and verifying NbS that takes into account the desired outcomes involving societal challenges

Disaster Risk Reduction and Resilience, 10-12 Nov 2021

Key Takeaway/Recommendations



a) Clear communication: During a disaster, everyone inside the organization needs to be informed.

b) Comprehensive training: Another important factor to consider when implementing a training plan is community involvement. Healthcare facilities may assume they will have the full cooperation of local ambulance services, police and fire departments, but those agencies often have other responsibilities in the event of a natural disaster. Establishing their role during training is essential to emergency management preparations.

c) Healthcare leadership involvement: Every hospital is focused on patient healing and safety. Occasionally, disaster preparedness is seen as a secondary pursuit, less impactful than the demands of day-to-day healthcare.

d) A natural disaster can wreak havoc on an entire community in an instant. If your healthcare facility is not equipped to respond, you lose the community's trust as well as a significant revenue stream. Expert

e) Emergency management is essential to the safety of staff, patients, and the hospital's financial security.

Fundamental of Disaster Risk Reduction and Management, 10-12 Nov 2021

Key Takeaway/Recommendations



a) Information dissemination among the students, researchers, academicians and stakeholders with reference to basic disaster management concept, institutional mechanism and need for DRR for a disaster resilient society.

b) Knowledge sharing about various natural and manmade disasters covered in detailed.

c) Providing information about climate vulnerability and its crises in future.

d) Basic learning about the need for disaster management plans and how disaster management plans are prepared and used.

e) Knowledge sharing about how geospatial technology can be done for the disaster management and response.

f) Message to the society for having a clear-cut understanding and making a fine balance between development and nature conservation for sustainable inclusive growth.

g) The development of disaster management plan at the village level aims at building the capacity and resilience of the community to equip them with skills so that management of various hazards becomes a way of life for them. The session will help the local community to prepare for and to respond to disaster effectively.

h) Impact of disaster on various socio-economic groups are also discussed in detailed.

Capacity Enhancement on Disaster Risk Reduction in Education Sector, 15-17 Nov 2021

Key Takeaway/Recommendations



a) Biological Invasion Species as second worst threat after habitat destruction.

b) It is clear that Niche Modelling using not only the bioclimatic variables but also the topographic variables are important.

c) Highlighted Key areas in the district where Managers can target for fast action in order to save time and resources.

d) Soil nutritional properties, coexistence with other native species, population study and their community structure should be extensively analysis in future in order to formulate better management plans for the future climatic scenarios.

e) It is advisable not to leave the agricultural fields barren for longer period. Uprooting of the weed species in regular interval can prove to be a strategy adopted by the local forest department.

f) Better awareness programmes should be initiated to make people aware about the necessity for the eradication if such weed species.

Landslides Risk Management and Geospatial Technology, 15-17 Nov 2021

Key Takeaway/Recommendations



a) Landslides are accounted for 20-25% losses (affecting the houses, agriculture, water bodies etc) of the cumulative losses of disasters across the world.

b) Geospatial technology can help to identify the inaccessible regions for landslide monitoring with the help of satellite imageries and to calculate the affected area after landslides.

c) Globally, landslides are one of the most devastating geo-hazards that impose serious threats to human life.

d) To reduce the economic burden and human losses it is helpful to delineate and identify potential landslide prone areas. In this regard landslide susceptibility mapping is regarded as a useful tool in disaster management & mitigation.

e) To do a risk assessment a foot print map is necessary. We need to prepare the inventory map first, then hazard, vulnerability and lastly the risk and after the outcome we can predict some mitigation strategies or management for the landslide.

f) Early warning and communication can help to strengthen disaster risk management. It can influence public and private sector to investment in disaster risk prevention and reduction.

g) Remote sensing and GIS based mapping techniques are considered as cost effective and less time consuming as availability of VHR images either free or at affordable cost and it is easy to integrate with ground based information. Remote Sensing techniques can also detect and classify the

landslide. It can monitor the landslide movements as well as the analysis and prediction of slope failure.

h) Landslide vulnerable areas are influenced by elevation, slope, vegetation, lineaments, lithology, landforms, soil texture, transportation network.

Prevention of Sexual Harassment (POSH) Act: Implementation, Gaps and Way Forward, 16-17 Nov 2021

Key Takeaway/Recommendations



a) In civil cases procedure is different than criminal. In criminal cases, an investigation is a must.

b) Being a criminal investigation there should be a thorough investigation so that false complaints can be avoided and justice can be given to the victim.

c) Under the rules of the Act, there must be a mechanism or certain guidelines or criteria to conduct a proper investigation.

d) To date, there are no rules or guidelines on how the Internal Complaints Committee or External Committee can act on a matter.

e) Data must be collected to know that in a particular year how many cases were filed in government, formal and informal sectors.

f) No complaint of defamation should be entertained at the initial stage.

g) When the Internal Committee or external Committee or court of jurisdiction concludes it as a false complaint then only the defamation case should be entertained.

h) If a defamation complaint is being entertained at the initial stage then it will certainly demoralise the victim and she will not put forward her complaint in a proper manner.

i) To stop misuse of the POSH Act, it is must to give a concrete definition of Sexual Harassment at the workplace.

j) A total Implementation of Act has not been achieved, even the basic things like displaying the board of the Anti-sexual Harassment Committee at the entrance of any institution and formation of ICC committee's are not on ground.

Early Warning and Communication for DRR&R, 16-18 Nov 2021

Key Takeaway/Recommendations

a) 3D physics-based ground-motion simulations represent a viable alternative to empirical ground-motion model outputs for capturing earthquake hazard (and therefore risk) in both research and practice.

b) It always remains necessary to better understand the performance of earthquake loss model predictions relative to actual consequences from seismic events, so that appropriate advancements can continually be made in the underlying methodologies.

c) There is a significant need for innovative frameworks and detailed studies focusing on the simultaneous and/or sequential effects of multiple hazards, to better understand and model cascading consequences.

d) Emerging technologies and improved data processing capabilities continue to pave the way for increasingly streamlined and efficient risk transfer tools in the catastrophe insurance market.

e) Earthquake early warning (EEW) is a relatively new innovation in DRR, with clear potential to enhance societal recovery from earthquake disasters.

f) Passive control systems (e.g., seismic isolation and damping devices), for the reduction of seismic actions on construction, have been extensively studied during the past few decades, creating new opportunities to design more resilient structures and infrastructure.



g) Damage to non-structural components and building contents often results in the majority of total direct event losses for building structures and significantly contributes to the loss of functionality and downtime.

h) Adequate knowledge on the current state of structural systems is essential to properly assess their safety against extreme events and to allow stakeholders and asset managers to take informed decisions for retrofit prioritization and risk reduction interventions.

Multi Sector Coordination for Emergency Shelter Preparedness for Response including Eco-DRR in India, 16-18 Nov 2021

Key Takeaway/Recommendations

a) Multi-sectoral Handbooks have been developed so that we can minimise the adhoc approaches and we can maximise the benefits of our efforts and that will eventually help in maximising the resources.

b) The roles and responsibilities including the capacities of the Non-Government actors including the civil society and other community-based organisation, their roles and performance can be improved that would be great contribution in reducing the impact of disasters.

c) Irrespective of the gender, age, caste, faith, etc., a person should be treated with dignity and the basic human rights of the people should be protected.

d) Any response requires a well-coordinated, multi-sectoral and Inter agency approach that empowers the communities.

e) By Adapting the proper coordinating mechanism approach and processes, we can ensure to follow the chronologically right steps towards strategizing the future plan of action.



f) Community participation and local governance is important for holistic approach towards emergency preparedness and response.

g) Humanitarian actors should ensure that the relief or humanitarian assistance reaches to the last affected person and also emphasized upon awareness to the affected victims about the entitlements like ex gratia.

h) Short-to-medium term and long-term protection response plans must be integrated in the agenda

of the shelter sector and other sectors.

i) Vulnerability mapping can help in identifying the vulnerable population of the risk prone area/community.

j) We must take cognizance of challenges at field level, strategic level or at operational level and ensure the coverage of geographical area and all vulnerable groups.

Community Based Disaster Risk Reduction Management for Communicable Diseases, 22-24 Nov 2021

Key Takeaway/Recommendations



a) Emerging infectious diseases in humans has increased.

b) The air pollution water pollution should be monitored and controlled.

c) The water pollution leads to many foods borne disease.

d) Ensure clean water to the community.

e) WASH, the water, Sanitation, and Hygiene must be monitor.

f) The water born disease is a serious problem of public leading to very risk burden.

g) The preventive measures should be focused on Poultry faecal wastes, Cattle feedlots, Wild life refuges, Population pressure on Infrastructure.

h) The standard operating Protocol should be followed in waste disposal.

i) Awareness on the disease should be created among the community.

j) The control of mosquito growth is important to prevent the vector borne diseases.

k) The community must be aware of the importance of Disaster risk reduction for their own well-being.

Pilot Session on Emergency Preparedness Response Handbooks on Wash Sector, Ecosystem Based DRR-Gujarat, 25-27 Nov 2021

Key Takeaway/Recommendations



a) WASH sector is likely to play a central role in the entire gamut of disaster risk reduction. Adaptive approaches need to be incorporated and popularized for the developmental plans and practices. Utilising WASH facilities during disasters and disasters affected WASH facilities needs to be addressed and we need to follow a resilient approach for the same.

b) Organizations working with sanitation can provide the knowledge and help design the various types of temporary toilets keeping in mind the various types of population. Quick technological structures should be considered for the sludge treatment of temporary toilets without contaminating Groundwater.

c) The affected communities not just had to face the losses of their housing but also faced issues regarding WASH such as inadequate amount of safe drinking water.

d) The importance of bottom-up approach in disaster management, comprising 'Community-Based Disaster Risk Management' (CBDRM) which can transform vulnerable communities to resilient communities.

e) Ecological engineering is the design of sustainable ecosystems that integrate human society with its natural environment for the benefit of both.

f) Water utility should be managed by Gram Panchayats. GP will be the first respondents for any emergencies and they will be responsible for planning, operating and maintaining the whole water system.

g) Supporting monitoring and evaluation including conducting third party verification and spot checks to help authenticate the real-time monitoring and information dashboard hosted by the Ministry Jal Shakti.

Pilot Testing of Eco System Based Disaster Risk Reduction Module -2, 29 Nov-01 Dec 2021

Key Takeaway/Recommendations

a) Capacity Building activities to be taken among different stakeholder groups – capacity of LSGs, Engineers to be strengthened.

b) Need for Strengthening LSGs role in disaster management using various tools - Local level DM Plans, Master Plans, regulatory instruments etc.

c) Gaps in data sharing to be addressed.

d) Awareness on Climate Change and Disaster Management among Gram Panchayat.

e) Necessary funding, technological and scientific support to be given to Gram Panchayats for developing long term development plans.

f) Engage people into Greening Programs to develop a sense of connection and ownership.

g) Incorporate Coastal shelter belt plantations and Raise ecological balance in Himalayan regions.



h) Create awareness on Climate Change and Disaster Management among Gram Panchayats.

i) Provide necessary funding, technological and scientific support to Gram Panchayats that can help in developing long term development plans.

j) DRR communities can collaborate with NIDM in preparations of Agricultural Disaster Management Plan.

OTP on CCDRR, 07-09 Dec 2021

Key Takeaway/Recommendations



a) Sick students, teachers and other staff should not come to school.

b) Enforce regular hand washing with safe water and soap, alcohol rub/hand sanitizer or chlorine solution and, at a minimum, daily disinfection and cleaning of school surfaces.

c) Ensure water, sanitation and waste management facilities and follow environmental cleaning and decontamination procedures.

d) Promote social distancing (a term applied to certain actions that are taken to slow down the spread of a highly contagious disease, including limiting large groups of people coming together).

e) Understand basic information about corona virus disease (COVID-19), including its symptoms, complications, how it is transmitted and how to prevent transmission.

f) Stay informed about COVID-19 through reputable sources such as UNICEF, WHO and national health ministry advisories. Be aware of fake information/myths that may circulate by word-of-mouth or online.

g) Update or develop school emergency and contingency plans.

h) Work with officials to guarantee schools are not used as shelters, treatment units, etc.

Rapid Visual Screening of Build-up Facilities, 07-12 Dec 2021

Key Takeaway/Recommendations



a) There is a need to understand rapid visual screening techniques to analyze the risks related to the health/safety of the building.

b) The earthquake zonation map has been updated to create flexible steps towards vulnerability.

c) Importance of performance of the building and their structural issues during earthquake shocks. Physical and socio-economic losses due to the issues such as lack of knowledge and capacity of supervisors.

d) It was suggested to create a database, based on structural failure in India for forensics purpose. Focus on household hazards along with other institutional buildings should be given.

e) It is important to identify the geographically vulnerable areas in India with the help of six major earthquakes since 1819 to understand the vulnerability measures.

f) Listing out Disaster Risk Reduction (DRR) measures by highlighted modifications incorporated in Indian Standard (IS):13920 in 2016. Discussion on time period calculation ISO 1893.

g) Evaluation of damage patterns of different types and subsequent retro fitting of the buildings. Mapping of structure vulnerability in build-up facilities.

Disaster Risk Reduction of Museums, 07-09 Dec 2021

Key Takeaway/Recommendations



a) Disaster risk reduction is a human right.

b) Thinking ahead of all the possible risks and preparing is the key.

c) The first aid to cultural heritage in disaster includes the immediate and interdependent actions taken to stabilize and reduce risks to endangered cultural heritage during and after an emergency.

d) The four stages of emergency response are situational analysis, onsite damage and risk assessment, security and stabilization, early recovery.

e) The above points can be addressed with the help of documentation, risk management, communication and coordination.

f) The response plan for disasters should also consider the possible secondary hazards.

g) The important points for safety and security of the museums are training (new entrant and refresher), risk audit, use of latest state of-the-art gadgets, addressing all issues and grievances for immediate corrective measures, monitoring and security check.

h) Community engagement, thorough training of the staff, motivation of the staff and detailed disaster risk management plan are crucial for the disaster risk reduction to museums.

Public Participation for Disaster Risk Management in Riverine plain in collaboration with CSJM University, Kanpur UP, 07-09 Dec 2021

Key Takeaway/Recommendations



a) The space technology can assess the damage and visualize the peculiarity of phenomenon Risk resilience is an important factor for risk transfer in terms of insurance

b) Space based observation contribute to all phases in disaster management cycle including prevention, preparedness, early warning, response and reconstruction.

c) Before disaster takes place, remotely sensed data provides information for systems and models which can predict disaster and provide early warnings

d) Satellites are also reliable and rapid communication, observation and positioning tools, which became vital to relief operation when ground based infrastructures are damaged

Sustainable Development Goal No. 9 & 11: Integration with Disaster Risk Reduction (DRR), 08-10 Dec 2021

Key Takeaway/Recommendations

a) Basic Understandings of the Sustainable Development Goals and how they are integrated with Disaster Risk Reduction

b) Performance of States in achieving SDG thereby contributing to Disaster Risk Reduction of communities

c) Contemporary Issues and Challenges in achieving goals mentioned in SDG



Occupational Health Safety in Disaster Risk Management, 08-10 Dec 2021

Key Takeaway/Recommendations

a) Need to develop an understanding in the field of occupation Health and Safety in the industries and skills for making a disaster management plan for a industry.

b) Detailed research and Policy advocacy is required for the domain of occupation Health and safety of workers in an industry.

c) Need to develop an understanding how to identify risk activities and conditions in the industries.

d) Concept of Personal Safety at workplace needs to be addressed at the local industry level.

e) Hospital employees must be educated in the field of hospital preparedness prior to the arrival of victims, triage.

f) There is a need to explore the domain of ergonomics at the workplace in detail.

g) Workers on the job should be educated about the rights they have under the BOCW Act.



h) Need to identify various mitigating strategies to prevent industrial disasters which alter the safety of workers at workplace.

i) Need to prioritize the issue of safety of workers at workplace in every industry in terms of occupational health and safety.

j) Need to explore ways to design and gauge impactful research that would lead to the long term solutions to the industrial disasters and safety of workers.

International Workshop on Role of Early Warning System in Geo- Meteorological Hazards Risk Reduction, 8-10 Dec 2021

Key Takeaway/Recommendations



a) There is a need to focus on improving capacity to analyze and interpret climate data, weather forecasting capabilities.

b) We need to focus on establishing denser networks comprising observation, forecasting, and monitoring infrastructure – including automatic and remote sensing technologies –which can be rapidly deployed, are relatively easy to maintain, and simple to use.

c) Efforts should me made towards recovering historical data related to disasters. We have to looks for ways towards building support and awareness among local communities that have a demand for climate information and warnings.

d) Promoting greater collaboration between the providers and users (including user-agencies and local communities) of climate information.

e) Understanding the division of role and responsibility in warning chain between the appointed Disaster Management Professional and the National Stakeholders is important.

f) Revisiting SoPs for Early Warning and Mitigation System to ensure that the roles of all agencies are clearly defined and that there is better communication amongst stakeholders needs to be carried out from time to time.

g) There is a need to Promote stronger coordination, cooperation and communication between key stakeholders using the latest multi-mode communication.

h) Synergizing the SOPs across agencies, especially among various stakeholders (including Media) and administrative workforce.

Stress Management During Pandemic, 09-11 Dec 2021

Key Takeaway/Recommendations



a) Focus should be on understanding stress and mental health during disaster, opting stress management techniques to tackle the effect.

b) To recognize the importance of Breathing techniques in managing stress and improving the socio-economic condition during the pandemic.

c) Understanding and getting aware of mental health and its issues during pandemic for improving the overall health condition of an individual.

d) Emphasize the role of sports in improving mental health.

e) Understanding Stress and its types and ways to cope with it during the spread of CORONA Virus.

f) Understanding Stress with the Behavioral techniques of stress management.

g) Spreading the awareness of the importance of Psycho-social care in disaster management

Basics of Disaster Management, 13-15 Dec 2021

Key Takeaway/Recommendations



a) Disaster Management Related Concepts, Terminologies, and Frameworks About the disaster related basic concepts and terminologies, disaster risk trends, major frameworks, approaches, tools, and methods for disaster risk reduction, Factor and significance, Natural and Manmade Disasters, Causes and Effects of disaster, Dos and Don'ts. Disaster Management Plan,

b) Hazard, vulnerability and Risk assessment

Hazard assessment, Elements at risk and vulnerability assessment, Types and methods of risk assessment, risk evaluation, cost–benefit analysis

c) Natural and Man-made Disaster

About the different types of Disasters – Natural Disasters and Man-made Disasters. What are its causes and how each disaster impacts on the environment.

d) Geospatial Technology for Disaster Risk Management

Role of Geospatial Technology for Disaster Management. Basic concepts of GIS and remote sensing and their components.

e) Risk Information and Communication for Risk Reduction Planning

How risk result/information can be communicated effectively by visualization of risk information, map interpretation, web portal in order to raise disaster risk awareness for risk reduction planning and Early warning system

Foundational Course in Food Security and Nutrition in Emergencies, 20-22 Dec 2021

Key Takeaway/Recommendations



a) Understanding the right differences between various concepts of disaster is important to recognize and analyze environmental threats and develop response models.

b) Coping strategies for survival during an emergency can be several but may not always deliver a positive outcome.

c) Disaster Management Cycle and Plan have undergone substantial changes since the '90s in India and its paradigm shift from relief to preparedness and mitigation has been an important realization in the field of disaster management.

d) Although on papers, India adopts a multi-disciplinary approach for disasters, examples, and case studies during the session has manifested the level of challenges faced during its practical application.

e) The institutional setup for disaster management has happened on a massive scale starting from the establishment of the High-Powered Committee in 1999 however, many existing disaster concepts, classification, and strategies and still disputed and in this regard, development is still happening, and revisions are being done.

f) Food Insecurity of a region or a community or individual can be measured using the IPC Scales.

g) The concepts of food and nutrition security since the 1970s have been moulded, upgraded, simplified, and made complicated as per the related situations and challenges of a particular region or a community. Although we now consider definitions by agencies like the United Nations or Red Cross Society or other Government Organisations to assess a situation, the meaning of food and nutrition security and insecurity can originally be only measured by the survivor.

