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Resilient India - Disaster Free India

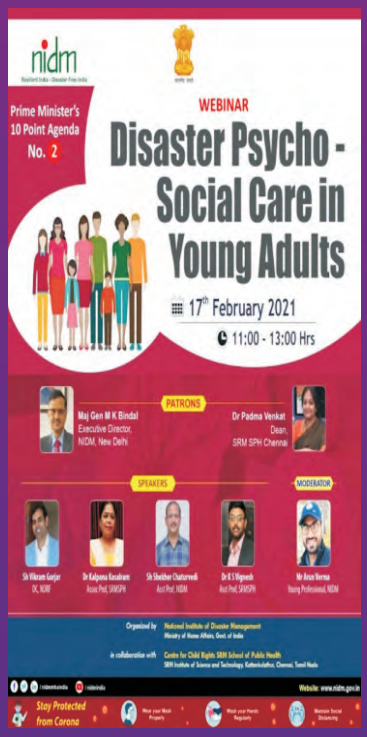
TIDINGS

NIDM Newsletter–11/2021
(January-March, 2021)

Theme: Pandemic and Vaccination









NATIONAL INSTITUTE OF DISASTER MANAGEMENT
(Ministry of Home Affairs, Government of India)

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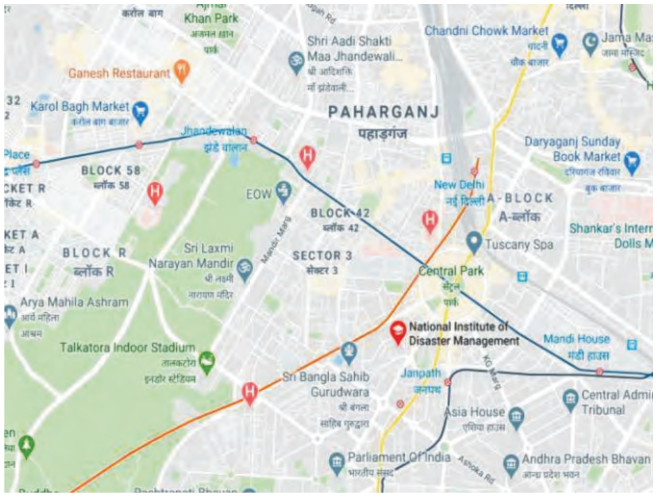
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About NIDM

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,

There is a sense of relief across the country as the first wave of the corona virus disease (Covid-19) appears to be receding for the first time with cases seeing a steady drop. As we successfully tide over the first wave of Covid pandemic, we still need to pull up our guards as experts warn that with the festive season coming up, the curve may rise again if people let their guard down during the celebrations. I would request the heads of communities to ensure caution and appeal that festivals should be celebrated within smaller groups and with all precautions. Large gatherings should be avoided in marketplaces as they could have detrimental impact in the coming months. Government guidelines issued from time to time to be followed strictly.

India has launched the largest vaccine drive, starting its journey on the road to recovery from a pandemic that has unconditionally disrupted and taken lives. The vaccination drive was launched on January 16, 2021 as a bulwark against the spread of the coronavirus. Priority is being given to estimated three crores health workers and frontline workers followed by above 50 age group and under 50 age group with co morbidities. The government of India has given emergency use authorization for two vaccines – Covishield and Covaxin.

I take this opportunity through our newsletter to request all eligible citizens of the country to dispel all rumours and get themselves vaccinated as soon as possible. They will not only be protecting themselves but also protecting their fellow citizens against this pandemic.