Big Data Applications in a Multi-Hazard Disaster Under Climate Change, 21-23 Dec 2021

Key Takeaway/Recommendations



a) The major challenge in big data analysis is its analysis, visualization, transferring, searching, transferring, and privacy.

b) The four V's (Volume, Variety, Veracity, and Velocity) parameters need to be monitored for big data analysis. The value of data is also an important issue.

c) The framework for early forest fire risk prediction based on Nepal's climate and hydrology conditions variables.

d) The Transportation mode impact on climate change mitigation policies specific to planning, regulatory, economic, information and technology, and the policy bundles for mitigation.

e) The research perspectives for combining terrestrial laser scanners (TLS) for three dimensional modeling along with GNSS, UAV, and MMP (Mobile mapping technology).

f) Incorporating artificial intelligence in different disasters like earthquakes, floods, and landslides will provide efficient disaster response and management system.

DRR, School Safety and Safe -Reopening of Schools in the Pandemic, 21-23 Dec 2021

Key Takeaway/Recommendations



a) The issue of school safety is of national importance and that is highlighted by its inclusion in India's National Disaster Management Plan (NDMP). NIDM rightly understood the importance of School Safety and its importance early on as evidenced from its repeated and singular focus on this theme.

b) School safety has taken on a new shape and dimension in this era of the pandemic as much more concern on the health and WASH aspects is necessitated.

c) Mental health and psychosocial support ought to be an integral part of the larger theme of school safety.

d) A series of re-opening measures have been taken by various states governments and other actors (CSOs, schools, teacher's associations). A compendium of good practices needs to be document the best among these measures.

e) School safety cannot be a one-off process and needs to be a continuous cycle which keeps on incorporating greater number of stakeholders and students.

f) The almost two years of schooling lost for India's students, especially those attending schools in rural and remote areas has reversed the gains made in education and learning outcomes. This loss needs to be captured well so that appropriate mitigation strategies can be devised to address the dire situation.

g) For instance, we need gender disaggregated data on how many students had to drop off due to the pressures of the pandemic.

Community Based Disaster Risk Reduction and Management, 21-23 Dec 2021

Key Takeaway/Recommendations

a) Concept of Disaster, Disaster Management cycle- connect to sustainable development disaster management practices in the national and international level sustainable development programs for a better disaster management Community Based Disaster Risk Reduction (CBDRR) and Community

b) Engagement Need of equipping local self-government for better disaster risk reduction importance of early warning system and capacity building measures Capacity building measures (Post and Pre disaster phase) Psychosocial Support for Community Resilience against Disaster Psycho-social dimensions of disaster Rebuilding social support system and psychological care techniques Community based DRR Best Practices

c) Community based disaster risk reduction plan Simple and effective strategies are framed in tackling disasters like Cambodia flood shelter, Assam flood shelter and Ethiopia check dams



Sustainable Development Goal No. 6 & 14: Integration with Disaster Risk Reduction (DRR), 22-24 Dec 2021

Key Takeaway/Recommendations

a) Our planet has sufficient fresh water for all but bad economics and poor infrastructure can screw the whole thing. You will know about it.

b) Careful management of the essential global resources.

c) Current status of SDG in India 6 and 14

d) How to stop water pollution and preserve drinking water.

e) Fundamental concept of SDG

f) A brief history of SDG



Climate Change and Disasters - Innovative Geospatial Solutions, 27-29 Dec 2021

Key Takeaway/Recommendations

a) Immediate action is required towards disaster management through Geo-informatics.

b) Need adoption of advanced tools and techniques in monitoring, evaluating, and predicting the disaster.

c) Prepare an integrated methodological framework for disaster management.

d) It required organizational and institutional collaboration toward planning and management.

e) Increase investment in sustainable soil management.

f) Implementation of suitable land-use policy.

g) Establish soil information systems.

h) Increase soil organic matter content and supply natural manure to the soil.

i) Take action to keep the soil surface covered



Geospatial Applications for Disaster Management, 28-30 Dec 2021

Key Takeaway/Recommendations

a) The geospatial information aids to mitigate and manage disasters.

b) The geospatial technology is key in processing, analysing, and predicting large geospatial data to extract information.

c) Responsible decision-making leads to minimal disasters only when citizens are given proper education on the topic.

d) Non-structural measures are real time flood forecasting, flood plain zoning, flood inundation mapping, and dam break flood simulation.

e) Dam break flood analysis basically estimates the flood, flood routing, application of remote sensing and GIS in flood management, development and management of hydrological database.

f) Geospatial data is basically the information that describes objects, events of locations on or near the surface of the earth. Information on remote sensing data such as Geographic Information systems(GIS) can be availed through maps of band wise IRS images and FCC.



School Safety, 29-31 Dec 2021

Key Takeaway/Recommendations

a) Understanding School Safety in The Overall Disaster Management Planning And Practice

- Basic concept of school safety
- Impact of disasters on school children of various age groups, at different levels/ phases (preparedness, response, mitigation, etc) and need of DRR for safe schools. Basic concept of Disaster Management and Institutional Mechanism.
- Vulnerability profile of India
- Linking school safety with whole school concept
- Linkage of RTE, SSA and UNCRC.
- Education in emergency
- HVCR Assessment in school tools and Techniques
- Mitigation And Preparedness for School Safety Structural and non-structural safety aspects
- Introduction of school DM Plan template
- Management of School as relief centers
- Roles and responsibility of various task forces (Fire, safety in schools, First aid skills, search and rescue technique, etc.).



b) Planning for School Safety Inclusive approach (gender, children with disability, HIV under RTE mandate) and disaster safety in schools.

c) Planning For School Safety and Addressing Special Needs Psycho-social care and support for children of various age groups

Webinars

Building Urban Resilience: Experiences and Initiatives in collaboration with SPA, Bhopal, 04 Oct 2021

Recommendations/Key Takeaway



a) Over 93% of all informal structures in slums are self designed, state resources and subsidies does not reach to slum settlements.

b) In the past 5 decades MDGs and SDGs have not been able to achieve much in the slum spaces of Mumbai like Dharavi-Mathare which is among world's top contagion risk hotspot mapping cities and largest informal settlement in south Asia.

c) The settlement digital profiling can help identify and prioritize the needs at the settlement level. This data has incredible value for bottom up policy formulation and developmental agenda setting.

d) Technology should be used for risk assessment for climate and disaster resilience at hyper local level which means at neighborhood and building cluster level.

e) Pioneering AI powered risk informed planning equipping each neighborhood with its risk data.

f) Vision for resilience need to be long term measures including land value capture, sustainable options livelihoods and social issues.

g) Resilience can be achieved when marginalized people of any developing country are taken care of most importantly in terms of space and shelter

h) Land use planning may engage some informality to infuse some alternative local ways which are capable to achieve resilience at a community level.

PM 10 Point Agenda No. 1, 8 & 9 SDG: 3 & 4 Self Care in Disaster & Emergencies: A Pathway to Mental Well Being in Collaboration with Manas Foundation, 04 Oct 2021

Recommendations/Key Takeaway



a) Practice healthy sleep habits and listen to your body's needs. Going to bed at an earlier time, ensuring that your bedroom is comfortable and quiet, and practicing good screen time habits before bed can help you enjoy a more restful sleep.

b) Take care of your health needs. Schedule appointments with your doctor for regular checkups, stay on top of your medications, therapy appointments, chiropractic adjustments, or any other care you require to maintain your physical health.

c) Practice healthy eating habits. Eating regularly can help you to feel better, even if you can't manage a nutrition-packed, home-cooked meal set aside time to talk with your therapist or a trusted friend, read, reflect, journal, or otherwise engage with your thoughts.

d) Self-awareness is an important part of self-care, so don't neglect your emotions!

PM 10 Point Agenda No. 1 on DRR Sendai Framework for Disaster Risk Reduction in collaboration with Madhya Pradesh State Disaster Management Authority, 05 Oct 2021

Recommendations/Key Takeaway



a) The Sendai Framework has strategic targets to advocate for the critical work that remains to be done and establish a roadmap toward full implementation.

b) A holistic and integrated approach must be evolved toward disaster management with emphasis on building strategic partnerships at various levels such as Community based DM, Capacity development in all spheres & Cooperation with agencies at national and international levels

c) The Government has decided to enact a law on disaster management to provide for requisite institutional mechanisms for drawing up and monitoring the implementation of the disaster management plans, ensuring measures by various wings of Government for prevention and mitigating effects of disasters and for undertaking a holistic, coordinated and prompt response to any disaster situation.

d) Disaster risk governance refers to the way in which the public authorities, civil servants, media, private sector, and civil society coordinate at community, national and regional levels in order to manage and reduce disaster and climate related risks.

e) Build back better recovery applies to all aspects and sectors of post-disaster recovery. For the purpose of infrastructure reconstruction, Build Back Better concertedly supports communications, education, energy, health, housing, transport, and water and sanitation. In livelihood recovery, Build Back Better extends to such sectors as agriculture and livelihoods, commerce, employment, industry, and public services. Build Back Better also applies to crosscutting issues such as environment, gender, and governance.

f) Effective mainstreaming results in DRR being embedded in the day-to-day operations of national and local organizations, in various sectors, with sufficient resource such as human, financial, technical, material, information – allocated to manage.

2nd Phase of online training programme on India Disaster Resource Network-(IDRN) for Punjab State, 05 Oct 2021

Recommendations/Key Takeaway



a) For IDRN portal updation needs to be sensitized on Punjab state DC/DM officials.

b) Face to face training programme required for All district level user id and password have to be shared with district officers.

c) DC/DM / DDMA / SDMA nodal officer profile have to update on district profile.

Climate Conversation Adaptation in Mountain Ecosystems at International Adaptation Futures Conference, 4-8 October, 2021 A Fragile Futures? Glacial Risks and Resilience in Mountains, 05 Oct 2021

Recommendations/Key Takeaway



a) To make matters worse, the implementation of glacial lake outburst floods early warning systems has been very limited in South Asia.

b) Early warning systems involve the use of remote observation including satellite imagery and seismometers to sense tremors at an initial stage.

c) Coupled with field data and mapping of past events, this identifies potential glacial lake bursts early on to minimize risk.

d) These systems could further advance to include water sensors and a codified warning system, using Smartphone's and other technology, to alert downstream communities and ensure evacuation of the population.

e) Both a robust early warning system and a framework for infrastructure development that does not exacerbate future risks are still lacking.

f) Lack of implementation is often a result of the remote location, fragile terrain and limited information regarding the risk scenario, leading to a lack of urgency.

g) Bhutan was the first South Asian country to adopt an integrated method to reduce glacial lake outburst flood events under the United Nations Framework Convention on Climate Change National Adaptation Programmes of Action and has been using low-cost techniques such as siphoning off water from critical lakes and enhancing the technology of early warning systems.

h) The areas countries could collaborate on include mapping potential risk zones, viewing the mountain terrain as one area; increasing the monitoring of glacial lakes; incorporating effective ground-based early warning systems at critical, often-unpredictable lakes; and – most importantly – increasing investment in glacial research.

PM 10 Point Agenda No. 01, 08 & 09; SDG:3&4 Ensuring Child Rights & Promoting Resilience: A Grassroots Level Case Study Organized by NIDM South Campus, 05 Oct 2021

Recommendations/Key Takeaway



a) Child protection policies are an absolute requirement for organisations working with children and youth in general but particularly for those working with vulnerable and experiential youth.

b) Don't Overburden Children and Recognise their other dimensions of Participation Adequate planning and orientation need to be given to participating children and adults so that experiential youth are not excluded or discriminated against in situations that involve other children despite the good intentions.

c) Setting up ground rules for behaviour and expectations helps to maintain the attitudes, expectations and behaviour in advance and also

provides a space for adults and children to remind each other of the purpose of their participation.

d) Set up monitoring mechanisms and child protection policies and procedures in relation to children's participation; and Develop separate participation policies for children and youth in the future, recognizing the differences in their capacities and protection needs.

e) Encourage member organizations to hire qualified staff members to support child for their right for well being. Establishing Standards and Procedures on Child Protection and Child Participation

Enhancing Peoples Capabilities for Self Development through Improved Livelihood System of Rural Community in India In Collaboration With Preservation and Proliferation of Rural Resources and Nature (Pran), Gaya, 06 Oct 2021

Recommendations/Key Takeaway

a) System of Root Intensification method of crop cultivation are getting important place among small and marginal farmers in Gaya, Nalanda and Munger districts of Bihar. PRAN (Preservation and proliferation of Rural Resources and Nature) through SRI. The SRI technique involves ecological, organic ways to promote root growth by spacing mustard plants through nursery technique.



b) Capacity of agricultural support services (Knowledge intensive) – suitable varieties, preparation of seedlings, irrigation and nutrient management). The system of root intensification (SRI) has helped farmers increase significantly yield of mustard, experts said today, claiming that extensive use of the technique could bring down the countries growing edible oil import bill.

c) Organic agriculture considers the medium- and long-term effect of agricultural interventions on the agro-ecosystem. It aims to produce food while establishing an ecological balance to prevent soil fertility or pest problem.

d) The impact of organic agriculture on natural resources favors interactions within the agro-ecosystem that is vital for both agricultural production and nature conservation. Ecological services derived include soil forming and conditioning, soil stabilization, waste recycling, carbon sequestration, nutrients cycling, predation, pollination and habitats.

e) Capacity in the context of village government can be defined as the ability of the Village in performing its functions and roles effectively, efficiently and sustainably. While strengthening is a variety of efforts to encourage and develop the Village in order to be independence. Village Strengthening is related to the performance of the village government and the role of the community in sustaining the village government capacity.

Floods in Himalayan Regions Organized by NIDM, 07 Oct 2021

Recommendations/Key Takeaway



a) Catastrophe risk must be managed with a clear vision, expertise, strategies, rules, money, and cooperation across sectors, taking into consideration the increasingly systemic character of disaster risk.

b) To build catastrophe-resilient societies, public and private investment in disaster risk prevention and reduction through structural and non-structural methods must be increased.

c) Both direct Automatic Weather Station (AWS)/ Automatic Rain Gauge (ARG) and remotely sensed Doppler Weather Radar observing networks must be improved (DWR) needs to be improved for enhancing prediction capabilities.

d) To ensure hourly monitoring of cloud strom and flood, it is necessary to integrate a significant volume of heterogeneous dataset.

e) The science and technology required to effectively anticipate heavy rainfall occurrences must be improved using the most recent advancements and state-of-the-art technologies.

f) The vulnerable community must be trained before the Early Warning System may be used effectively.

g) Because there may be significant gaps in the observing system, the number of observation systems should be increased and made operational.

h) Stakeholder coordination and information sharing must be promoted.

i) We must also concentrate on disseminating knowledge and information in local languages in order to reach populations living in distant places with little knowledge of Hindi and English

Consultation meeting on Multi Hazard Risk Assessment for Cities in Collaboration with IIT Indore, Madhya Pradesh, 07 Oct 2021

Recommendations/Key Takeaway



a) National Institute of Disaster Management has been mandated under the Disaster Management Act 2005 for policy planning and capacity building on all aspects of disaster management within the country and outside.

b) The Ministry of Home Affairs in cooperation with UNDP has carried out "Disaster Risks and Resilience in India - An Analytical Study" at state/UT levels.

c) Majority of the Indian smart cities are vulnerable to urban natural disasters.

d) There is inadequate knowledge on the impact of disasters in different sectors of economy e.g., Agriculture, natural ecosystem, health, biodiversity, coastal zones, etc.

e) In order to build and strengthen the resilience of the urban population to reduce disaster risk a tool for performance measure of disaster risk management and risk information conveying platform is required at city level.

f) The state level information regarding the hazard risk and vulnerability are available with State Disaster Management Authority but such kind of crucial information is not available at the city levels.

g) Nodal officers from selected four cities supported to provide data regarding this study

Basic of Disaster Management in Collaboration with Dada Ramchand Bakhru Sindhu mahavidyalaya, Nagpur Maharashtra, 08 Oct 2021

Recommendations/Key Takeaway



a) There is an important practical application of the definition of disaster in the realm of disaster management. Such definition helps provide a common concept and theme throughout disaster management activities. Thus, the chosen definition is valuable for purposes of policy, organization, planning, and legislation.

b) Natural phenomena such as earthquakes, cyclones, volcanic eruptions, tsunamis, wildfires, floods, landslides, and drought still persist. So, does their basic man-made counterparts such as major accidents. These disasters continue to cause grievous human casualties, economic and social loss, and damage to the environment.

c) The primary responsibility for dealing with disasters must rest with the national government. In addition, an important disaster management concept is to ensure optimum use of existing resources, the majority of which tend to be under government direction.

d) Awareness of the youth on the importance of skill training and education and strategy to be adopted would be through skit, group work interventions. Mobilizing and networking with NGOS and government sectors to enhance their quality of life through various skill training programmes.

e) In framing a national disaster management policy, these organizational aspects must be carefully considered and included in the relevant policy statement. In this regard, it is usually prudent to frame the policy so that minor adjustments to organizational arrangements can be made without having to amend the policy itself.

f) Any disaster management organization must therefore cater to appropriate community involvement and participation. This applies particularly to relevant aspects of preparedness, response, and recovery action. In fact, in framing and/or checking organizational effectiveness, it is advisable to consider requirements at community level first.

16 Anniversary of Kashmir Earthquake Building Back Better in J&K Lessons Learnt from 2005 Earthquake in Collaboration with Govt. of J&K and Institution on of Engineers, India, 08 Oct 2021

Recommendations/Key Takeaway

a) Mitigation through design and construction of earthquake resistant structures is the need of hour.

b) Capacity building and training of local masons especially in rural sector is important for credibility and sustainability of seismic resistant building technology.

c) 2005 earthquake brought better understanding of the overall earthquake risk and incorporating it in development planning.

d) Multi hazard risk assessment study by RMSI showed two key outcomes: first development of Disaster Risk Database Solution (DRDB) and development of Integrated Operational Forecasting System (IOFS).

e) Resettlement needs lot of consideration and a fine balance should be made between safe sustainable solution and socioeconomic aspect

f) Building back better should be promoted not just in physical aspect but in socio economic aspect

g) Improving behaviour of masonry walls by grouping them like a box along with the roof and the foundation.

h) In new constructions safer dhajji dewari tradional styles are getting lost and should be reinvented again.



Disaster Resilient Airport Infrastructure Organized by NIDM, 08 Oct 2021

Recommendations/Key Takeaway

a) To understand the key issues and challenges (structural and non-structural) in building airport resilience.

b) To explain guidelines, policies, Airport Disaster Management Plans and need of trainings and mock drills for disaster resilient airports.



Essentiality of Empathy and Sensitivity for Women and Child Centric Interventions and Policies, 08 Oct 2021

Recommendations/Key Takeaway

a) What it means to be empathetic and sensitive?

b) Difference between empathy, sympathy and compassion

c) Busting misconception around empathy

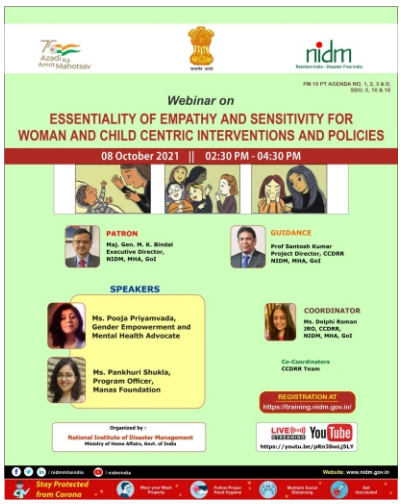
d) Women, children and disasters

e) Gender roles and their impact on well-being of women especially unpaid care

f) work Psychosocial and mental well-being in post disaster phase

g) Differential impact of disasters on women and children

h) Case studies of women in disasters: Female frontline workers



Pandemic - Impact on Children in Juvenile Homes, Shelter Homes, Victims of Child Abuse and Juvenile Justice in collaboration with Tamil Nadu Dr. Ambedkar Law University, Chennai, 09 Oct 2021

Recommendations/Key Takeaway



a) Juvenile justice policies should be based on data and research about youth development and delinquency, and effective responses to prevent reoffending and promote improved outcomes for youth, communities and families.

b) Funding should be prioritized for juvenile justice programs, policies and practices that are backed by research and evidence demonstrating effectiveness

c) Objective assessment tools should be used to inform decisions at various stages of the juvenile justice process so that interventions are responsive to the risks, needs and strengths of youth.

d) Conditions in residential facilities and other programs should be humane, supportive of rehabilitation, developmentally appropriate and "traumainformed," incorporating practices that understand, recognize and respond to trauma.

e) System-involved youth, families, crime victims and survivors impacted by the juvenile justice system should play a central role in informing the development of juvenile justice policy and finding solutions to hold youth accountable in age appropriate ways.

Disaster and the Built Environment in collaboration with Dr. YSR Architecture and Fine Arts University (YSRAFU), Andhra Pradesh, 11 Oct 2021

Recommendations/Key Takeaway



a) Need to adopt the area specific traditional and indigenous technologies to minimize the disaster risks.

b) The paradigm shift should consider built environment address the issues and challenges. The movement from "access to infrastructure" to infrastructure should be adopted.

c) The new technologies adopted at each level.

d) Key focus should be for resilient communities as a matter of practice

e) The resilient parameters should be included and implemented at policy level implications.

f) There is a need for formal effort for securing infrastructure by leveraging the strengths in consideration with history of the country. Regular safety audits should losses at local level.

g) The paradigm shift should consider built environment address the issues and challenges. The movement from "access to infrastructure" to access to resilient infrastructure should be adopted.

h) The new technologies in Design, implement and monitoring adopted at each level. be on Building awareness, capacities for resilient communities as a matter of practice in built environment

i) The resilient parameters should be included and implemented at policy Need to invest in coherent efforts across various stakeholders for a sustainable development.

j) There is a need for formal effort for securing infrastructure by leveraging the strengths in consideration with history of the country. Regular safety audits should be carried out to minimize the disaster losses at local level.

PM 10 Point Agenda no. 1, 8 & 9 SDG: 3 & 4 Climate Crisis and Children: A Media and Communication Perspective in Collaboration with JIMS, Greater Noida, UP, 11 Oct 2021

Recommendations/Key Takeaway



a) Cutting greenhouse gas emissions so that the average rise in the global temperature is limited to a maximum of 2° Celsius, and ideally to 1.5°C.

b) Prioritizing the needs of the most vulnerable in climate change adaptation efforts, particularly children – who will bear the brunt of climate change far longer than adults.

c) Reducing inequities among children now to promote their future resilience to climate change and other disasters or crises.

d) Listening to and acting on children's perspectives on climate change.

e) Providing children and youth with climate change education, awareness raising and training.

f) Aligning and coordinating work on climate change adaptation, preparedness and disaster risk reduction at national and sub-national levels.

g) Investing in children as part of national climate plans on mitigation and adaptation.

h) Scale-up proven approaches to address the changing needs of children

International Day of Disaster Reduction 2021 in collaboration with Institute of Home Economics, University of Delhi, 11 Oct 2021

Recommendations/Key Takeaway



a) Introduced the key concept of Disaster Risk Reduction to the students and how it aimed at preventing new and reducing existing disaster risk and managing residual risk for strengthening resilience and therefore to the achievement of sustainable development.

b) Understood the interrelationship between SDG-13 and Disaster Risk Reduction. Speakers also highlighted that how the SDG-13 goal provides an opportunity for India to align its developmental and disaster risk reduction-related objectives and priorities with global targets.

c) Highlighted the various challenges to Disaster management especially the role of technology in disaster management cycle.

d) Webinar also instated the role of women's leadership in Disaster Risk Reduction by building their capacities in today's scenario and building resilience.

e) Understood the various Eco-system based approaches to climate change adaptation and disaster risk reduction especially EbA and EcoDRR.

f) Reinforced the role of Eco-DRR harnesses ecosystems to prevent, mitigate or buffer, natural hazards and climate change impacts.

g) Understood the nature based solutions or ways for reducing climate change impacts.

h) Highlighted and introduced the four phases of disaster management cycle namely Mitigation, Preparedness, Response, and Recovery to the students

The Epidemic Diseases act, 1897 and DM Act, 1987 & DM Act, 2005: Government and Public Relations in collaboration with Sri. R.K.M. Law College ,R.V.S. Nagar, Chittoor, 11 Oct 2021

Recommendations/Key Takeaway



a) The Epidemic Diseases Act is the smallest act with only four sections out of which section two is important as states have been given special powers under this act.

b) It is important to review the act with reference to its current relevance, its adequacy to tackle deadly virus outbreaks, surveillance and privacy issues and, most importantly, its limitations.

c) The act fails to define a “dangerous epidemic disease.”

d) There is no clarity on the criteria that need to be applied for declaring a disease as “dangerous” or “epidemic.”

e) The act focuses on the government's powers during an epidemic, but does not specify its duties in controlling/preventing an epidemic, nor does it enunciate any rights available to the citizens in the event of an outbreak.

f) Instead of relying upon colonial-era laws, using brute force in enforcing quarantine/lockdown measures and resorting to provisions like Section 144 Code of Criminal Procedure (CrPC), a new law is required to address the lacunae in the existing structure.

g) COVID-19 is the first pan India biological disaster being handled by the legal and constitutional institutions of the country.

h) The current lockdown has been imposed under the Disaster Management Act, 2005 (DM Act). India's large population poses an administrative challenge in dealing with any disasters, especially a pandemic such as COVID-19.

Post Disaster Recovery (Build Back Better) Resilience for Future in collaboration with INVERTIS University, 12 Oct 2021

Recommendations/Key Takeaway



a) Building Back Better (BBB) is an approach to post-disaster recovery that reduces vulnerability to future disasters and builds community resilience to address physical, social, environmental, and economic vulnerabilities and shocks.

b) It is important to identify key areas of present research on and potential research gaps or future research needs for BBB.

c) The benefits of ECO-DRR and EbA include Biodiversity conservation, disaster prevention and recovery, hazard mitigation, climate change adaptation etc.

d) EbA addresses climate-related natural hazards, long term mean changes in climate such as sea level rise and ocean acidification. Climate risk management includes climate-related natural hazards such as storms, floods, drought landslides, fire etc.

e) There is a requirement of engagement of IPLCs and practitioners in policy making processes to ensure knowledge and experience feed into policy making processes.

f) Capacity building for Eco-DRR/EbA for different stakeholders at different levels needed in order to support mainstreaming efforts. Create space and incentives for collaboration and dialogue about tradeoffs; establish political commitment to integrated approaches.

g) Scale up knowledge-sharing at the local, national, regional and global levels between and across different disciplines, and make use of knowledge-sharing platforms.

Management of Crowd at Large Congregation in collaboration with DDMA Kullu, Himachal Pradesh, 12 Oct 2021

Recommendations/Key Takeaway



a) Management of crowd at large congregations which includes methodology of crowd control is the need of the hour.

b) Amendment in Police Acts of various states/ UTs to include crowd Management must be taken up as a study.

c) Use of technology advancements must also be designed and utilized for management of Crowd.

d) More behavioral studies on crowd assembling in various places such as melas, concerts, Matches, Family get-togethers, Rallies, etc. must be taken up.

e) Preparedness of crowd related events must include knowing the crowd behavior, profile of the crowd, facilities and resources available with the organizers/ administrators.

f) During any crowd related event, community at large which include volunteers, NGOs, Shopkeepers, Shrine Pujaris (if it is a temple), participating people must be made aware about the guidelines and facilities available at their disposal to follow.

g) Mock drills must be carried out with involvement of all stakeholders to enhance coordination.

h) Organizers/ administrators must be aware of local customs, terrain and resources available and must have access to these resources and relevant training to use them

Sedimentation and Dam Stability in collaboration with National Institute of Technology Warangal, Telangana, 12 Oct 2021

Recommendations/Key Takeaway



a) There are risks to the dam itself and there is resulting risk exposure to the nearby population and infrastructure due to proximity to the dam, including residual risk that remains even after risk reduction measures are enacted.

b) Geology plays an important role in deciding the safety of any dam and ensures its full usefulness in the future.

c) Geological hazards, if bypassed during the investigation's phases, may lead either to failure later on, or costly repairs, or even the abandonment of the project as may happen if the reservoir tightness is a problem and cannot hold stored water

d) Foundation conditions at any site are most important to dams' safety, as it affects structural stability and stiffness to limit deformations to within acceptable limits and maintains the dam's integrity under the conditions that exist or may be expected to develop over time, such as excessive seepage under the dam with the accompanying high uplift pressures.

e) Trapped coarse sediment is periodically excavated and then transported and placed temporarily on the channel downstream of the dam.

f) Natural channels, rivers, and streams have beds formed by earthen permeable materials and experience seepage flow through boundaries because of the difference between water levels in the channel and the adjoining ground-water levels.

Disaster Risk Management in Fuel Stations in collaboration with Nayara Energy Ltd, Maharashtra, 13 Oct 2021

Recommendations/Key Takeaway



a) The employer/ responsible person must find out what dangerous substances are present in their workplace and what the fire and explosion risk are.

b) The employer/ responsible person must put control measures in place to either remove these risks or, where this is not possible, to control them.

c) We must put controls in place to reduce the efforts of any incidents involving dangerous substances. We must prepare plans and procedures to deal with accidents, incidents and emergencies involving dangerous substances.

d) We must encouraged taking a holistic approach and avoiding keeping any extra fuel containers inside the car; unless you are travelling on a barren expressway.

e) Avoid doing anything that creates static electricity while you are at a fuel station. Static electricity can create sparks and light a fire. In case you see the presence of static electricity, touch a metal bar immediately.

f) People living near industrial units should gather information about the nature of industrial units located near their houses.

g) We should take extra care on smoke as seven out of ten fire-related deaths occur from breathing poisonous gases produced by the fire.

Resilience Sustainable Development Goals (SDGs): Cultural Heritage, 13 Oct 2021

Recommendations/Key Takeaway



a) A healthy balance of both traditional and modern ways needs to be adopted in all sectors of the economy.

b) All the practices either planning, engineering or designing should give emphasis to climate resilience and on understanding the heritage of our country which is pre-existing for a very long time

c) Individual identity and pride are associated with the culture which needs to be conserved by every individual.

d) Culture is the link between what is common and what is unique in terms of architecture, engineering, building and design.

e) What we see today mostly is what is inspiring us for the future. The role of Visual media in the preservation of cultural heritage and environment.

f) Celebration of culture with understanding and its role in the natural ecosystem.

g) Three key points for transformational change in cultural heritage. 7.1. Women empowerment – by empowering them we are empowering our future generation because cultural knowledge transfer begins from the birth when a child is born and knowledge transfer that takes place between a mother and a child. 7.2. Education – The role of educational institutions needs to be broadened to impart cultural knowledge to the younger generation. 7.3. Collaboration – a collaboration between different stakeholders of cultural heritage.

h) Needs to reduce and gradually change materialistic thinking. Experiences will shape our societies and not consumerism.

i) Increase the number of choices of an individual by imparting proper education.

Launch of Handbook on Multi Sector co-ordination for Emergency Response in India in Collaboration with Sphere India, 13 Oct 2021

Recommendations/Key Takeaway



a) A well contemplated and a flexible coordination mechanism is necessary for efficient disaster risk mitigation and management during a crisis with participation of all stakeholders, including Central government, state government, local government, community, CSOs, CSRs, NGOs and Self-help groups.

b) Need of translating global goals at National, as well as local level.

c) Handbooks should fill in a critical gap area as it will bring about the relevance of social sector in Emergency Response as it is never clear to those who work in government, especially at district level.

d) Community engagement should be there at the inception of any program, especially for DRR as the community keeps facing challenges of risk and disaster impact.

e) There is a need of organizations that can create a balance between the government institutes, civil societies and CSR partners so that all efforts are channelized to a particular place with common aim, which is in the benefit of the society.

f) Need to engage the community for inclusive approach in the process of response, recovery and rehabilitation. Session 2: Media Roundtable: 'Emphasizing the Role of Media in Disaster Risk Reduction'

g) Strong coordination between Government agencies and Media Houses is absolute necessary

h) Role of media houses should be in the whole cycle (Pre-Disaster, During the Disaster as well as Post Disaster) of disaster management, not only particularly limited to during disasters

i) Standard Operating Procedures should be developed in media houses by experienced journalists in order to transfer their knowledge to other journalists to make them prepared to cover disaster like situations in better way

j) Proper Coverage Facilities and Information's should be officially provided to the Media

International Day for Disaster Risk Reduction 2021 Panel Discussion on: Disaster Risk Reduction in Collaboration with School of Sciences Indira Gandhi National Open University (IGNOU), New Delhi, 13 Oct 2021

Recommendations/Key Takeaway



a) The improved focus needed in the education system of the current generation of students around climate change & environmental issues and Disaster Risk Reduction.

b) The innovative skills related to DRR should be improved to minimize or to disseminate the information related the DRR phases.

c) Forward plan based on forecasted advancements in technology is much more needed. This is important when working with

technologies that are evolving rapidly over a short period of time, to provide options to remain relevant.

d) Greater Awareness of the importance of international cooperation and multi lateral cooperation to address the planetary emergencies is needed.

e) The best practices, strategies and guidelines on disaster risk reduction & resilience should be shared between countries. Public discourse to promote attitudinal and behavioral changes towards disaster risk management should be improved.

f) New ways should be adopted to enhance the skills related to disaster risk management. Strengthen disaster resilient public and private investments, particularly through: structural, non-structural and functional disaster risk prevention measures in critical facilities, in particular schools and hospitals

PM 10 Point Agenda on DRR: Agenda 8 Seminar on Climate Change & Disasters: Vulnerability and Mitigation Strategies in Collaboration with Chaudharu Bansi Lal University, Bhiwani, 13 Oct 2021

Recommendations/Key Takeaway

a) There is a need of Transgender Inclusive Disaster Risk Reduction.

b) To create/identify spaces that have the facilities for Transgender use them as a relief centre for the transgender communities.

c) To create a database of existing Transgender communities and use it to reach out to them during disasters.

d) To train and involve Transgender as the first responders during disasters. This will facilitate a shift in the perception towards them and help in breaking the existing barrier and stigma.

e) To create safe and resilient alternative livelihoods for them and ensure long term livelihood rehabilitation, reducing the risk associated with their existing livelihood.

f) The Government and NGO's policies to be made more inclusive, recognizing the needs, capacities, skills and role of the Transgender communities in building resilient communities.



g) There is a need to empower local actors in the management and resolution of their problems. Enhance young people's capacities through multiplicity of stakeholders (UN Volunteer) which provides young people under the age of 30 with the opportunity to work as DRR volunteers and gain exposure, on the frontlines of political, developmental and humanitarian field operations, and engaging in development and peace initiatives worldwide

PM 10 Point Agenda no. 8 and 9 International Day for Disaster Risk Reduction Building Back Better after 2001 Bhuj Earthquake Translating Lessons Learnt into Actions in Collaboration with Department of Earth and Environment Science Krantiguru Shyamji Krishna Verma Kachchh University, Bhuj, 13 Oct 2021

Recommendations/Key Takeaway



a) Documentation should be done to compare 2001 event to 2021 pandemic so that work needed in terms of strengthening of healthcare system can be evaluated.

b) Promotion of sustainable option of vernacular building, traditional knowledge like Bhunga style of housing need to be recorded and scientifically translated into practices.

c) Building quality and material should not be compromised by corrupt system.

d) Bhuj has 4 major fault lines which were mapped to formulate the vulnerability zone, this need to be used by the planners and engineers while working on infrastructure.

e) Emphasis on enough manpower, healthcare manpower and resources of our country is lower than what is needed to tackle any disastrous situation.

f) Use of technology such as National Digital Health Mission helped in changing picture of healthcare system.

g) Museum need to be made of biggest disaster events of our country so that the lessons and impact of the event should not be forgotten.

Building Resilience of the Education Sector to Various Hazards in Collaboration with Geo-hazards Society, 13 Oct 2021

Recommendations/Key Takeaway



a) Education sector is highly vulnerable to various hazards and their safety and resilience should the utmost priority of all stakeholders involved.

b) The scale of damage of schools or education institutions by hazards depends on number of factors such as the time of the event, population density, type of hazard and building structural fragility.

c) The past earthquakes exposed vulnerability of school buildings disproportionately compared to the other infrastructures.

d) Education sector include not just Schools, Colleges/ Universities but also the skill development centres, training institutes and coaching centres which are running for preparation of competitive exams are running in the market places, residential areas and congested locations, which do not have proper class rooms and evacuation routes.

e) The effects of past disaster events that have affected school buildings provide a window of opportunity to learn and work towards comprehensive safety 'Right to Education' is incomplete without 'Right to Safe Education'.

PM 10 Point Agenda no 1 on DRR Planning Resilient Cities with DRR in Collaboration with Sushant University Gurgaon, Haryana, 14 Oct 2021

Recommendations/Key Takeaway



a) Local Government should address the differential impacts of disasters on the local leadership needs to be empowered about their role and functions men, women, children, sick and differently able people.

b) All the Central and State Government Officials needs proper training to during the different phases of disaster. Local Governments should ensure 'co-ordination and convergence' of the implement the needful at the time of disaster.

c) The dynamism, energy level, pace of work, innovative ideas, modern efforts among the government institutions, non-governmental agencies, community based organizations and all other stakeholders.

d) strategies and pro-active approaches of the youth need to be properly

e) The Disaster Management plans should be regularly reviewed tested and channelized for better mitigation and management of disaster.

f) Policies to be linked with Economic and Infrastructure Planning to reduce updated. the gap between the existing strategies and implementation.

Conserving Traditional and Practices of Adivasi Communities in India in Collaboration with Tribal Academy of Bhasa Research & Publication Centre, Tejgarh, Gujarat, 14 Oct 2021

Recommendations/Key Takeaway



a) Culture and tradition play a big role in the development of any community. This is especially true of marginalized rural communities such as India's Adivasi tribes.

b) The farming practices of tribal people are truly sustainable in many ways. Their subsistence life style, local diet habits and dependence on rained irrigation have influenced them to cultivate and conserve the traditional cultivars or land races.

c) The tribal communities practice a unique method of farming, known as the mixed cropping system in limited areas depending on monsoon rain. Cultural diversity in terms of ethnic groups gives us knowledge on the value of plant resources.

d) The knowledge of ethnic groups on the cultural, spiritual, social and economic values of plants can be of immense use to the entire humankind. It can provide many valuable genes for developing the crop plants that are extensively cultivated today.

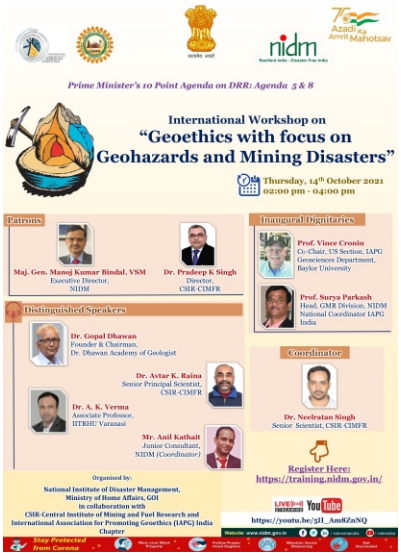
e) It can equip the humankind with several new chemicals for combating many human ailments. Tribal areas located deep inside the forest areas were selected to ensure less contact with the so called civilized society.

f) Reconnaissance surveys were done to select tribal communities and hamlets in order to work with people who still practice forest depended lifestyles, living in rich forests.

g) Medicinal properties of plants have been recognized and practiced by tribal communities as a tradition for thousands of years. Knowledge on some common medicinal plants of their locality is available with all the members of the community.