Major General Manoj Kumar Bindal, VSM
Executive Director, NIDM

Webinars

Prime Minister's 10 Point Agenda No. 1, 5, 8 & 9 on DRR and SDG-3, 4 & 5 Online Education, Widening Digital Divide: Issues and Concerns of Children, 6 Jan 2021

Recommendations/Key takeaways



a) Need of work on education equality for all sections of society

b) Strengthen readiness in terms of training of teacher and student for digital learning

c) Participatory and joint approach is must for digital learning and participation of all stakeholders need to be considered

d) Need to take care about of privacy issues of students

e) Teacher's training is must as many teachers are also facing the challenges with continuity of online education

f) Develop easy to use scientific technology for children vis-à-vis online/ digital learning

g) Socio-economic issues i.e. availability of devices, recharging mobile, internet services etc. are to be considered on priority

Prime Minister's 10 Point Agenda No. 9 on DRR Climate Change: Child Health and Nutrition, 7 Jan 2021

Recommendations/Key Takeaways

a) Addressing under nutrition: Effective implementation of National Food Security Act (NFSA)-2013 and other food programs to address calorie inadequacy. Maternal and Infant Child Feeding is the key.

b) Addressing Protein Hunger: Expand Food Programs and Income Safety Net: Diversifying both production and farming system to include poultry, fishery, diary etc.- Invest on Women Small Holder Farmers. Water as source of nutrient and address heavy metal contamination



c) Addressing micronutrient malnutrition: Dietary diversity, Food Fortification, Bio-Fortification and Supplementation Odisha

Millet Mission and Nutri-Garden with MGNREGA. Climate Smart Agriculture- Nutrition is the key livelihoods, ecosystem, culture and tradition, Soil health

d) Addressing Obesity and Overweight: Safe and Nutritious diets with reduced salt, sugar and fat. Fix standards for Trans-fat- Localization: Food MSMEs and Farmer's Cooperatives are the key.

Multi Hazard Preparedness during the Current Pandemic in collaboration with Department of Environmental Science, Central University of Jammu, 8 Jan 2021

Recommendations/Key Takeaways

a) Highlighted how research institutes can better prepare themselves for future pandemics and become more resilient with a planning approach that encompasses multi hazard management.

b) Need to take a multi-hazard approach in planning to prepare for natural disasters and other hazards like the pandemic

c) Creating new lifestyle and 'build back better' is important. These lessons can be learnt from earthquakes, tsunamis, volcano eruptions, heavy rain and landslides. But these principles are surprisingly apt for the COVID-19 situation and to counter future pandemics.

d) Addressing gaps like lack of general business continuity plan to prepare for an emergency. Even for institutions that had such plans, "33% of the plans do not cover biological hazards in pandemic risk management. Sixty per cent of the business continuity plans did not include conducting simulation exercises in advance based on the plans.

e) Adapting emergency plans to COVID-19 to manage communications, including coordination with staff, patients, government agencies, or the public, healthcare facilities.

f) Including the community, we had to work with society in order to solve social issues and we have to collaborate with various stakeholders, we can't just have independent silos and the pandemic has absolutely reinforced that.

g) Working in a multi hazard preparedness field means the experts will be able to monitor facilities activity and adapt quickly to any situation in real-time during an emergency. Such teams can collaborate and create solutions for facilities to adjust processes and programs to ensure safety.

PMs 10 Point Agenda Point No. 2 & 8 and UN's SDG No. 3 Covid-19 & Mental Well - Being, 8 Jan 2021

Recommendations/Key Takeaways

a) Importance of Mental wellbeing and Psycho Social Care during and post disasters as well as in our day to day lives;

b) Psycho-social care issues and challenges; Mental stress during the times of Pandemic;

c) IHBAS activities and success stories during the times of covid 19;

d) Role of family, peer group, colleagues in managing stress factors;

e) Infrastructural and human resource shortcoming in Psycho Social Care and Mental Health Services in India;

f) Training, skill development and awareness generation to professionals, volunteers as well as local community;

g) Role of schools, colleges and educational institutions in imparting knowledge to young generation and youth with regard to drug abuse, domestic violence and sexual misconduct;



COVID-19: Safe School Operation (PM 10 Point Agenda: 1, 8 & 9; SDG- 3 & 4), 8 Jan 2021

Recommendations/Key Takeaways

a) Taking actions to reduce the spread of the virus that causes COVID-19

b) Make decisions about school opening and staying open for in-person learning based Indicators for Dynamic Decision-making.

c) Develop learning model and implementation of proven mitigation strategies

d) Develop a protocol for monitoring local COVID-19 data in your community to keep track of the level of community transmission

e) Examine the accessibility of information and resources to reduce the spread of COVID19



f) Maintain healthy environments and determine whether they are culturally relevant, in plain language, and available in appropriate languages and accessible formats.

g) Establish transparent criteria for when the school will suspend in-person learning to stop or slow the spread of COVID-19 in consultation with local officials,

h) Plan transparent criteria for when to resume in-person learning.