PM 10 Point Agenda on DRR: Agenda 5 & 8 International Workshop on Geo-ethics with focus on Geo-hazards and Mining Disasters in Collaboration with CSIR Central Institute of Mining and Fuel Research and International Association for Promoting Geo-ethics (IAPG), 14 Oct 2021

Recommendations/Key Takeaway



a) The sole ethical principle that has allowed science to exist is that the truth must always be conveyed.

b) To protect public safety we need to follow the scientific community's ethical norms, standards, and best practices.

c) Any engineering geologist's ultimate client is society. The public's safety and wellbeing must be prioritized, and we must endeavor to adhere to sustainable development principles. Our unethical behaviour will be deterred by ethics, and we will know what to do and what not to do in the correct sense.

d) Scientists' ideas may differ, and they should be free to voice their own, but science has a foundation, and we cannot make statements without verification and confirmation. We need to develop a set of concepts and rules to guide and assist our behavior in a constructive way, so that our contributions serve society rather than hurt it. The majority of individuals conflate ethical standards with following social customs, religious convictions, and the law.

e) Geoethics is concerned with the ethical, social, and cultural implications of Earth Science study and practice, and serves as a nexus for geology, sociology, and philosophy.

Workshop on Promoting Eco-DRR for Infrastructure and Social Resilience in Collaboration with UNEP, 14 Oct 2021

Recommendations/Key Takeaway



a) A memorandum of understanding (MoU) between UNEP and NIDM would also be signed to make the association more formal.

b) The planting of casuarinas plants helped in reducing the wind speeds and the danger of houses getting damaged were removed.

c) Similarly, using MGNREGS funds lakes were restored which are breeding grounds for fish and others, leading to increase in fish stocks and a rise in migratory birds.

d) There should be efforts to also identify more indigenous and bio-diverse species using traditional knowledge.

e) Civil engineering and plantation approach was adopted for cost effective solution for landslide management.

f) The local experience in Kerala have the potentials for national mainstreaming because at the national level all the panchayats have financial allocations to carry out in their respective panchayats.

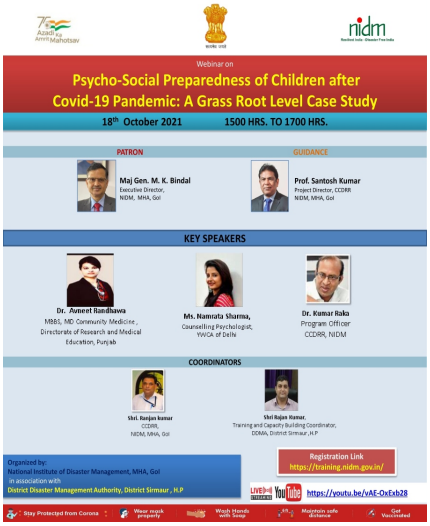
g) Degradation in Ecosystem and Climate Change are impacting all and the strategies to mitigate them must be taken not only at the national, state or local level but also at the international level.

h) The potential for leveraging Ecosystems for DRR is huge across every gram shabha, districts and states in India.

i) A social security net program with environmental restoration program could be an important message for the world

Psycho-Social Preparedness of Children after Covid-19 Pandemic: A Grass Root Level Case Study in Collaboration with District Disaster Management Authority, District Sirmaur, H.P., 18 Oct 2021

Recommendations/Key Takeaway



a) The caregivers should provide space for Play-and Interact for reducing stress

b) The parents and caregivers should develop routine for children and increase participation in household activities

c) The parents should also listen their concerns

d) Children should not be forced to discuss or reveal experiences and the lead should always come from the child.

e) Having a community response and recovery plan that is implemented in a prompt, effective, and coherent manner will create a more sup- positive environment that lessens the risk for long-term emotional disorders.

f) Schools may be a good place to have simulations and or drills for disaster preparedness. There is a need to develop mechanism for accessibility to every child

g) The action should be taken to create awareness and sensitization at all levels

h) There is a need to formulate Programs specialized for parents, children and higher officials The policy decision making level should more focus on Setting up local mental health clinics/ Services

PM 10 Point Agenda No. 1 on DRR Protecting Children from Vector Borne Disease in Collaboration with Manipur University, 20 Oct 2021

Recommendations/Key Takeaway

a) Personal protection measures, such as repellents and protective clothing, are effective against all of them. It is recommended to use a suitable mosquito repellent for children and expectant mothers mostly when they are stepping out.

b) In the evening time usually mosquitoes swarm towards the houses, a physical barrier like mosquito screens, doors or net windows will effectively mosquito proof your home.

c) Improve water storage and sanitization so that the disease is controlled at the community level.

d) It is important to provide training (capacity building) on clinical management, diagnosis and vector control with support from some of its collaborating centres; and supporting the development and evaluation of new tools, technologies and approaches in respect to vector-borne diseases which also includes vector control and disease management technologies.

e) In order to make sure that the disease spread is reduced in the community, the majority of the people from the community need to make active participation.



f) The Integrated vector management (IVM) approach to reorient the control programmes for vector -borne diseases and adopting the surveillance methods, to determine the local presence and abundance of the target mosquito species, egg or larvae, before, during and after a control programme are some of the most vital elements under the mosquito control measures.

PM 10 Point Agenda no. 1 on DRR Ar6 Climate Change 2021-The Physical Science Basis (UN's IPCC Report 2021) Community Resilience Building for Climate Change Adaptation in Collaboration with Hindustan College of Arts & Science Tamil Nadu, 21 Oct 2021

Recommendations/Key Takeaway

a) Technology is in our hands and with mobile technology we can solve a lot of environmental issues. We have to adopt technology in a right manner and know that it has greater disaster management strategies.

b) We must understand about our ecosystem better and it should be conserved and maintain the natural ecological niches.

c) The advanced modern tools & techniques helps to improve the livelihoods, resilience and self-determination in farmers communities and fosters the recovery from the economic effects of Covid-19 by strengthening farmer producer organizations and improving their bargaining power with buyers.

d) Newer technology pairs scalable, high-quality agricultural and post-harvest advisory services and leadership coaching with the mobile application, digital advisories give women farmers the information to meet market demands.

e) Leadership training empowers women to take on market-facing roles.



f) The digital tools that enables transparent data sharing to improve the farmers performance and support buyer discovery. Low carbon life style must be adapted to reduce the emission of green - house gases.

Air Pollution and Climate Change in Collaboration with International Society of Environmental Botanists CSIR-NBRI, Lucknow, U.P, 21 Oct 2021

Recommendations/Key Takeaway



a) The problem of air pollution has become multidimensional in nature now and to significantly reduce the risk from air pollution we should adopt solutions like phytoremediation, etc.

b) There is a need to inculcate air pollution mitigation solutions into the mainstream and the overall thinking process of the development planning at local, regional and global scales.

c) The Himalayan ice sheets, which are majorly responsible for reflecting significant amounts of sunlight, are becoming brownish because of the atmospheric brown cloud.

d) A manual is being developed by ISEB with the participation from 10 other countries which gives the background of the air pollutants, adaptation and mitigation solutions including a methodology of developing an index to quickly screen the plants based upon the eco-physiological and biochemical parameters.

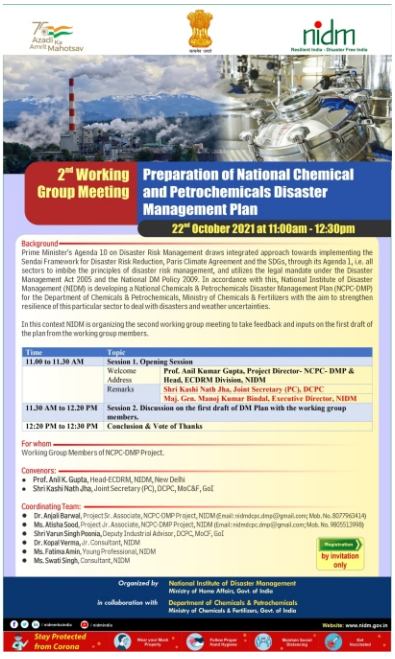
e) Ozone monitoring is required in agricultural areas as its elevated levels have serious impacts on the crops.

f) Yield response relationships to project future yield losses at increasing ozone concentrations

g) Interactive effects of increased concentrations of CO_2, temperature/drought and O_3 on plants are there

2nd Working Group meeting for the preparation of National Chemical and Petrochemicals Disaster Management Plan, 22 Oct 2021

Recommendations/Key Takeaway



a) India is developing as a key global player in industrial and technology sector.

b) Rapid industrialization has increased the hazard, risk and vulnerability of the industry and the environment

c) Frequency and severity of chemical disasters has increased in last few years due to rapid development of chemical industries of a wider range manufacturing & formulation, petrochemicals, pharmaceuticals, agro-chemicals – fertilizers, pesticides, industrial chemicals, and facilities that store hazardous chemicals – oil depots, exploration/ mining and beneficiation sites, ports, docks, treatment plants, power, etc

d) Increase in size of plants, storage and carriers especially in densely populous areas has posed the greater risk and vulnerability for such disaster likeliness.

e) The causes of industrial and chemical hazards and their disasters are malfunctions, failures, unanticipated side-effects of technological system

f) Off-site perspectives of chemical disaster management need multidisciplinary inputs and interdisciplinary coordination, effective information processing and management system

g) Government-industry-community interface plays major role in off-site risk management and in responses during emergencies.

Self Management Skills to mitigate Disaster Risk and Losses in Collaboration with ICFAI University, Tripura, 22 Oct 2021

Recommendations/Key Takeaway



a) The webinar gave knowledge n various professional techniques to minimize the disaster risk and losses.

b) Local skill development is very essential for the institutions to reduce the losses due to fire or other disastrous events.

c) We must conduct training programs and mock-drills to build local capacities and reduce the risks.

d) There are many techniques like fire ball or automated devices which should be used to overcome the disasters. Several such documents and applications are available on the internet.

e) We should make use of it and prepare our communities for better response, instead becoming panic.

f) The participants were encouraging to prepare institutional Disaster Management Plan, Family Disaster management Plan, disaster management kits etc to enhance preparedness.

g) Communities must be aware of how to survive during local disasters like flood, how to mitigate flood impacts and flood warning mechanism etc.

h) University DM Plan / Campus DM Plan should be prepared by the ICFAI university by involving several departments and practiced regularly

Self Management Skills to mitigate Disaster Risk and Losses in Collaboration with ICFAI University, Tripura, 22 Oct 2021

Recommendations/Key Takeaway



a) States have the ability to declare a local catastrophe and to give assistance to those affected.

b) In risk pooling, a low premium may be achieved if there are a large number of purchasers, resulting in a lower insurance premium. In the one district pilot project the insurance premium value will be higher due to lower spread

c) There is a need to educate the general public about financial education in order to make better use of insurance products.

d) Risk transfer to insurance is important because it may help with the proper assessment of risk in a given place

e) It is critical to understand various insurance products as well as the link between insurance and catastrophic risk finance.

f) In addition to risk minimization, insurance is a disaster-focused solution with a number of advantages.

g) Many plans cover both direct and indirect damages, and the insurance covers a wide geographic area with enough catastrophe coverage and sum covered.

PM 10 Point Agenda no. 1 on DRR Tunnel Disaster: Issues and Challenges Organized by NIDM, 22 Oct 2021

Recommendations/Key Takeaway



a) Tunneling technology as an option for averting landslides and reducing the risks on long term basis. Tunnel disasters cause indirect and direct risks.

b) Local, regional, or potentially even negative economic impact of long closure for repair works leads to MEGA SOCIO-ECONOMIC IMPACT.

c) Ground collapse in urban area cause building damage and also sometimes loss of life. Tunnel fires can raise internal temperature up to 1300-1500 deg C.

d) Higher temperature rise leads to melting of cement complete loss in strength and structural disintegration. Fire resistant cables and other fittings should be used in tunnels.

e) No rubbish (fuel) in tunnel should be kept. Regular maintenance of electrical fittings.

f) In order to fight fire incident in tunnel, emergency evacuation through safe passages (shafts, escape tunnels, cross passages etc.) should be used.

g) Monitoring of tunnel lining, surface deformation and top, and nearby buildings until they cease to move further.

h) Rock fall drapery or simple drapery systems are installed on rock slopes to contain loose and falling debris.

Law and Governance in Pandemics in Collaboration with Sri. R.K.M. Law College, Chittoor, 25 Oct 2021

Recommendations/Key Takeaway



a) To overcome the pandemic, the government needs to prepare better with adequate health expenditure and a well-defined policy when it comes to health.

b) It should also ensure just and equitable implementation of the revised vaccine policy.

c) The Indian Government effectively imposed the lockdown and reduced the number of cases, while at the same time certain lawmakers and legal experts questioned the constitutional legality of the lockdown and the response of the Government.

d) Though the Central Government has implemented the Epidemic Diseases Act (EDA) and the Disaster Management Act (DMA), these are not sufficient to face the health emergency effectively given the dynamic nature of the disease.

e) Special protection should be given to health care and sanitation workers keeping in mind the social dynamics of society.

f) India should explore various options for inserting a health emergency provision into the Indian Constitution.

g) The amendments related to identifying, testing, isolating, contact tracing, controlling, coordinating, and containing any epidemic are needed to make the EDA comprehensive to tackle any future health emergency.

h) Identification of the quarantine locations, which are geographically and scientifically advantageous to contain the pandemic, should be explored.

i) These should be located in remote locations where there are naturally fewer inflows and outflows of people.

PM 10 Point Agenda no. 1 Disaster Psycho-Social Care for College Students in Collaboration with SRMU, University Barabanki, 26 Oct 2021

Recommendations/Key Takeaway



a) Faculty must make themselves aware of latest guidelines issued by respective governments and must ensure that students follow the basics precautionary steps being publicized.

b) Colleges must assume the role of care giver and must undertake activities like awareness, motivation and other logistics support to the needy and the community at large.

c) Charity begins at home and hence awareness and vaccination drive within college campuses for students, faculty and their families may be organized from time to time.

d) College students can also volunteer themselves for any disaster risk reduction related activities along with providing services with respect to food, drinking water, medicines to the needy.

e) Need for most vulnerable groups is that matters most when it comes to mitigation. College student force can identify such needs and can bridge this gap with remedial measures to the extent possible.

f) College youth can update themselves with ongoing schemes and make the concerned aware with benefits and cautions of the schemes.

g) Students can take up studies about impact of covid on education and come up with suitable recommendations so as to prepare the authorities for any future such adversity

h) A coordinated effort from all stakeholders is necessary to address the issue of psychosocial ailment.

Making Climate Action Count- Turning Ambition into Reality in collaboration with Sambhav Social Service Organization, Odisha, 26 Oct 2021

Recommendations/Key Takeaway



a) About eight percent of the municipal solid waste in India's high-altitude cities is plastic. This is quite high and could be as a result of the floating population and tourist inflow.

b) It was highlighted that it is important to identify and train Zero Waste resource persons.

c) There is a need to build capacity of resource persons for the Himalayan region in order to develop local self-help training. Patterns of pollution are best observed by residents of the community.

d) Low cost monitoring technology can be used through swiping a tissue in a certain dust area and send it to a lab, alternatively a low volume sampler can be run for a day and the filter be sent to lab.

e) The area has over 1000 species of plants and 500 varieties of rice also supported a seed bank with over 800 varities of seed. Sambhav has been developed as a state-level resource centre . for organic farming where people from across the state, India and also from other countries get training on methods of organic farming.

f) The composition of waste needs to be tracked appropriately since these cities have floating population and the quantity of waste always keeps changing.

g) This results in improper design criteria for the treatment and disposal method.

PM 10 Point Agenda no. 1 & 2 Build Back Better: Beyond Bricks & Mortar: Builing Financial Recovery & Resilience Organised by NIDM, 27 Oct 2021

Recommendations/Key Takeaway



a) Lack of funding not the only reason for regressive state of Sustainable Development goals 7 and 13.

b) Large investment gaps needs to be addressed and countries can increase the investment in energy, with the composition of power generation investment shifting more towards renewable.

c) There were three polices options suggested to deal with climate change including financing of climate- related expenditures that could expedite the move – a. Prioritize de-carbonizing the economies i. Remove fossil-fuel subsidies. Build Back Better: Beyond Bricks and Mortar 10 ii. Adopt carbon pricing iii. Introduce the carbon tax b. Governments should also promote the green public procurement. c. Internalize the externalities related to business operations like Environmental, Social and Governance (ESG).

d) Employment generated in the COVID crisis through child day care policies in Canada.

Role of Higher Education in Disaster Risk Reduction in collaboration with Dada Ramchand Bakhru Sindhu Mahavidyalaya, Nagpur, 27 Oct 2021

Recommendations/Key Takeaway



a) Every stakeholder has a role to play for contributing for reducing the disaster risk.

b) Higher Education Institutions, being learning hub for future generations, must come forward to contribute in work of capacitating youth DRR related activities.

c) Faculty, as torch bearers, must guide youth for constructive contributions in the field of management of disasters.

d) Coordination in terms of research and awareness activities, with other stakeholders is must.

e) As the number of higher education institutions is large, their outreach is also large. Hence, they must take up responsibility to reach out to community for making them aware for DRR.

f) Higher Education Institutions must take up advocacy role for making DRR as actionable point in every stream.

g) Higher education institutions have an advantage of having many streams under one roof, they can utilize this advantage for enhanced contributions for management of disasters.

h) Guiding and assisting other stakeholders for smooth disaster management must be agenda of higher education institutions.

Emergency Operations Centre in Collaboration with GVMC, Andhra Pradesh, 27 Oct 2021

Recommendations/Key Takeaway



a) Emergency Operations Centre (EOC) must be functional even at normal times in addition to emergency times.

b) EOC must be self-sustained in terms of facilities and gadgets for a certain period of time so that it can function without any break.

c) The EOC can be preferably ESF based or combination of ESF and IRS functions to enable smooth decision making.

d) EOC may function as facilitation centre and may manage effective response and the VIP visits.

e) EOC is an important spoke in the Incident Response System and hence must be activated when IRS is being implemented.

f) Officials at EOC must have powers to take decisions pertaining to mobilization and provisioning of resources from their corresponding departments.

g) EOC must facilitate coordination within the site operation teams and also with all stakeholders.

Disaster Variability in Different States of India: Insights and Experiences, 28 Oct 2021

Recommendations/Key Takeaway



a) Early Warning and Dissemination systems play a vital role during the Disaster.

b) Each and every district should have their Disaster Mitigation and Management Centre which will act as a Focal point during disasters.

c) There is a need to establish strong communication network among the Central Government/Concerned Ministries /Departments /Communities to deal with the disasters.

d) The Government should improve the Alert and Information System (SMS Software) which will act as an early warning system for the community.

e) The Government as well as the Public and Private Sector Organizations should conduct the Capacity Building Courses/Programmes for the Stakeholders and Officials of the State Governments at regular intervals.

f) The Concerned Departments have to ensure the preparation of the Disaster Management Plans and their proper implementation on ground level.

g) Rapid pace of urbanisation in India has put massive pressure on existing infrastructure and services across most of the cities.

h) Coastal cities are exposed to natural hazard including the modification of environments which generates new hazard, e.g. through the loss of protective mangroves to urban development, or subsidence following ground water extraction.