Prime Minister's 10 Point Agenda No. 9 on DRR A Life Cycle Approach to Child Centric Disaster Risk Reduction, 11 Jan 2021



Recommendations/Key Takeaways

a) Understand disaster and climate risk and its impact on children: Assess and regularly update disaster/ climate loss and risk assessments. Provide disaggregated data on the specific impact and risks for the most vulnerable incl. children and make it publicly available (as a basis to build resilience, observe trends and track progress)

b) Adopt "0 D + 0 D" for school safety: Integrate DRR and climate change in schools (structural and non-structural assessment and resilience building, school/teacher curricula, child-inclusive school safety committees)

c) Invest in building resilience of other critical social infrastructure and services catering for children: ICDS, PDS and related services, agricultural and nutritional practices, "safety hospital toolkit"

d) Build climate resilience of the WASH sector through appropriate planning and preparedness for potential shocks (Ensure appropriate supply of safe water and sanitation at all times, access to toilets, water governance, land-use planning)

e) Improve preparedness for response incl. optimization of supply chain management of critical social services and child protection provisions (health, nutrition, water, education, DM, …), optimize social sector recovery and rehabilitation (and" build back better")

Disaster Management in Petroleum Industry Coordinating Agency: Nyara Energy, 12 Jan 2021



Recommendations/Key Takeaways

a) Petrol pumps need to undertake fire risk assessment in order to review their respective risks to the fire and the strategies/recommendations in case of any fire incident.

b) Petrol pumps are hub of combustible items, hence massively vulnerable of ignition. Avoid anything that can trigger fire like smoking, lighter, electronic equipment and so on.

c) Earthquake can be fatal to retail outlets as it can caused damaged to infrastructure and in case of gas leakage there

can be explosion. To assess the damage caused by an earthquake there should be mandatory check list for petrol pumps like leakage, fire and soon after the earthquake.

d) Equipments such as surge arrester, lightning arrester, surge suppressor and lightning rod should be installing at the retail outlet to avoid/minimize the risks/impacts of the lightning.

Prime Minister's 10-Point Agenda No. 1 and 8 on DRR "Bird Flu: A Health Emergency Risk & Response", 12 Jan 2021

Recommendations/Key Takeaways

a) Bird Flu may lead to devastating consequences for the country, particularly the poultry industry. Farmers might experience a high level of mortality in their flocks (often>50%). Protection- Strict bio security measures and good hygiene are essential.

b) Policy of culling infected and contact animals is normally used in an effort to rapidly contain, control and eradicate the disease.

c) Low pathogen city avian influenza viruses may cause no disease or mild illness such as ruffled feathers and a drop in egg production and may not be detected.

d) Highly pathogenic avian influenza virus cause severe disease with high mortality in birds. The zoonotic potential and the subsequent fear of imminent pandemic led to culling of chickens wherever the infection of humans and birds occurs together.



e) Disease control and prevention three key goals: 1. Find it fast 2. Kill it quickly 3 Stop it spreading. Emphasis should be placed on bio security which has a proactive preventive impact and will enable producers to protect their flocks themselves.

f) A bio security plan should be a part of any poultry production system and depends on the type of production system. A bio security plan must include the socio-economic factors as well as factors that can have an impact on the birds' immunity. It is safe to consume poultry products that are properly cooked at over 70 degree Celsius.

Role of Youth in Disaster Management with Invertis University Bareilly, 12 Jan 2021



Recommendations/Key Takeaways

a) Youth have the knowledge, capacities and support to meaningfully participate and contribute in national and local DRR strategy planning as well as implementation.

b) Importance of planning for effective management of the emergency is well accepted

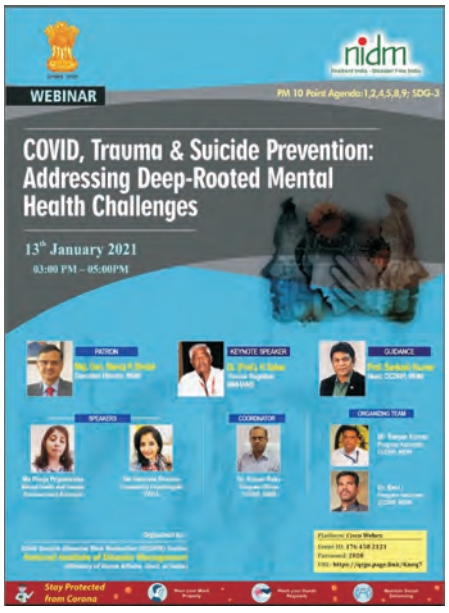
c) There is a high need to train the youth in the field of Disaster Management.

d) Communication, social media and educational campaigns designed and run by youth and volunteers can mobilize local to global actions.

e) Youth have the capacities and resources to share and train others at school, home and in their communities to understand disaster risk.

Prime Minister's 10 Point Agenda: 1, 2, 4, 5, 8, 9; SDG-3 Covid, Trauma & Suicide Prevention: Addressing Deep-Rooted Mental Health Challenges, 13 Jan 2021

Recommendations/Key Takeaways



a) Need to highlight suicide warning signs such as negatives view of self, isolation feeling alone and engaging risking behavior etc

b) To explain about traumatic stressors and general stressors expose due to covid19

c) Need to be discuss symptom of post-traumatic stress disorders

d) To emphasize on Action step for helping someone in emotional plan, help them connect, stay connected and keep them safe.

e) Taking action to improve the conditions of daily life from before birth, during early childhood, at school age, during family building and working ages, and at older ages provides opportunities both to improve population mental health and to reduce the risk of those mental disorders that are associated with social inequalities.

Encourage greater participation and leadership of women in Disaster Risk Management, 13 Jan 2021

Recommendations/Key Takeaways

a) Awareness generation to youths (specially girl college going students) about various vulnerabilities faced by women during and post-disaster management;

b) Information dissemination with regard to DRR measures to uplift women not only during and post disasters but also in their day to day lives;

c) Various issues and challenges that enhance women's vulnerability in a patriarchal society; Specific impact of Pandemics of roles of women at home during lockdown;

d) How to develop leadership skills in women as envisaged by Hon'ble PM in his 3rd agenda point of famous 10 point agenda of DRM;

e) Impact of climate change, changing environment, challenging weathers upon drudgery of women in family, society and working sector; Insecurity with regard to physical and sexual abuse in Disaster Rehabilitation camps, human trafficking and domestic violence issues in disasters like current Pandemic; Role of women in checking population, strengthening local economy and better social cohesiveness;



f) Health hazards to women during and post disasters specially the malnutrition, hygiene, inadequate rest and mental trauma etc; Formation of Women Self Help Groups, Thrift Society for them, brining financial security and decision making capabilities for them; Various Government schemes, plans and programmes oriented towards women empowerment; Use of social media and media management for liberating women and giving them more freedom towards their causes; Girl Child, their continuum of education during pandemics and their social rights.

The Role of Local Organization and their Interaction in Disaster Risk Mitigation in collaboration with Kalimpong, West Bengal, 15 Jan 2021

Recommendations/Key Takeaways

a) Organizations working at grassroots level were impacted severely during the pandemic in implementing their projects and required capacity building for better preparedness.

b) Local institutions ensure balance between humanitarian assistance and financial and especially health impact during the current pandemic.

c) At the institutional level, disaster risk exposure and eventually disaster impact is related to the size, age and level of financial and operational sustainability of a local organization.

d) Local institutions with poor memberships or trying to reach very poor clients tend to be more vulnerable to disasters which were evident during the pandemic most of them remained stagnant and saturated.

e) There was a need felt to focus on how to facilitate Institutional Linkages and foster a Collaborative Approach amongst local stakeholders for better disaster management.

f) The local institutions do play a key role and should be left in silos and be mainstreamed in their efforts for DM together with other stakeholders.

g) Creation of Trust with Locals is NGO's Power because they directly work with the community and hence they must be involved in decision making for DRR.