PM 10 Point Agenda no. 1 & 2 Build Back Better: Beyond Bricks & Mortar: Building Social Recovery and Resilience Organized by NIDM, 28 Oct 2021

Recommendations/Key Takeaway



a) At the moment, catastrophe recovery does not extend far enough to encompass social healing.

b) It is past time for recovery programs to include social issues such as education, women's empowerment, health, social protection, water supply, and nutrition. To do this, the following capabilities are required - i) Damage and loss assessments must be conducted, which will eventually encompass the social sectors. ii) Following damage and loss evaluations, structure recovery strategies should be developed. iii) Allocating resources and paying attention to the assets of the marginalized.

c) Recovery should be development oriented rather than being focused on only restoring what existed before. 8 Build Back Better: Beyond Bricks and Mortar Building Social Recovery and Resilience

d) Investing in social protection will have a major impact on resolving the problem of widening inequalities and poverty caused by disasters.

e) With the correct combination of health, agriculture, social protection, and infrastructure, the nexus between poverty, catastrophe, and inequality may be alleviated.

f) Emerging technologies such as digital identification and big data provide unprecedented opportunities for individuals all around the world to be included and empowered.

g) The districts that measure their resilience by listing the social capital that exists in their districts, such as hospitals, schools, and social businesses.

h) Registration, identification, distribution, and monitoring are the four pillars that must be in place to guarantee that the excluded groups are visible.

Ar6 Climate Change 2021- The Physical Science Basis (UN's IPCC Report 2021) Theme Community Engagement in Climate Change Mitigation, 28 Oct 2021

Recommendations/Key Takeaway



a) Respect traditional knowledge or indigenous knowledge for planning for risk reduction and mitigation

b) Reaching the last mile is the beginning to address mitigation where the most affected are found, one shouldn't miss them.

c) Effective communication in the local languages with simplified terminologies which are understandable by a layman is required.

d) Coordination and Integrated approach among various stakeholders including government and non-government organisations, communities, experts, academic institutions for wider outreach and execution

e) Involvement of local self-governing institutions like Panchayats with guidance from block/district for livelihood based inclusive planning for long term addressing of climate change mitigation Recognise and include women-oriented planning of activities also for effective resolutions in the future.

f) Create dialogue with different cross sections of the community viz. age, sex, class, caste, economic status for enhanced participation leaving no one behind.

PM 10 Point Agenda no. 8 and 9 Building Back Better after 1999 Orissa Super Cyclone-Translating Lessons Learnt into Actions in Collaboration with UNDP India (Odisha Office), 29 Oct 2021

Recommendations/Key Takeaway

a) The convective events show an increasing trend in recent years with south coastal Odisha and North Coastal Odisha showing the highest increase.

b) The build back better concept is applicable in all the stages of disaster management such as disaster risk reduction, community recovery and effective implementation.

c) The average period for averaging the variables of climate is 30 years as defined by WMO, the most relevant quantities are temperature, precipitation and wind speed.

d) Lightning impact in terms of frequency is seen highest in Odisha state however death rate is

recorded in Uttar Pradesh state with 96% deaths occurring in rural areas, 75% by standing under the tree due to lack of awareness.

e) High density integrated long term observations with improved early warning system and proper understanding of secondary effects is most important while promoting build back better.

f) Multi-hazard mapping and customized region specific action plan should be must to have.

g) Eco-friendly development climate resilient infrastructure and community resilience in coastal region should be at priority.



Pandemic Waste Management Lakshadweep Island Ecology in collaboration with REEF Ocean School India Lakshadweep Island, 29 Oct 2021

Recommendations/Key Takeaway



a) Carelessly discarded lightweight masks and gloves can be carried from landfills by wind and water and end up in the seas and oceans, thereby endangering marine life. Like plastic bags or straws, it could be the new category of marine debris.

b) Plastic in a mask disintegrates easily in water. When this water drains into the sea, more micro-plastics enter coastal ecosystems.

c) They are ingested by fish and other organisms, affecting the food chain.

d) This would mean humans are at risk from consuming toxic laden plastic debris ingested by fish.

e) Policy reforms and new guidelines are required for Covid waste management (energy, recovery and disposal) and environmental safeguards.

f) "Behaviour change and raising awareness among public on safe PPE disposal is necessary.

g) Consumption of single-use plastic products like masks and gloves have surged in the pandemic. With inadequate biomedical waste treatment plants and an ineffective waste disposal system, the litter is making its way to the ocean.

h) Plastic and biomedical waste littered near river mouths, get washed down the waterways and end up in ocean beds during monsoons.

Integrated Disaster Management and Risk Reduction, 29 Oct 2021

Recommendations/Key Takeaway

a) Integrated approach to disaster response is very important. Setting up of national drought resilience partnerships to mobilize public.

b) Prevention has far lower human, financial and environmental costs than response.

c) A drought management mechanism at the international and national levels could help address the complex and cascading nature of drought risk. Inclusion of indigenous and local knowledge, sharing of values and opportunities.

d) All preparedness planning needs to be supported by appropriate rules and regulations with clear allocation of responsibilities and budgetary provision.

e) To be effective, warnings must be related to mass education and training of the population who know what actions they must take when warned.

f) The emergency relief activities undertaken during and immediately following a disaster, which includes immediate relief, rescue, and the damage, needs assessment and debris clearance.



g) Evacuation, rescue and relief, rehabilitation and reconstruction post disasters are very important

Climate Change and Disasters: The Aggravating Urban Risks, 29 Oct 2021

Recommendations/Key Takeaway

a) Climate is changing and it is a reality we need to accept this to move forward.

b) As per the studies, the heat waves are going to increase 75-fold times in a business-as-usual scenario. Over 140 cities in India are prone to a high risk of flooding especially cities in coastal regions

c) We need to find ways to build resilience at the local level especially in cities which is the centre of civilization because the climate is changing the city scenario rapidly with new limits are set every year to define the risk capacity.



d) An in-depth understanding of the existing city land-uses is required for understanding the gaps and to better prepare ourselves better in this direction.

e) Availability of granule level data. Despite having data at the global and national levels, such data sets are not down casted to the local level or city level to tell the local scenario of disaster.

f) Much of our cities are focused on building and so there also presents an opportunity to rethink this whole concept of building in terms of building material, designing, planning, etc

g) Every inch of city cost and our solution should be oriented in this manner taking into account the existing situation of cities and not some utopian ideas.

h) Build Back Better with natural solutions so that the built that we are building should be resilient and at the same time sustainable.

PM 10 Point Agenda no. 7 on DRR 2nd Phase of Online Training Programme on India Disaster Resource Network- (IDRN) for Tamil Nadu & Pondicherry state, 29 Oct 2021

Recommendations/Key Takeaway

a) Tamil Nadu state duplicate data updation need to be delete on IDRN portal.

b) TNSDMA required for IDRN API integration on SDRN.

c) IDRN mobile based app is required for handy use.

d) Private / PSU's data updation needs to be simplify through online mode.

e) Items wise data updation filtration required for district level login dashboard.

f) 365 items usage description need to be enabled on IDRN portal.

g) Nagapatinam district effectively utilizing the IDRN database at ground level same maybe sensitize to all the districts of India.

h) Non updation of items list needs to be display on district level dashboard.



PM 10 Point Agenda No. 1 on DRR Disaster Risk Reduction for an Earthquake, 29 Oct 2021

Recommendations/Key Takeaway

a) Ground shaking due to earthquake is depending on 3 parameters i.e. acceleration of ground, velocity of ground and acceleration experienced by ground.

b) When peak value, in horizontal direction shaking then then there is chance do enhancing of collapse.

c) Process of subdividing a potential earthquake prone/Seismic zones w r t some geological and geophysical characteristics of sites viz. ground shaking, liquefaction susceptibility, landslide and rock fall hazard etc.

d) In recent sediment i.e. Holocene unit, destruction amplification factor (3) is high in comparison to Pre-tertiary unit amplification factor (1).

e) Amplification factor and resonance frequency are the important parameters for seismic micro zonation. Disaster Risk Reduction for an Earthquake Damage due to Tsunami generally happened very high.



f) Integration of hazards is prepared to counter the damage due to earthquake using Hazard map, Micro zonation map, Vulnerability data and Risk analysis data Beneficiary of micro zonation maps are Urban Development Authority, Planning, Design & Construction Agency, Defense Installation, Heavy industry, Public Utilities & Services etc

PM 10 Point Agenda No. 8 and 9, 1999 Odisha Super Cyclone: Recalling the Lessons and Advancement in collaboration with OSDMA, 29 Oct 2021

Recommendations/Key Takeaway

a) There is a need to focus on documenting realistic and paradigmatic case studies of disasters and also to read, understand and debate on the learning for the future course of action/framework to reduce the risks of disasters.

b) Promoting people friendly early warning system in such a way that it facilitates the decision support system and timely action of response groups and vulnerable people needs to be emphasized.

c) Investment on resilient infrastructure and early warning communication systems which ultimately reduces the disaster risk needs to be prioritized.

d) There is a need to develop a reliable and resilient communication system for handling DRR.

e) Need to combine DRM with EWS by all the development sectors to enhance disaster risk reduction and resilience.

f) Enhance the capability to respond to cyclone manifold, and provision of an efficient and quality database must be carried out.

g) There is need of prior training for effective utilization of EWS. Orderly and systematic planning process needs to be strengthening for effective implementation of CEWS.

h) Adoption of traditional and global best practices and technologies needs to be learned and adopted as much as possible



PM 10 Point Agenda No. 2 & 3 SDG's 3, 5 & 6 Health and Nutrition Among Women and Children organized by NIDM, 29 Oct 2021

Recommendations/Key Takeaway

a) Food, health, water and sanitation, education, and social protection.

b) A deliberate emphasis on improving diets, services and practices.

c) A comprehensive life cycle approach to nutrition programming.

d) An explicit focus on addressing child mal nutrition in all its forms.

e) A systems approach to maternal and child nutrition

f) A greater attention to private sector engagement

g) A universal vision and agenda relevant to all countries.



Disaster and Health Expenditure: Building Economic Resilience organized by NIDM, 29 Oct 2021

Recommendations/Key Takeaway

a) The quality of public health facilities should be increased.

b) Planning should focus on SDG goal – "Health for all"

c) Uniform government support must be ensured during any kind of disasters.

d) Resource mobilization and allocation should be compulsorily made available to marginalized and vulnerable communities

e) Communities should be included in the planning phase and the community itself should take responsibility in becoming resilient

f) Health Insurance must be made available to all the sectors of the population.



Disaster Management in India: Role of Armed Forces in collaboration with Defense and National Security Studies, Punjab University, 29 Oct 2021

Recommendations/Key Takeaway



a) The armed forces possess capabilities like airlift or the ability to carry a large number of men and material to any place across the country.

b) Their expertise in the field of search and rescue is unmatched.

c) The armed forces can also bring in equipment for repairing damaged roads or building makeshift bridges.

d) They have the equipment, training and professional response to any situation.

e) The lack of a civil defense system is also a reason for the dependence on the armed forces in times of calamity. During the tsunami of 2004, Indian armed forces carried out one of the biggest peacetime relief operations.

f) During Nepal Earthquake 2015, Indian Air Force airlifted medical personnel, engineering teams, water, food, blankets and tents.

g) In November-December 2017, Cyclone Ockhi; Indian Navy transported food, water, blankets, raincoats and mosquito nets to the island of Lakshadweep.

h) They also helped in searching for missing fishermen and transporting relief supplies to the affected.

Public Health Emergency in collaboration with AIIMS Jodhpur, 29 Oct 2021

Recommendations/Key Takeaway



a) The importance of community participation in raising awareness and taking public health action should be stressed.

b) In places with low positivity, an epidemiological approach identifying the reservoir of infection is necessary for cluster containment; in areas with high transmission intensity, containment is the recommended public health measure, and mitigation remains the preferable strategy.

c) There is a need to reinforce the importance of preventive measures and practices in a sustained manner in order to deal with the disease in the long run.

d) We must take the steps to manage this avalanche of information and pick who and what to believe: Analyze the source, look beyond the headlines, identify the author, verify the data, evaluate the supporting evidence, examine your prejudices, and then return to the facts checkers.

e) We must cultivate critical thinking skills in order to make well-informed, balanced decisions that discern between substance and presentation. It is necessary to have the ability to search for information utilizing numerous sources, including social media.

f) During epidemics, we need to assist the community understand what is known, what is unknown, and what is being done to obtain additional information.

g) Because the public's perception of risk differs from that of specialists, the RCCE must be implemented to fills in the gaps by assessing what the public knows and should know.

PM 10 Point Agenda no. 1 on DRR Safe Congregation and Celebration during Festivals in collaboration with ILDM, Kerala, 01 Nov 2021

Recommendations/Key Takeaway



a) The state /district administration should equip, train and prepare the doctors and the other staffs of the medical department.

b) The implications of medical preparedness should be loud and clear which is one of the weakest links in the crowd disaster management.

c) We need to focus on planning for recovery before disaster happens. To get people back on track and to restore their livelihood we can go for quick impact projects for recovery after disasters.

d) Our planning for recovery, for rebuild and human development should be on the outcome based approaches.

e) Most of the time it has been found that our recovery and reconstruction planning is done in silos. There is need to integrate all the planning in one single framework for better DRR.

f) There is a need to streamline the disaster preparedness operations for ensuring safety in religious mass gatherings.

g) Guideline, Checklists and Standard Operating Procedures for mass gathering event organizers and authorities must be prepared and updated.

h) Sufficient measures and conditions should be taken and maintained for animal care and public safety.

Celebration of Eco-Friendly Diwali in collaboration with Delhi Institute of Advanced Studies (DIAS), 02 Nov 2021

Recommendations/Key Takeaway



a) Climate Change is happening due to emissions and extravagant human lifestyle.

b) The impacts of climate change such as rainfall pattern changing, sea-level rise, extreme weather events.

c) The reason for not burning crackers is because of the rise in pollution level.

d) Adopting alternative ways of celebrating Diwali will be for the safer society and future.

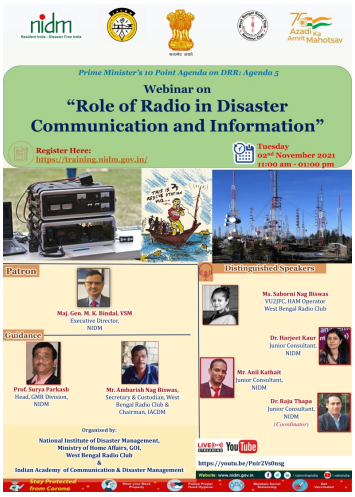
e) Emphasis should be given on providing awareness programs.

f) Crackers comprise of substances which causes harm to human beings.

g) Employees of firework industry are exposed to hazardous elements.

PM 10 Point Agenda on DRR: Agenda 5 Role of Radio in Disaster Communication and Information in collaboration with WBRC and IACDM West Bengal, 02 Nov 2021

Recommendations/Key Takeaway



a) In order for amateur radio operators to be able to contribute their help in emergencies, the local public officials should be aware of amateur radio capabilities and limitations.

b) Hospitals needed to have an amateur radio operator as backup communicators if the telephone system is down and cellular systems down or overloaded.

c) Amateur radio operators should be able to help with emergency communications.

d) Educating society regarding rumor control during disaster response is very essential. There is a need to train and promote society to follow government organizations, official and credible source of information to get factual updates about what is happening in disaster situations.

e) NIDM should carry out various Information Education Communication (IEC) activities to train-up media personnel to create contents and programs in disaster Management spreading information of disaster preparedness, education, health and other nationally important issues.

f) There is need to promote utilization of social media for quick response and rescue measures helping in adapting to vulnerable situation.

g) Collaboration and coordination between broadcasting organizations in emergency situations needs to be strengthen.

PM 10 Point Agenda on DRR: No. 1 Cyber Risk Mitigation and Disaster Management in collaboration with FICCI, 02 Nov 2021

Recommendations/Key Takeaway



a) One of the issues with digital platform is miscommunication, dis information communication and also miss utilisation of the in communicated information.

b) Cyber disasters unlike all other disasters, actually do not know any kind of political or administrative always because most of these can actually come across all boundaries and they can not only be physical, but also in terms of software activities.

c) Software platforms are actually causing more threats and risks compared to the physical infrastructure.

d) We have to educate people, even at the school level, how they can avoid and protect themselves against potential cyber risks.

e) The number of activities on the digital platforms has increased quite a lot and this has also increased over exposure to the cyber risks and disasters.

f) Each and every individual should know that if somebody steals away their information then how to act to protect you.

g) Government has created several system to combat cyber risks. We have a National Cyber Security Systems, National Cyber Coordination Centre and Cyber Emergency Response Team.

h) Cyber security and emergency management is a very broad topic, but it requires intense situational awareness and training.

Livelihood and Climate Change Resilience with reference to Flood Hazards, 03 Nov 2021

Key Takeaways/Recommendations



a) The three aspects to be taken into consideration to minimize the huge proportions of loss and damage are preventive strategies before the occurrence of floods, during flood measures and rehabilitation of post-flood livelihood disturbance.

b) Frequent flooding events in recent years have been linked with the changing climate. Comprehending flooding events and their risk is the first step in flood defense and to mitigate flood risk.

c) Climate change has played an important role in causing large-scale floods across India. There has been a three-fold rise in widespread extreme rainfall events, across the country.

d) He further said that the adaptation strategies if can be implemented efficiently can work like miracles in building resilience to climate change and flood hazards. Also, the role of community and their preparedness is very important in order to minimize the loss.

e) There is clear role of livelihood diversification in the flood resilience. Wooden stilts play a major role in mitigating the flood impacts. Early evacuation of valuable assets and storing calorie rich food is the key to combat this issue.

f) If we want to manage floods, save people and build resilience, we will need to plan much beyond the flood and must think about the entire system as a whole.

g) The flash flood vulnerability zonation enables them to recognize the sub-watersheds, which need faster adaptation for appropriate measures to minimize damages and destruction of life and property.

h) A very high-end instrumentation like a dense network of radars is required to monitor such weather dependent phenomenon.

Advances in Tsunami Sciences and its Disaster Risk Reduction in collaboration with ESSO-INCOIS, 05 Nov 2021

Key Takeaways/Recommendations

a) More detailed investigation on tsunami characteristics and their impact on failures of each type of facility are needed.

b) There is a need to develop tools to support decision-making for better emergency management to address short- and long-term social impacts.

c) Awareness and preparedness at the community level is essential.

d) There is a need to revive traditional knowledge about tsunamis.

e) Mock drill for medical evacuation well in advance needs to be carrying out.

f) Tsunami evacuation structures must be built at tsunami vulnerable zone

g) There should be resilient designing, sitting and building structures to minimize tsunami damage.



h) There should be proper planning for post tsunami recovery.

i) There is a need to emphasize on land use planning and building design to prepare for and mitigate the potential impacts of a tsunami.

The Fundamentals of Disaster Management: Response, Reduction and Preparedness, 09 Nov 2021

Key Takeaways/Recommendations

a) Disasters are a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses that exceed the ability of the affected community or society to cope using its own resources.

b) The success of any citizen science project depends on the establishment of a well-devised monitoring program and the dedication of its volunteers.

c) Volunteers have varying levels of expertise, from kids in their backyards to members of high school science clubs to amateur astronomers with sophisticated home equipment.

d) Ecosystem based approached to disaster risk reduction and ecosystem-based approaches to climate change adaptation are the need of the hour which should be taken into consideration to minimize the risks from rising disasters.



e) Mangroves have various direct as well as indirect roles towards preserving the ecosystem like on one hand, they provide food and on the other hand protect the deltaic lands and coastal fringes and provides them mechanical support.

f) For any sort of event if our preparedness is not optimum then it is viable to become a disaster.