Disaster Management Plan in Collaboration with Institute of Management Studies Devi Ahilya Vishwavidyalaya Indore, Madhya Pradesh, 15 Jan 2021

Recommendations/Key Takeaways

a) Universities such as IMS DAVV must come forward to undertake research study for analyzing the hazard, vulnerability and capacity of their surrounding areas.

b) Universities must engage themselves in creating awareness about disasters in their vicinity.

c) A standard collaboration is must with expert institutions for running a course in disaster management.



Fire Safety Measures in Winters in Collaboration with Institutions of Engineers (INDIA) J&K State Centre, Srinagar, 16 Jan 2021

Recommendations/Key Takeaways



a) It essential that a fire safety audit of all lifeline buildings and Govt. offices should be completed at the earliest, mandatory fire-safety measures are put in place.

b) Fire mock drills should be conducted in all important offices, on a regular basis.

c) Insurance of residential and commercial structures should be made mandatory and strictly enforced, so that the affected persons can get compensation in case of devastating fires.

d) There is a need to prepare fire safety evacuation plans at family-level and regular practice of the drills, once in a while; involving all their family members should be done.

e) The improper use of gas, charcoal or firewood Bukharies results in fires, or even deaths due to asphyxia. Kitchen fires are also very common, when food is kept unattended, while cooking and electrical short circuits, due to overloading the power sockets, or using faulty electrical appliances, electrical room heaters, electric blankets are also very common in winters.

f) For rural areas where community is incapable of buying or understand use of fire extinguisher, fire extinguishers should be procured by the rural development department and placed at the disposal of the respective Panchayats. Volunteers should be identified in each panchayat and they will be imparted fire-fighting training.

Role of Youth in Disaster Risk Reduction in collaboration with UT Administration of Lakshadweep, 18 Jan 2021

Recommendations/Key Takeaways



a) Population of youth helps build workforce of a country which contributes to development of nation.

b) Youth have the knowledge, capacities and support to meaningfully participate and contribute in national and local DRR strategy planning as well as implementation.

c) Youth should be encouraged in education and skill-building opportunities.

d) There is a need to train the youth in the field of Disaster Management.

Living with Corona Virus: 2021 & Beyond, 18 Jan 2021

Recommendations/Key Takeaways



a) There is information in the community that the 3rd test of the Indian vaccine has not been done yet due to which there is a fear of taking vaccine among the people.

b) The Corona leads to financial crisis, change in socioeconomic dynamics.

c) The number of Corona cases is among the lowest in India this is either due to strong immunity or there is a lack of proper database.

d) The number of fatalities due to Corona is less than fatalities due to various other diseases.

e) It is a high time to think about sustainable development.

f) During this Corona phase, the economies shrunken more than the expected.

g) Due to COVID-19, we got an opportunity to develop our infrastructure especially the health infrastructure.

h) Need of good communication system so that the information can be shared effectively.

i) Need to distribute the mix- match of all the vaccines in India. We can't rely on only one vaccine for such a large population.

Prime Minister's 10 Point Agenda No. 1, 8 & 9 on DRR and SDG- 3&4 Disaster Risk Reduction and Child Protection, 18 Jan 2021

Recommendations/Key Takeaways



a) Work with national partners to ensure emergency preparedness plans for child protection, including appropriate referral services, are in place in all disaster-prone areas.

b) Establish permanent 'safe spaces' for women and children in disasters-prone areas as part of the community-based child protection network.

c) Promote measures to safeguard identification documents and teach life skills (e.g., first aid).

d) Support inter-agency monitoring of child protection risks in relation to hazard risks to inform programme strategies.

e) Enhance capacity of communities and families to care for their children, and identify and encourage existing positive coping mechanisms.

f) Disseminate and ensure access to information to the affected population including on availability and locations of services, for example, through mobile safe spaces.

g) Mainstream child protection into other sectors' response work to scale up protection measures.