Challenges and Solutions for utilization & Safe Disposal of Solid Waste Generated in Post Disaster Scenario (Technical Session 1), 11 Nov 2021

Key Takeaways/Recommendations



a) Emphasis was given on the issues and challenges related to disaster waste management.

b) Debris removal can help prevent long-term and short-term threats to the public. Moreover, the removal is necessary to ensure hassle-free relief operations.

c) Local Capacity should handle the solid waste during local region-specific disasters.

d) Disaster waste should be handled carefully because wastes of varied characteristics, such as hazardous waste, building collapse debris and vegetative debris, get intermingled and pose a severe threat to health.

e) Disaster Debris/Waste Management must include steps such as pre-planning, Pre-Incident Waste Management Practices (WMP) Review and Incident Specific WMP.

f) Governance framework should be thoroughly discussed and the legislation for waste management should be reviewed and strengthened.

g) The debris management and disposal are expensive for cities which had no institutional setup, skill set, expertise, and financial settings. It is important for these cities to work towards future disaster solid waste handling.

h) In the debris waste management planning stage, the planners should focus on topographical, hydrological, geological and geotechnical investigations, educating the contractor, incorporating the cost of debris transportation, disposal site preparation etc.

i) The selection of the debris disposal site should consider parameters like cost effectiveness, absence of ground or surface water, scope of forestation works, quantity of mucks etc.

PM 10 Point Agenda no. 1 on DRR Seismic Hazard Assessment organized by NIDM 11 Nov 2021

Key Takeaways/Recommendations



a) Active Fault is having indirect evidences is – Morphotectonic and stream morphometry aberrations of geologically recent time.

b) Similarly Direct evidences – Overriding, tilting, folding, faulting and deformation in Holocene deposits along fault.

c) For Seismic risk assessment Source characterization, Path effect and Site response Analysis are essential to be made.

d) Fault and seismicity are having intimate relationship. Active faults are risky.

Advisory Committee meeting for the preparation of National Environment Forest and Climate Disaster Management Plan for the MoEFCC), 15 Nov 2021

Key Takeaways/Recommendations



a) Enforcement of regulation and development of the programme of mitigation and abatement and community participation is very important for sustainable growth with assigned role to community.

b) To integrate the already existing resources to the DM plan and identify the gap which can be filled.

c) The mistakes and learning from every disaster must be systematically cataloged and put as a national learning log and need continuous improvement.

d) To conduct a webinar entirely on how to produce multi-hazard map and plan should have list of annexure for different disasters.

e) Emphasized to integrate existing documents related to disaster management in the plan.

f) To identity and map the vulnerable areas of extreme events in India both for present and future scenario and more focus need to be given in high resolution.

g) To have provision of species-specific institutes to conserve the specific species like oak conservation institute or so.

h) The plan should have a separate section talking about the learning labs which should be located in every ecological zones or climatic zones of the country.

i) Disaster Management and DRR issues should be mainstreamed and integrated in the schemes and programmes of the Ministry as explained in the CUSP principle.

Special Round Table Workshop on perspectives in Disaster Research: Status, Needs and Opportunities), 15 Nov 2021

Key Takeaways/Recommendations



a) Disaster research would relate to the issues of interpretation and inferences of the available data and addressing the data gaps.

b) Disaster research allows professionals in the field to advance existing preparedness, response and recovery practices and it is important to study the impact of disasters on behaviour which will help us identify the emergence of psychopathology and to develop mental health interventions to prevent or mitigate the traumatic effects post-disaster.

c) It's high time that the Govt. of India through its various arms deploy an institute to undertake disaster research and disaster science and technology measures.

d) The focus should be to connect early warning system to the preparedness and prediction systems. Pre-disaster events are as important as the post-disaster activities and to make this happen, we need a very strong research base.

e) Natural and man-made hazards threaten millions of people every year and cause billions of property damage. Disaster continues to undermine sustainable development so reducing its impacts and identifying pathways towards resilient societies is a global goal.

f) To deepen the understanding of evolving risks, the root causes of disasters and their impact, actionable research that is useful is needed, usable and used.

g) There is a need to give scientific advice to decision makers through close collaboration and dialogue with more focused attention on interlinkages between disaster risk reduction, sustainable development and climate change mitigation and adaptation.

h) Involving academia with good S&T interventions, start-up India platform and the policy makers in an integrated manner can be taken to R&D led disaster risk reduction.

Disaster Risk and Building Resilience: Compassion and Love organized by NIDM), 17 Nov 2021

Key Takeaways/Recommendations

a) All religious traditions at their core teach about compassion, they are all worthy of respect.

b) In order to be happy, it's necessary to do no harm, 'ahimsa', and treat everyone with compassion, 'karuna'.

c) All seven billion human beings are essentially the same in that they experience the same emotions and seek to live a happy life. This is the basis on which he talks about the oneness of humanity.

d) Maj Gen Bindal summed up the conversation and thanked his holiness for highlighting that the essence of all religious traditions is 'karuna' and 'ahimsa'.

e) The education provides us with the means to develop compassion and achieve peace of mind.

f) Prof Santosh Kumar also thanked His Holiness for elaborating on love and compassion, empathy and joy and for confirming the essential role of compassion, not only in disaster management, but even in ordinary human relations.

Industrial training webinar on Future Mitigation and Adaptation Measures for Flood Resilience in collaboration with Amity University, Lucknow, 17 Nov 2021

Key Takeaways/Recommendations



a) Events associated with floods such as landslides, heavy rainfall, hailstorms, thunderstorms, and cloudbursts increased by over 20 times.

b) Climate Risk Atlas should map critical vulnerabilities - Coasts, urban heat stress, water stress, and biodiversity collapse.

c) Integrated Emergency Surveillance System need to facilitate a systematic and sustained response to emergencies.

d) Require to mainstream risk assessment at all levels, including localized, regional, sectoral, cross-sectoral, macro and micro-climatic level.

e) Need to enhance adaptive and resilience capacity to climate-proof lives, livelihoods and investments.

f) Require to adopt participatory engagement of all stakeholders in the risk assessment process.

g) Integration of risk assessment should be mandatory into local, sub-national, and national level plans.

h) More research is also needed on river hydrology.

i) Flood models should incorporate sediment dynamics especially in Himalayan River flooding.

j) Need to include new ecosystem-based flood management approach in city planning.

Role of Citizen Science in Understanding Disasters organized by NIDM, 18 Nov 2021

Key Takeaways/Recommendations



a) Citizen Science for DRR needs to Be Multi-Dimensional;

b) Holistic approach and ground truthing is important;

c) Cross-fertilization of communities will bring innovation

d) Stimulating cross-community collaboration via an evidence-based framework.

e) Community members play vital role in reducing the impact of disaster.

f) Their knowledge of local topography, resources and livelihood options during disaster can play an important role.

g) Different aspects of rehabilitation such as social rehabilitation, economic rehabilitation and agricultural rehabilitation among others.

h) Preparation of safety plans, conducting of regular drills and mock exercises to school children and school management to make them conscious about disasters.

i) It is important to understand citizen science and make use of it to make a disaster resilient society.

Fundamentals of Community Based Disaster Risk Reduction and Management organized by NIDM, 18 Nov 2021

Key Takeaways/Recommendations



a) As community is the first and foremost responder, developmental policy planning should be made in consultation with the community.

b) Traditional and indigenous knowledge should also be taken into consideration for planning, and well documented.

c) SDRF needs to be strengthened.

d) Strengthening of community volunteer groups.

e) Need for greater efforts to construct hazard resistant houses.

f) Improvement of building techniques.

g) Effective dissemination of information on DRR to communities.

h) Changing role of social workers/development professionals needs to be revisited.

i) A holistic approach should be developed in way forward.

Hazards in the Himalayan region due to climate change organized by NIDM, 24 Nov 2021

Key Takeaways/Recommendations



a) Himalaya is covered almost 85% of snow but in summer it reduces to 10% only.

b) Himalaya is warming more than rest of the globe.

c) Due to retreating, Pindari Glacier lost his dimension from 1936 to 2015 as per satellite data.

d) Retreating of Glacier is varying from Glacier to Glacier depending on various parameters.

e) Hazard intensity is mainly depending on the area and velocity of flow.

f) Moraine dam is a classical disaster.

g) Level of flood in high altitude is very high due to GOLF.

h) Reassess the disaster vulnerabilities at the hilly region is needed.

i) It is in need to understand the impact of climate change, precipitation, earthquake on glaciers.

j) Adoption of sustainable development approach is required.

k) Holistic and robust mountain zone regulation is in need.

Disaster Risk Financing & Insurance Disaster and Insurance Awareness - for Andhra Pradesh, Karnataka, Kerala, Pondicherry, Tamil Nadu, Telangana, 26 Nov 2021

Key Takeaways/Recommendations



a) Understanding of various insurance products and the relationship between insurance and catastrophe risk finance is crucial.

b) There is a requirement for sensitising the overall population in regards to the monetary education for better use of the insurance products.

c) The insurers must reach out for large number of population with appropriate insurance products according to their respective needs.

d) The claim evaluation procedure is also important in order to protect the party from any type of fraud.

e) Insurance is a disaster-focused solution with several benefits in addition to risk mitigation.

f) Appropriate licensing is completed while adhering to the code of conduct. There are safeguards in place to maintain client confidence.

Wildlife Health Challenges during Disaster, 29 Nov 2021

Key Takeaways/Recommendations



a) As more disasters are emerging, some of unpredictable scale and magnitude, it becomes clear that the Anthropogenic has heightened animals' vulnerability.

b) Balanced ecosystems are a key component of resilience, and disease threats (including the risk of disease emergence) can be reduced by ensuring healthy balanced ecosystems.

c) Planning is critical because capability gaps can occur and be filled in any phase of disaster, and because the process of planning itself is a critical part of creating a functional emergency management system.

d) Disasters may present opportunities to explore protections for animals in preparation for future ones

e) Disasters, however, remind us that human beings and animals share an ecological landscape. In a sense, many of our uses of animals themselves may constitute a hazard, exposure or vulnerability for animals when not properly cared for or managed.

f) Inclusion of training module on disaster management under the training and capacity building component of the on-going schemes of the DADF for training of officers, trainers, farmers and cattle owners on mitigation of risk of disaster on livestock and fodder.

Safety of the Responders Avoiding Loss of Trained Responders, 29 Nov 2021

Key Takeaways/Recommendations



a) The work of the responders is inherently dangerous on any scale; it becomes even more perilous in a major disaster such as a terrorist attack or large scale disasters.

b) The trained responders must be shielded from the increased health and safety risks that they confront while responding to a catastrophe of giant magnitude.

c) In the circumstances of twin disasters, the biggest challenge for all of us is how to keep our responders safe during deployment and execution of rescue operations.

d) There should be a proper planning to avoid responders becoming victims themselves during the disasters. Appropriate planning will increase the operational efficiency of a disaster response at the same time it will reduce the incidence of post-traumatic stress disorders in respondents and therefore research needs to be made and to define which interventions will provide the greatest benefit to the local responders.

e) It is imperative for all of us to devise a suitable mechanism which allows us to build protect and safeguard ourselves, safeguard our responders and safeguards our generations.

f) There are four phases of disaster response, time critical response, mission specific preparations, dynamic inputs or analysis based on mobilization and fourth is terrain knowledge based operations.

If we adhere to these four principles of disaster response perhaps we can safeguard our own responders.

g) The risk during rescue is far greater than the hazard itself. We need to keep our responders safe that should be our top priority.

Occupational and Mental Health Challenges of Health Workers COVID-19 Pandemic, 29 Nov 2021

Key Takeaways/Recommendations



a) It is pertinent to discuss on health challenges of the health care providers and also to think of some kind of remedial issues well in advance so that the past experiences of first wave and second wave can help in future not only in Covid but this lessons will be helpful in future pandemics or any other kind of future disasters as well.

b) It is an immediate priority to monitor the rates of mood, sleep and other mental health issues in order to understand mediating factors and inform tailored interventions.

c) There is a shortage of well-designed studies on interventions for established burnout among doctors. Findings from a systematic review may shed some light on the effectiveness of individualized intervention strategies against burnout.

d) Coping strategies can include peer, family support and the positive experiences manifested as appreciation and recognition for their contribution during pandemic.

e) Enabling work environment, right information in media, support groups, community engagement, manpower increase, counseling services, workload reduction, appreciation from authorities, providing incentives, psychological support

f) Covid sensitization by Covid survivors and recreational activity can be the means for mental stress relief.

g) To better protect health workers from Covid-19 we need to strengthen data collection and reporting on infections, ill health and deaths among health care providers.

h) We also need to accelerate the vaccination of all the health and care workers in all countries.

i) Need to make regulatory, policy and investment decisions that ensure the protection of health and care workers.

j) Training of health workers and recognition of Covid-19 as occupational disease is important.

Water Related Disasters & Mitigation Strategies, 30 Nov 2021

Key Takeaways/Recommendations



a) The bank erosion is a natural process in stable rivers; however, it can become accelerated and exacerbated by direct and indirect human impacts.

b) River bank degradation can disrupt the transportation system, property loss from undermining structures, sedimentation of in-stream structures.

c) The Health risks associated with flooding are surprisingly poorly characterized and need to consider the whole event and entire recovery process.

d) More and better quantitative data are needed, including the better registration of injuries and deaths.

e) Long-term effects such as mental health outcomes are likely to be significant for riverine flooding.

f) More and different instruments are needed for assessing health risks: for flood, dislocation and recovery process. Maps are one possible tool. Health risks should be included in the risk characterizations.

g) Preparing for disasters is far more cost-effective than to recovering from them after they have occurred.

h) The droughts and the floods are a common feature and their co-existence poses a potent threat, which cannot be eradicated but has to be managed.

i) For addressing natural calamities such as floods and drought, there is a need to make full use of existing schemes and priority needs to be given to the implementation of schemes that will help overcome the conditions created by the calamity.

Effective Communication during Disasters, 30 Nov 2021

Key Takeaways/Recommendations



a) Focus should be made in creating a mainstream/mass media disaster prevention environment through government and non-government interventions and initiatives.

b) Public-Private Partnership, especially in the area of infrastructure building needs to be enhanced.

c) Disaster Management & Communication should be a part of curriculum for all Mass Communication/Mass Media/Journalism courses.

d) Community-centric approach for Disaster Risk Reduction should be taken as a 'common cause' and not an area for competition.

e) Role of AI in recognizing patters before disaster, disaster response and in planning evacuation, real time analysis of content in disaster recovery, assessment of loss and impact needs to be investigated and implemented to the maximum extend.

f) It is useful to report the chronology of events to create an accurate picture of what has happened, and it is important to avoid laying the blame for any disaster without having strong reasons to do so.

g) Online social networks such as Twitter allow people to use mobile phones to share lifesaving information during a crisis, and journalists can also use these tools to get a better picture of what is happening.

h) Aid agencies and emergency services depend on media coverage to raise awareness of the need for help, and journalists benefit from the cooperation of aid agency staff. But each side of this relationship can have very different expectations and it is important to be aware of this during a crisis.

i) Hospitals needed to have an amateur radio operator as backup communicators if the telephone system is down and cellular systems down or overloaded.

Building Coastal Community Resilience against Disasters organized by NIDM, 30 Nov 2021

Key Takeaways/Recommendations



a) Climate change is anticipated to increase the coastal hazard threat trends (sea level rise, floods, storm – both intensity & frequency).

b) Knowledge of indigenous groups can be tapped for preserving forestry and their inputs can be valuable for watershed, forestry, fishery and other livelihood management programs.

c) The majority of the coastal communities are completely dependent on fishing for their sustenance and lack skills and capabilities to shift occupation.

d) The coastal villages lack the protection of dense mangrove belt which can minimize the impact of sea waves.

e) The coastal population is not self-reliant during adverse situations and is exclusively dependent on external aid.

f) Restoring ecosystems not only protects from disasters but also promote tourism, mitigate climate change effects etc.

g) Innovative Use of NDZ for non-structural measures for CRZ 3 B to mitigate the impacts of climate change.

37th Memorial Anniversary of Bhopal Gas Tragedy Recalling Lessons Learnt and Way Ahead Organized by NIDM, 02 Dec 2021

Key Takeaways/Recommendations



a) We should not rely on prevention measures only but have a clear and logical approach to dealing with emergencies.

b) We should not undermine any potential Hazard but conduct a detailed Hazard Identification, evaluate the risk comprehensively, prioritize the Risk as per potential to destruct etc.

c) Do not consider any potential Hazard in isolation but always consider the possibility of multiple hazard consequences in your plant."

d) Consider all potential Scenarios and prepare for the Worst cases.

e) Do not assume everybody knows what you think they should know and provide common reference for all departments and authorities with roles and make everyone aware of the Risk and the important role they play in mitigating it.

f) Enhance level of skill to handle allotted task by training with specialized equipment and techniques.

g) Do not designate emergency personnel who are not actively performing emergency operations in extreme hazardous situations.

h) Do not neglect the Medical Surveillance aspect for Emergency Responders because It may affect the outcome of the operational plan, critically reduce the Response element and it may create a demoralizing impact

Safety of Hazardous Chemicals in Collaboration with NDMA, 02 Dec 2021

Key Takeaways/Recommendations



a) It is the need of the hour to integrate the chemical disaster management issue or the management of hazardous chemicals with the holistic or broad framework of disaster management that is a multi-hazard framework.

b) National Disaster Management Authority took out three guidelines on chemical disaster, chemical terrorism and on transportation and movement of fuel carrying vehicles which have been widely accepted and have brought about a transformational change in the industry.

c) The most important thing in an industrial scenario is the leadership commitment to safety; how the leadership is involved in reviewing the safety performance, in setting up the targets and demonstrating their commitment to safety.

d) PESO has been granting licenses to flammable/non-flammable; toxic gases and liquids under Static and Mobile Pressure Vessels (Unfired) 2016 rules, Petroleum Rules 2002 and Gas Cylinder Rules 2016. Although when the quantity of any such gas exceeds its limit than storage capacity, automatically it comes under the MSHS rules and further CPCB, SPCB, Factory Act, inspector of factories, police authorities, etc. comes into play.

e) As an immediate action after a chemical splash, flushing the skin/ eyes with water should be done for 5-minutes to 60 minutes depending upon the type of chemical irritant. There should be Decontamination kiosks, vending machines, OTC medicines, available. Stocking oxygen should be based on the type of health emergency because cylinders containing oxygen in extreme pressure is in itself a hazard

Advisory Committee Meeting on Multi-hazard Disaster Risk and Resilience: Practical Learning and Step-by Step Guide for to Improve Disaster Resilience at City Levels", 06 Dec 2021

Key Takeaways/Recommendations



a) Ministry of Home Affairs, Government of India jointly with United Nations Development Programme had undertaken a study for developing a multi-hazard disaster risk and resilience score card for all the states and union territories of India.

b) This study will be based on a few cities only but it can be made generic in such a way that everyone can use it to build resilience for their city. This study will be addressing the factors, challenges and recommendations in a step-by-by manner which can be treated as an action book or a toolkit for a particular city.

c) In old city areas which are heavily congested, there are various fragile abandoned buildings which have been illegally occupied that pose serious risks of falling down and hindering response force operations. A system is needed to be devised to rebuild these areas of the cities in disaster resilient manner.

d) The communication system which is severely disrupted during the disasters. A communication system should be devised to cater the needs of the contingencies.

e) The role of agencies is not very clear during disasters. There is a lack of proper policy and accountability as well as a proper city disaster management plan which can define roles of different agencies during the disasters.

Disaster Risk Mitigation and Management in Libraries in Collaboration with DELNET Developing Library Network, 06 Dec 2021

Key Takeaways/Recommendations



a) The fundamentals of disaster mitigation and management should be added to the library in all its programmes and functions.

b) Libraries should be equipped with adequate equipment for the disaster risk reduction and resilience such as detection/alarm systems, fire extinguishers.

c) Collaboration/coordination between libraries that are exposed to different hazards with relevant line departments to equip libraries with reliable and timely information on imminent disaster.

d) We must formulate certain action plans for mitigation and better preparedness against each of the disasters to which the library may be prone to.

e) Disaster resilient infrastructure demands planning ahead for disasters and investing in resilience to reduce vulnerability. Disasters might happen anytime, anywhere so we must have minimum preparedness to face those kinds of disasters.

f) The concept of Business Impact and Risk Analysis (BIRA) helps in assessing the most critical processes in an institution or in a library. Every institution must have their digital library disaster recovery policies that take into consideration the process for recovery in case of a disaster.

Advisory Committee meeting for preparation of National Chemicals and petrochemicals Disaster Management Plan for the Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Petrochemicals, Ministry of Chemicals & Fertilizers, GoI, 07 Dec 2021

Key Takeaways/Recommendations



a) A good warning system is one of the most important pre-requisite of the emergency management system to save lives, prevent injuries and mitigate losses.

b) As soon as incident controller determines that it is necessary to warn people of a threat to public safety, a strategy appropriate to the situation will be developed and immediately implemented to ensure coverage of the affected area

c) In a disaster situation, evacuation from hazardous areas may be the most effective way to obviate casualties.

d) Regular follow up and communication between government agencies and industries and ensure the availability of emergency equipments

e) Chemical names, descriptive names or prescribed 'correct technical names' should invariably be displayed on packages or vehicles carrying hazardous chemicals

f) The drivers of all road vehicles carrying hazardous chemicals must carry with term instructions in Writing' relating to each dangerous substances or to each class of dangerous substance whether covered in packed form (i.e.) in tins, drums, etc.) Or in bulk road vehicles.

Disaster Risk Management at Fuel Stations in collaboration with Nayara Energy Ltd, Maharashtra, 08 Dec 2021

Key Takeaways/Recommendations

a) There is a need to develop risk assessment framework that prioritize hazards and calculate risk value to assist health safety and environment professionals in decision making.

b) Strictly follow the Oil Industry Safety Directorate (OISD) safety guidelines. Eliminate all possible ignition risks.

c) The employer/ responsible person must find out what dangerous substances are present in their workplace and what the fire and explosion risk are.

d) The employer/ responsible person must put control measures in place to either remove these risks or, where this is not possible, to control them.

e) We must put controls in place to reduce the efforts of any incidents involving dangerous substances. We must prepare plans and procedures to deal with accidents, incidents and emergencies involving dangerous substances.

f) We must encouraged taking a holistic approach and avoiding keeping any extra fuel containers inside the car; unless you are travelling on a barren expressway.



Consultation Workshop on Disaster Damage & Losses - Study of Root Causes in Collaboration with Sphere India, 09 Dec 2021

Key Takeaways/Recommendations

a) Socio-economic vulnerabilities at multiple levels needs to be considered while analyzing

b) Sample size is too small to conduct a realistic and detailed study; needs to be strategized.

c) Ecosystem and wildlife related damages/impacts needs to be considered in practicalthe damages.

d) Intangible loses, psychological impacts and mental health must be included to create a senses while conducting such an assessment.

e) Comparative study of those affected and those not affected can give a bigger and overall holistic picture.



f) A mix of qualitative, quantitative and spatial techniques must be employed throughout picture of the scenario and enhance the understanding. the study

Integration of Disaster Risk Reduction into Gram Panchayat Development Plan in Collaboration with Pragya (Gurgaon), 10 Dec 2021

Key Takeaways/Recommendations



a) Panchayats should be equipped to act using their own resources to provide food, shelter, and support to the vulnerable even before directions from central or state governments are received.

b) Gram panchayats or the Self Help Group (SHG) based Pubilc Distribution System (PDS) will ensure the food security of the rural poor. Shifting of regulatory power from state or district authority to gram panchayats is important to efficiently arrest the spread of COVID-19.

c) The PRIs need to be given adequate power and funds to take over control of the school system and public health system at the village levels. The Gram Panchayats need to be empowered to carry out these functions efficiently, especially in light of the pandemic and plan for the coming three to six months when an upsurge in cases is predicted

d) Based on Climate Risk Assessments, each Gram Panchayat Development Plan (GPDP), District Disaster Development Plan (DDMPs) and Annual Plans of Line Departments is able to factor in disaster, climate and ecological risks in their annual plans and adopt 'early warning early action' interventions.

e) Highlighting the significance of improving the capacity of Gram Panchayats in the preparation of Panchayat-level disaster management plans to act efficiently in response to a disaster. These plans must be integrated with the GPDP to ensure the development of disaster management plans by every Gram Panchayats in the country.

f) GPs have a very important role to play in both preparedness and mitigation in mobilizing and organizing the people. The GPs are accountable to the people. GP's close involvement will go a long way in getting people prepared for countering natural disasters as well as involve them in all possible preventive and protective activities so that the impact of the disasters are mitigated and the people are able to save their lives and property.

2nd Phase of Online Training Programme on India Disaster Resource Network IDRN for Meghalaya & Sikkim State, 10 Dec 2021

Key Takeaways/Recommendations



a) IDRN portal updation needs to be sensitized periodically to the state of Sikkim & Meghalaya.

b) IDRN system functioning should be sensitized to the various stack holders of Sikkim & Meghalaya state.

c) For more data updation district have to encourage all the line department including (Govt , PSU , Private)

Integrated Water Resource Management, Hydro Resilience and Sustainability under Climate Change in Collaboration with MANIPAL Academy of Higher Education, 16 Dec 2021

Key Takeaways/Recommendations



a) The issue today is not about lack of water but about mismanagement of water which brings great challenges.

b) The urbanisation and climate change extremities are route cause of water mismanagement.

c) The current earth climate warming trend is extremely likely to be the result of human activity since the mid-20th century.

d) The NBCP model enables the stakeholders to detect the radiative forcing and attribution to climate change.

e) Today, the effective governance along with scientific solutions which is the science policy practise interface is the need-of-the-hour.

f) Water conservation is the key mantra to address the rising water scarcity issues.

g) The sponge city concept and storm water harvesting techniques are keys to address water scarcity in urban built environment.

h) The methods such as the Invest model, NRCS-CN model, Lumped Zhang model, and SWAT model are resourceful in recognizing rainwater harvesting hotspots in cities.

Drought Management in India: Role of Geospatial Technologies Organized by NIDM, 17 Dec 2021

Key Takeaways/Recommendations



a) Drought is Hydro-meteorological disaster and root cause is meteorology

b) Long term drought management Hazard, vulnerability and Risk assessment is very essential parameters o Geospatial technology is mandatory in every facet of drought management

c) Spatial soil moisture data plays a very important role in drought management.

d) RADAR Data is very high potential back scattered for sensitive drought detection.

e) Drought management in India: Role of Geospatial Technologies

f) Smart phones are the surveillance tools for drought monitoring system, smart phone based crop monitoring system are given importance now a days.

g) Mainstreaming of drought risk reduction practices is important to develop resilience in the system and to achieve sustainable development

Human Resources Capacity Building Plan for DM & RR, 21 Dec 2021

Key Takeaways/Recommendations



a) The modern approaches like preventive and proactive culture and integrated holistic approach

b) Need to bring all 18 agencies in one platform.

c) Plans should be implemented to the last mile, to the need of the hour is we have to develop the culture of hearing, communication, preparedness, prevention, capacity building and development, otherwise we will not be able to reach the goals can be included in HRCD plan.

d) The need of the society will change, therefore, a dynamic format is needed for the plan, so that itDistrict level, Panchayat and Municipal level.

e) The topics of the HRCD Plan can be divided in to smaller sub areas and discussed in upcomingcould be updated time to time.

f) The capacity developed by training should be considered for a specific time as if the training has More emphasis should be given for adult learning. consultation sessions for in-depth discussion and to receive concrete suggestions been taken long back it becomes dormant if it is not practiced for long. Skills have to be

g) We need to think how we can group and interlink various ministries in National level, Various validated periodically to remain as a trainer or active volunteer. departments and the ministry in the state level, and district level both in vertical and horizontal way.

Mitigation of Urban Risks for Resilient Communities, 22 Dec 2021

Key Takeaways/Recommendations



a) To make cities resilient from disasters we need to break down cities into their fundamental components and see how different components coexist with each other. We can break the cities into geography, planning and disaster.

b) When we talk of different kind of urban risks, the important thing is to understand where these different risks emanate from.

c) Urban Primacy is also a major concern because everyone is moving to larger cities and neglecting smaller cities, which gives a skewed kind of growth in a region. In terms of Disasters this phenomenon has a huge impact because now the risk is not transferring or distributing equally within a region but residing at a single place.

d) Allocating some portion of their budget specifically for climate related issues.

e) To mainstream climate action in policies and governance framework we require separate climate cells for this within the urban local bodies.

f) Concluding points for actions for cities

- Climate action planning,
- multi-stakeholder approach,

- o DRR and sustainable development co-benefits,
- o integration in urban/infrastructure policies, plans projects,
- o Finance and governance – allocation of budget, data, institutional capacities, business process

How to Mainstream Gender Sensitivity in Disaster Management Organized by NIDM, 23 Dec 2021

Key Takeaways/Recommendations



a) Promote women's empowerment for broader resilience strengthening is essential.

b) Women should be given the right to assistance to regain their functioning, resulting in recovery and rehabilitation and that they should participate in the plan for their rehabilitation

c) Social workers must also be made aware of these so that our interventions do not add to their vulnerability through benign neglect.

d) The improvement and recovery needs must address threats posed by disaster hazards, vulnerabilities and risks within communities

e) Tangible and intangible effects of disasters need to be considered

f) Rights based approach to recovery and rehabilitation activities.

g) During emergency, the needs of women of reproductive age, particularly pregnant and postpartum women, introduce unique challenges for public health and clinical care. Incorporating reproductive health issues and considerations into emergency preparedness and response is must and essential.

Special Discussion on Disaster Documentation & Forensics: Approaches and Lessons Organized by NIDM, 24 Dec 2021

Key Takeaways/Recommendations



a) The documentation of an emergency incident is a critical part of an emergency plan.

b) Precise recording of each step of the disaster is very important in order to provide a clear understanding of the events that occurred.

c) In order to conduct a documentation of disasters, it is very important to promote research that will support changes in the understanding and common conceptions and misconceptions of disasters.

d) There is a need to develop a system of reporting and record-keeping as part of the disaster and emergency plan.

e) It is important to examine the root causes and the dynamic processes of risk drivers through an integrated, interdisciplinary and comprehensive analysis of the causes and consequences of disasters.

f) The local administration should update the geographical, topographical and vulnerable profile of the area to mitigate the risk of the disaster as well as for an effective preparedness.

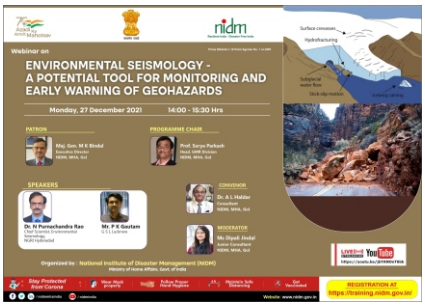
g) The Road, Rail and Air connectivity, shelters and relief camps should be ensured by the District Administration during the disasters.

h) After every disaster there is a need to undertake research studies and analysis to understand the best practices and learn lessons to improve the policy and disaster governance.

i) Records are necessary for financial reimbursement and helpful for future disaster and emergency preparedness.

Environmental Seismology - a potential tool for monitoring and early warning of Geohazards, 27 Dec 2021

Key Takeaways/Recommendations



a) Environmental Seismology and Seismic monitoring has a tremendous potential for monitoring, tracking and Early warning of several geo-hazards like Landslides, Rockslides, Debris flow, Floods and Glacier breaks.

b) Future efforts should focus on development of automated, regional Early Warning Systems for geo-hazards to safeguard human lives and property.

c) Utilization of AI-ML for identification of the events would be of paramount importance for successful early warning.

d) Environmental Seismology generates low amplitude wave and recording could be picked up in limited surficial distance.

e) Critical Zone monitoring can help farmers to monitor their crop growing during the season.

Special Discussion Session on Action Research in DRR Approaches and Lessons, 28 Dec 2021

Key Takeaways/Recommendations



a) Disaster management is a subject of professional practice and not purely academic practice. Disaster management is also a highly evolving subject.

b) It is important to invest in disaster research.

c) If early warning systems are effective, we can save lives and properties to some extent.

d) Policy needs to be reached to the last mile and that is the biggest challenge of the professionals working in the field of disaster management.

e) Local people overcomes calamities through knowledge gained through generations.

f) It's not only about communication but the method of communication and ambience of communication that makes a difference and how people will absorb it.

g) Everything should be done through case studies and emphasised that institutions should be based in the field and learning should come from the field.

h) Action research needs to be narrowed down and its solutions should be specific rather than being a generic one.

i) The process of action research needs to be shifted from top-down approach to bottom-up approach. Interventions are to be queued in a manner that it becomes more of a local agroclimate context.

States/Uts & Districts DRR Needs: Context of Local Capacities in Collaboration with Brain International School, Vikas Puri, New Delhi, 29 Dec 2021

Key Takeaways/Recommendations

a) Ensuring that disaster risk reduction is a national and local priority with a strong institutional basis for implementation requires building institutional capacity through the development of policy, legislative and institutional frameworks.

b) Using knowledge, innovation and education to build a culture of safety and resilience at all levels requires supporting and building technical capacity to assess impact and vulnerability, improve monitoring and evaluation, and promote community-based education.



c) Strengthening disaster preparedness for effective response at all levels requires equipping institutions, individuals and communities in disaster-prone areas with the necessary knowledge, skills and capacities to manage and reduce disaster risk. Increase access to education and training using online learning systems.

d) Programmes tend to be focused on present risks and vulnerabilities, and little attention is paid to developing capacities to recognize and adapt to longterm changes, including those associated with climate change.

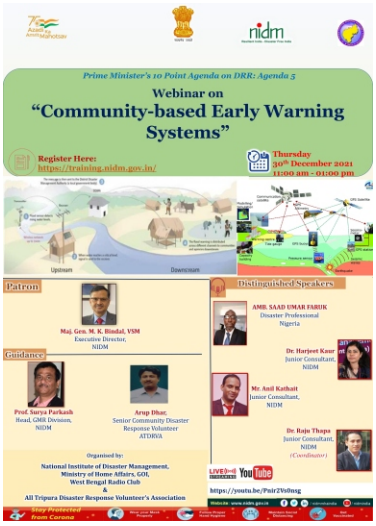
e) Increase the understanding of the importance of risk forecasting and the influence of climate change risk among disaster risk management and sustainable development stakeholders Policy-planners should think carefully about the ways that they can facilitate the construction and maintenance of social networks

f) Improved disaster response, including specific areas of technical expertise such as urban search and rescue, the incorporation of risk-reduction approaches into response management and recovery planning, local level partnerships

g) Governmental and nongovernmental organizations need to set up sustainable network organizations, which are capable to institutionalize disaster relief action on a local level. Impacted by disasters, local institutions, the community and its members are direct and active participants preparing for and responding to disasters.

Community Based Early Warning Systems in Collaboration with All Tripura Disaster Response Volunteer's Association, 30 Dec 2021

Key Takeaways/Recommendations



a) NIDM should carry out various Information Education Communication (IEC) activities to train-up media personnel to create contents and programs in disaster Management spreading information of disaster preparedness, education, health and other nationally important issues.

b) There is need to promote utilization of social media for quick response and rescue measures helping in adapting to vulnerable situation.

c) Collaboration and coordination between broadcasting organizations in emergency situations needs to be strengthen.

d) NIDM need to focus in sharing of knowledge and information in local language to reach to the communities residing in remote areas with limited understanding of Hindi and English language. Broadcasting techniques and systems for use in emergency communications needs to be continuously improvised.

e) There is need to improve the last Mile Connectivity (LMC) under States/UTs arrangements, based on Wi-Fi, Wireless Mesh Radio, VHF Radio, Micro Cellular technology etc depending upon the need and suitability of the concern area.

Coastal Area Planning and Management in Collaboration with Malla Reddy University, Telangana, 30 Dec 2021

Key Takeaways/Recommendations



a) The domain of cultural values should not be marginalised with respect to coastal zones. An applicable and detailed concept of strong sustainability should be developed that holds for all natural capitals addressed in the 2030 Agenda.

b) There is need to strengthen linkage EWS with forecast-based early action programming which can ensure that tools such as standard operating procedures, triggers, warning processes, and contingency and response plans are developed collaboratively with marginalised social groups, and that disaster risk reduction, management and response are effective in building resilience for everyone.

c) A global, systemic approach to coastal management should be employed.

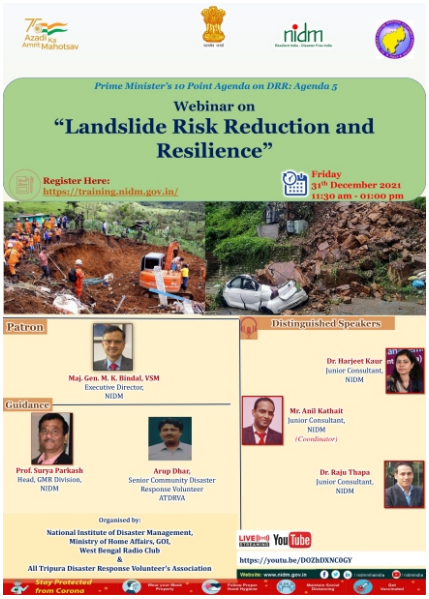
d) We can strengthen links between early warning and early action, and continue to improve the effectiveness of both of these important mechanisms.

e) There should be properly designed by the scientific institution through proper research work for coastal area.

f) We need to focus on planning for recovery before disaster happens. To get people back on track and to restore their livelihood we can go for quick impact projects for recovery after disasters.

Landslide Risk Reduction and Resilience in Collaboration with All Tripura Disaster Response Volunteer's Association, 31 Dec 2021

Key Takeaways/Recommendations



a) Documentation of past disastrous events is crucial in strengthening the strategies to reduce the adverse impacts/risks of the landslides on our hilly slope.

b) Landslides are predictable and the adverse impacts posed by them can be minimised or even averted with proper and systematic studies.

c) Before any construction activities we need to check the slope health status, whether the proposed construction is feasible or not, if not what should be the measures to ensure the safety of the slope.

d) Proper monitoring of slopes potential to fail.

e) Need to incorporate the local knowledge in the development planning process. Systemization and standardization are needed to improve the application of technology interventions.

f) Broadcasting techniques and systems for use in emergency communications needs to be continuously improvised.

g) Use of online social networking services and social media like whatapp, Facebook, Twitter, Google, etc in all the phases of disaster management must be promoted.

Thematic Write-up

Enhancing Omicron SARS-CoV-2 variant responsiveness

Dr. Surya Parkash and Dr. Raju Thapa

Following the advice of the WHO's Technical Advisory Group on Virus Evolution, WHO identified variant B.1.1.529 as a variant of concern (VOC) (1) on November 26, 2021. Omicron was the name given to the variation. Omicron is a highly divergent variety with a large number of mutations, including 26-32 spike protein alterations, some of which were likely connected with humeral immune escape potential and increased transmissibility. For a variety of reasons, the total risk associated with Omicron remains quite high. To begin with, the worldwide risk of COVID-19 is quite high. Second, recent evidence suggests that Omicron has a large growth advantage over Delta, resulting in fast community dispersion. The quick rise in cases will result in more hospitalizations, putting undue strain on health-care systems and causing severe morbidity, especially among disadvantaged people.

Omicron has a significant growth advantage over Delta, according to the research. In places where community transmission is recorded, the Omicron variation is spreading far quicker than the Delta version. Data on the clinical severity of Omicron-infected individuals is becoming more readily available. Early evidence from South Africa, the United Kingdom, Canada, and Denmark suggests that Omicron has a lower incidence of hospitalisation than Delta. However, hospitalisation risk is simply one component of severity that may be influenced by admission policies.

Preliminary data shows that the Omicron variant's tropism may be shifting towards the upper respiratory system, as opposed to Delta and the Wild Type (WT) virus, which have a lower respiratory tract tropism. In the Syrian hamster (M. auratus) model, there are also indications of less severe pathogen city, although this must be confirmed.

Efforts in all nations to increase COVID-19 immunisation coverage in at-risk people should be stepped up. Immunization efforts in all nations should provide a special emphasis on people identified as high priority (2) who are still unvaccinated or whose vaccination is incomplete. The objective for booster doses, according to the SAGE (Self-Administered Gerocognitive Examination) assessment, is to maintain and optimise vaccination efficacy against severe illness outcomes, particularly for people at high risk of serious disease. With the development of the Omicron variety, the use of well-fitting masks, physical separation, indoor ventilation, crowd avoidance (particularly during the holidays), and hand cleanliness remain crucial to minimising

SARS-CoV-2 transmission. To break transmission chains, increased monitoring with quick testing, cluster investigations, contact tracing, case isolation, and assisted quarantine of contacts are urgently recommended. To combat the spread of all SARS-CoV-2 forms, WHO continues to recommend employing a comprehensive, multi-layered, and targeted use of Public Health and Social Measures (PHSM).

Ensure that early warning mechanisms are in place to guide efficient and sensible modifications to public health and social measures, as well as effective methods for involving impacted communities and conveying these changes while anticipating their concerns. Authorities should frequently convey evidence-based information about Omicron and other circulating variations, including what is known, what is unknown, and what is being done by responsible authorities, to the public in a timely and transparent way.

Preparing for the Omicron Wave

Dr. Sushma Guleria

The Omicron covid variant, which was first identified in Southern Africa, is feared to be more transmissible and able to evade vaccine barriers than the predominant delta strain that emerged in India. The principal concerns about omicron include whether it is more infectious or severe than other VoCs and whether it can circumvent vaccine protection.India is preparing to bolster Covid-19 genome sequencing efforts, in the hope for early detection of the newly-emerged omicron variant so as to be able to avoid a repeat of the delta-fueled wave of infections that brought our health system close to collapse in the last 2 years. Public health officials aim to analyze positive tests from airports within 48 hours and more than a dozen state-funded laboratories may be added to the current 38 that are part of the Indian SARs-COV-2 Genomics Consortium, or INSACOG, according to Priya Abraham, director of the India's National Institute of Virology.As a country, we have learnt a lot from the second wave and this capacity needs to be exponentially expanded.

As is being assessed by the doctors of All India Institute of Medical Science (AIIMS), if oxygen levels decline due to Omicron, then that can perhaps pose a concern with respect to the health care infrastructure, nonetheless, due to the ongoing vaccination programme, this shouldn't be a problem. This, although is a little difficult to predict because, and even at this point of time when more than 30 countries have reported one or more cases, India is still waiting for some more information. So, in this phase, we should be preparing ourselves that a third wave may come but at the same time, it may be good news in case we find that this particular virus Omicron is not very fatal. Thankfully, so far no death has been reported from any part of the world.

The health repercussions due to Omicron might be a mild disease. It is possibly being observed in some countries such as South Africa that the gap between the infection and the manifestation of the disease is a little longer. And when it is longer than the Delta virus, it is likely to be transmitting and infecting more and more people. Therefore, there is a probability that if the transmission rate is high, but its killing power is low, then it can transmit and generate immunity among the people as well.

However, concerns remain about gaps in India's overall Covid-19 surveillance, especially given its past track record of lax imposition of testing and isolation protocols ahead of the emergence of the newest variant. After opening up its borders to foreign tourists in recent weeks following dwindling infection rates, India has once again taken the necessary precautions and will reimpose airport testing and home quarantine for fully vaccinated arrivals from countries that have registered omicron cases.

Despite the moves to ramp up both testing and sequencing, some government officials and experts speculate that omicron may already be circulating in our nation that's home to about 1.4 billion people, as reports of identified patients with the variant have started emerging from few States.

There is no denying that the experience of the second wave in India was a profound shock and it in a way helped to shape public opinion and government policy towards ensuring that India should never go through this again. Also, case loads are low in India at the moment and that will help to divert sequencing and surveillance to this effort, at least initially.

Isolating Omicron

Pune based library NIV holds a library of about 300 Covid strains and is trying to look for ways to isolate omicron to allow Indian vaccine makers, including Bharat Biotech International Ltd. and the Serum Institute of India Ltd., to potentially calibrate their shots to the new variant.

Doctors in India feel that Hybrid Immunity is very high in our country which means a better protection against the Omicron as has also been indicated by scientists. Different related surveys have informed that more than 70-80% of the population have been exposed to the Covid infection, which means they have antibodies in them. Simultaneously, nearly 126 crore people have been vaccinated with either one or both the doses of the vaccination which is an indication about the high hybrid immunity in India.

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2) https://www.business-standard.com/article/current-affairs/omicron-isn-t-fatal-but-india-should-be-prepared-for-third-wave-expert-121120400811_1.html
3) https://www.aninews.in/news/national/general-news/omicron-is-not-fatal-but-india-should-be-prepared-for-third-wave-top-health-expert20211204183425/

Preparing for the Omicron Wave

Shekhar Chaturvedi

India has been successfully fighting the wave of COVID 19 pandemic since January 2020. It had strengthened its health infrastructure, issued guidelines for human safety, Identified ICMR and other labs for finding innovative ways of testing on a fast pace and involving all stakeholders for its fight against the pandemic. Despite all these efforts impact of pandemic was huge as even a single death matters. The second wave was much more severe as it had widespread community spread. Government with the support of state governments, UT administrations and other stakeholders could manage to break the curve of impact. With decline in curve of impact of COVID 19, majority of the entities got opened which included construction sites, malls, marriage homes, schools and offices although with prevailing COVID precautionary behavior.

Now it has been seen again that the new variant of Corona virus known as Omicron has started its impact on a very high pace. According to news agencies 57 countries have been impacted by Omicron. India is also not left behind and it has also registered 23 cases of Omicron. Although initially it was not sure whether the impact of Omicron would be as severe as the second wave or it is mild. There were different information's regarding this. India, as usual is confident that it can withstand the impact of Omicron. As an activity of response to Omicron, India is taking various steps right from beginning.

Minimizing the impact through international travelers, India has identified the `at risk' nations and has started screening all international passengers across the airports. At risk nations are those nations where Omicron has its impact. Further to it, India has stopped all its international flights till January 31, 2022. A separate pathway has been earmarked for international travelers and on-site RTPCR tests are being done. They are also being sent on institutional quarantine for 7 days post RTPCR test and sent home for 7 days quarantine if the report is negative. However, if the report is positive, they are sent to hospital.

It has also issued guidelines for maintaining the COVID 19 appropriate behavior such as washing of hands, use of masks and physical distancing. Centre in this regard has requested all the States and UTs to strictly implement the guidelines and ensure that Covid appropriate behavior is followed.

Directions have been issued to all states and UTs to be on alert for any such increase of impact and report the same to the corresponding health department. They have also been requested to strengthen and activate the hospitals along with their staff for meeting any eventuality/ emergency.

Common citizens have also been requested to follow Covid appropriate behavior and inform any symptom of fever, breathing trouble etc. to nearest Covid centre so that appropriate and due attention can be made available to them.

Hence, we see that various response preparedness measures have been undertaken by the Government to fight with any rise in Omicron wave.

Impact of Omicron on International Students

Ranjan Kumar

The Omicron strain of SARS-COV-2 (the coronavirus that causes COVID-19) was first identified following a spike in coronavirus cases in South Africa, and now has caused cases in over 108 countries The CDC & WHO consider the strain a "variant of concern" because this new strain is more contagious than all other previous variants including Delta. Efficacy of vaccines available in the market is also less efficient against Omicron strain. It spreads more easily from person to person and its contagiousness is much higher than all previous variants of COVID-19. There is currently no information to suggest that symptoms associated with Omicron are different from those of other variants.[1] The COVID-19 omicron variant is reported to be more transmissible, although reportedly less severe.

The outbreak of Omicron, the new variant in the Covid-19 pandemic, is a further challenge that concerns not only a difficult health situation or a complex socio-economic framework, but also the role of Education, regarding primary and secondary school, vocational education training institutes, and university students around the world, without forgetting all those who live the community dimension of the campus and, therefore, with a specific risk of infection.[2] In India, several education institutions have experienced institutional outbreaks of Covid-19 and the new sub-variant, Omicron, has triggered concerns worldwide. The national genomic surveillance programme is tracking the variant and trying to ascertain if it is emerging as a major epidemiological concern in the Indian context.[3] In the current pandemic situation, most parents agree on that the closures should be continued if there are multiple Omicron cases rather than risking lives of the students.

Travel restrictions on countries with reported cases of omicron are likely to affect international students and higher education institutions. International students doing online learning may have to continue doing so until restrictions are lifted.

Effects on education and institutions[4]

As early as March 2020 when the COVID-19 pandemic first gripped the globe, the education sector was already hit hard. Most schools at all levels closed down most of the countries in the world. Numbers suggest around 1.2 billion youngsters were affected because of this. This eventually led to utilizing the power of the internet and online methods of delivery as a means to keep learning going and make education more accessible, especially international education. Studies have shown that even before the pandemic, investments in online learning were already pegged at $18.66 million as of 2019. This is projected to increase to around $350 billion by 2025, accelerated by the COVID-19 pandemic.

Now, it is a question in the mind of many students how will this affect their education? And for international students still waiting to be allowed entry to their destination countries, will they ever experience studying abroad? The travel bans from countries with cases of the new COVID-19 variant are likely to affect higher education institutions across the world. Countries like India, Thailand, and members of the European Union have all imposed travel and flight restrictions. This means that

[1]"Omicron or No, Schools Should Prepare for a Pandemic Winter." 1 Dec. 2021, https://www.edweek.org/leadership/omicron-or-no-schools-should-prepare-for-a-pandemic-winter/2021/12. Accessed 22 Dec. 2021.
[2]"The Omicron Variant and the Impact to Education - Global Student ...." 9 Dec. 2021, https://www.globalstudentforum.org/2021/12/09/the-omicron-variant-and-the-impact-on-education/. Accessed 22 Dec. 2021.
[3]"What schools need to do during pandemic - The Indian Express." 9 Dec. 2021, https://indianexpress.com/article/opinion/columns/schools-reopen-covid-cases-omicron-7661409/. Accessed 22 Dec. 2021.
[4]"The Omicron COVID-19 Variant's Possible Effects on Education ...." 7 Dec. 2021, https://msmunify.com/the-omicron-covid-19-variants-possible-effects-on-education-institutions/. Accessed 22 Dec. 2021.

international students may have to stay put and continue with their studies online. Higher education institutions may also have to shift back to doing virtual classes or put stricter restrictions when it comes to attending classes on campus. In the higher education sector, one of the most widely affected cohorts of learners is international students. Many of them have been stuck in their host country while others have been barred from entering because of closed borders.

And while the omicron variant has not hit that many countries and people. There is a need to be extra careful and even brace for the worst. The world could be facing yet another round of lockdowns or an even greater pandemic. For now, it is best to be careful, follow health and safety regulations, and hope that the pandemic ends soon. WHO has advised countries to take several actions, including enhancing surveillance and sequencing of cases; sharing genome sequences on publicly available databases, and laboratory assessments to better understand if Omicron has different transmission or disease characteristics, or impacts effectiveness of vaccines, therapeutics, diagnostics or public health and social measures? Countries should continue to implement effective public health measures to reduce COVID-19 circulation overall, using a risk analysis and science-based approach.

The different stakeholders CSOs and NGOs, trade unions, national and international policymakers have raised their concern for children and also emphasized to develop an inclusive and long-term strategy that safeguards the education sector against possible closures and against restrictions that could be dangerous for people disadvantaged in society.

Omicron Wave: School Preparedness before Reopening

Dr. Kumar Raka

The discovery of the Omicron COVID-19 variant has shaken the entire world. The wave of Omicron, a new variant of Covid -19, is increasing rapidly in many countries and cases of Omicron have penetrated over 108 countries. Omicron was first identified in South Africa and it took just six weeks to rise from zero to 98% of analyzed sequences, making it the most contagious COVID-19 variant identified till date. Early findings suggest that spreads of these new variants are higher than all other previous variants including Delta, although reportedly it may cause less severe illness. Early evidence shows that new variants may be caught faster than delta even for those people who are fully vaccinated.[5] The country has seen a surge in new COVID cases ranging from 2.5 to 3.0 lakh new cases every day from past few days, the reported virus-related deaths also have witnessed a spike. The worrying spate of COVID-19 clusters in educational institutions across Karnataka, coupled with a surprise appearance of the Omicron variant early on - the first-ever cases in India, has also left the government in a dilemma, a choice between children's health and their education.[6] The Omicron variant of the coronavirus is in the community transmission stage in the country and has become dominant in several metros where new cases have been spiking exponentially, said Indian SARS-CoV-2 Genomics Consortium (INSACOG) in its latest bulletin of January 10 which was released on Sunday (January 23).[7]

The pandemic has caused the most catastrophic disruption to education in history. It is therefore vital that classroom-based learning continues uninterrupted across the globe. This is of paramount importance for children's education, mental health and social skills, for schools to help equip our children to be happy and productive members of society. The implementation of such measures is of key importance to the mental health of youngsters and should remain our primary objective, so we don't rob them of the opportunities they so deserve.

Children are highly vulnerable because majority of them are still not vaccinated, the vaccination of children ages 5 to 11 is critical to keeping schools open. Public health experts and scientists are working hard to understand concerns of new variant Omicron. Amid rising uncertainty, many governments are weighing whether to keep schools open. Another wave of widespread school closures would be disastrous for children because past evidences show that prolonged, nationwide school closures; limited resources for students, teachers and parents; and lack of access to remote learning have wiped out decades of progress in education and rendered childhood unrecognizable. Beyond lost learning, children have also lost the safety of school, daily in-person interactions with friends, access to healthcare, and, too often, their only nutritious meal of the day. As per an UNICEF assessment, this generation of schoolchildren could collectively lose US$ 17 trillion in potential lifetime earnings.[8]

Children are silent victims of pandemics since the last two years. Most of the marginalized poor children have been amongst the hardest hit by Covid disruption and as they were already out-of-school, or in school, but not learning at the same level as their classmates. The pandemic is not over till now, Children and youth cannot risk having another year of disrupted learning. Vaccination and protective measures

[5]"Omicron may be spreading fast, but there are signs it's not actually ...." 8 Dec. 2021, https://www.businessinsider.in/science/news/omicron-may-be-spreading-fast-but-there-are-signs-its-not-actually-worse-than-delta/articleshow/88155630.cms. Accessed 21 Dec. 2021.
[6]"Preparing school edu for Omicron - The New Indian Express." 13 Dec. 2021, https://www.newindianexpress.com/opinions/editorials/2021/dec/13/preparing-school-edu-for-omicron-2394941.html. Accessed 22 Dec. 2021.
[7]https://swachhindia.ndtv.com/third-covid-wave-in-india-omicron-in-community-transmission-stage-schools-reopen-in-maharashtra-66264/
[8]"Even as Omicron variant takes hold, school closures must be a ...." https://www.unicef.org/press-releases/even-omicron-variant-takes-hold-school-closures-must-be-measure-last-resort. Accessed 21 Dec. 2021.

together will help prevent a return to the darkest days of the pandemic when people had to endure lockdowns and children had to experience disruption of learning. The school is a place of learning, safety and play and also at the heart of our communities. When they are closed, children miss out on learning, being with their friends and may be exposed to violence in the home. The pandemic worsened an already unacceptable situation - we must ensure that schools reopen, and they stay open safely.[9]

As per Experts opinion, it is prudent to be prepared for a long-drawn battle against the virus. If the coming year does bring in the successive pandemic waves, the governments should ensure that the education sector is not too hard-hit. It should foresee the pitfalls and adopt a two-pronged approach to keep the situation as stable and normal as possible: Push ahead with vaccination and booster doses for adults, besides early implementation of paediatric inoculation, and simultaneously explore inclusive digital learning solutions for government schools so that underprivileged students do not get left by the wayside.

There is a need to endorse at school level key recommendations of WHO, UNICEF and UNESCO, to help keep schools open and safe, Schools to be among the last places to close and first to re-open.

- Put in place a testing strategy.
- Ensure effective risk-mitigation measures.
- Protect children' mental and social well-being.
- Protect the most vulnerable and marginalized children.
- Improve the school environment.
- Involve children & adolescents in decision-making.
- Implement a vaccination strategy designed to keep children in school.

[9]"COVID jabs needed for educators and kids to keep schools open." 30 Aug. 2021, https://news.un.org/en/story/2021/08/1098712. Accessed 22 Dec. 2021.

Omicron and Children

Dr. Balu I.

Introduction

Children have good immune system response to the Covid infection. Since 2020, Majority of the young people experienced mild to moderate illness of COVID 19. There was no sign of dangerous complications among the children. Apart from the common symptoms i.e. Fever, fatigue, cough and multisystem inflammatory syndrome in severe scenarios there were no significant case of death or hospitalisation among the children. The previous two waves of covid 19 experiences have shown that children are not at greater risk and also the disease is mild to children compared to adults.

Now experts believe that the children may be at high risk of infecting with New Omicron variant and experiencing severe symptoms because the young people, below the age of 18 years are not yet received their COVID-19 Vaccines. It's very important for the parents to be alert right now. There is no clear data on Omicron yet, all are simply speculations.

Recommendations

- It's important to strict adherence to anti COVID measures (wearing mask, washing hand, maintaining social distancing) in public places to prevent the spread of Omicron to young people and Children. We need to wait for the nature of the progression of the virus to get a clear picture.
- Apart from following all COVID protocols, the parents should seek medical help as soon as the symptoms observed among the children are important.
- The need of the hour is vaccination for children. Even the newly introduced ZyCoV-D vaccine that has been tested on 12+ age groups will yet not be available for children until they are able to ramp up their production capacity. Aggressive vaccination coverage for children may delay the third wave.
- There are festivals and celebrations in the month of December and January so the Schools Anganwadi Centres and other Child Care institutions may announce festival holidays to safe guard the children. The educational institutions also should educate the children to avoid holiday parties and festival gatherings.
- It's better to announce festival holidays to all schools and other educational institution to avoid gatherings and crowd.
- During closure of schools and childcare institutions the government should implement the take home ration to ensure the nutrition food to the children which helps to maintain immune of children.
- The scheme of providing free cycles to school children has been stopped by many state governments and it is need of the hour the state government should continue implementing free cycles scheme. When the students get free cycle which will help avoiding travelling in public transport. The students can travel by cycle and ensure social distancing.
- Wherever the number of Omicron cases is high, the Respective district administration should increase the frequency of busses during school starting and ending time to avoid spread of Omicron among the school children and public.
- The government should ensure institutional or non-institutional care to the children without parents is care givers who are defined as children in need of care and protection.

- Keeping children healthy with good nutrition and physical activity should be of prime concern of parents. Good health and immunity is important for children.
- The Children required different medical care than adults. The children need dedicated space with special care and there needs to be trained staff and doctors. Therefore the department of health and family welfare should take necessary action to ensure the intensive care and appropriate equipment and medication.

Conclusion

There is much speculation recently about a third wave of coronavirus in India, which is likely to be more detrimental to children. We cannot be certain whether this prediction is from reliable scientific sources. However, in the second wave, we have seen more children affected by the virus than first wave. Therefore all the stakeholders need to take a responsibility to protect the children from Omicron.



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