Prime Minister's 10-Point Agenda No. 1 & 8 on "Sendai Monitoring Framework and Process for India", 18 Jan 2021

Recommendations/Key Takeaways

a) Increased use of Virtual National workshops to assist in data collection coordination of partners nationally continued use of the Self-paced E-Learning Course

b) Exploring possibility to translate Monitor to Local Languages

c) More Technical guidance notes and knowledge products using Regional and National Platforms to increase political support



d) Releasing analytical products using regional mechanisms like APP-DRR to demonstrate monitoring results and data application

e) Developing a Regional Assessment Report to showcase regional risk landscape and DRR efforts. Disaster Risk Reduction more than before has been seen as a policy concern that cuts across many sectors including health and education.

f) There is a need to address existing challenges and prepare for future ones by focusing on monitoring, assessing and understanding disaster risk and sharing such information.

g) Necessary to strengthen the economic, social, health cultural, educational resilience at all levels. Requires investments in research and the use of technology to enhance multi-hazard early warning systems, preparedness, response, recovery, rehabilitation and reconstruction.

Museum and Disaster Risk Management, 19 Jan 2021

Recommendations/Key Takeaways



a) The Ministry of Culture should build institutional capacity among Central Museums and create a streamline Disaster Risk Management Plan which includes Museums within it Individual States should work with State Museums and Other Large-Scale Museums to devise coordinated strategies for museums and streamline museums within State Disaster Management Plans

b) Districts should identify museums including smaller scale museums and streamline museum concerns within overall disaster risk management plans and build capacity at the district level

c) Each museum needs to develop its own disaster risk management plan and link it to larger disaster risk frameworks operating at district/ state and national levels

d) Need to identify and assess risks to people- visitors, staff and management and also to the overall significance

e) Need to identify and assess disaster risks beyond the building, exploring the site and immediate context and environs, including aspects like access to the site, availability of critical infrastructure etc.

f) An approach of minimal intervention should be adopted as far as possible as long as high standards of human safety are maintained. Within the collections of the museum, an inventory identifying objects of highest significance to low significance should be prepared and made accessible to staff.

g) At the same time, objects within the collections identified as having "low" significance should not be deemed disposable, but every attempt should be made to ensure safety of the entire collection as a whole specialized effort to secure the site and collections during a disaster should be undertaken to ensure minimal loss to collections due to lack of specialized procedures.

Prime Minister's 10 Point Agenda on DRR: No., 8 Environment & Disaster Risk Reduction in Collaboration with Ramswaroop Memorial University (RSMU), Lucknow, 21 Jan 2021

Recommendations/Key Takeaways

a) Need to bring all the stakeholders together by providing them a common platform to work upon, incentives through which they can manoeuvre and a friendly governance-technology regime in this regard;

b) Showcase of success stories at local levels, R&D works in the field of pollution control, water conservation, soil salinity and remediation measures using microorganisms and renewable energy sources that can be tapped;

c) Shrinkages of water bodies, lakes, seas, glacial melt, increase in number of heat islands across the globe, sea level rise, oil spills etc;

d) Need for skilled and adequate (in number) manpower to meet the increasing demands of fire incidents, both the urban fire as well as forest fires;

e) Loss of biodiversity, related threats to existence of mankind and measures to be taken to safeguard ourselves;



f) Proposed strategies for sustainable environment management; Why we need to make climate crisis a people campaign, why youths need to be involved in this process and how low carbon pathways could be researched and propagated; Why national and international cooperation is required so that S&T innovations can be shared by all the humanity with optimum utilisation of resources and lesser duplicity of works. SRMU showed huge satisfaction over the outcome of the programme and wished to sign a MoU with NIDM on mutually acceptable areas of cooperation in the field of DRM.

Prime Minister's 10 Point Agenda No. 7, Environment (Non-Clinical) Risk and Disaster Management in Health Sector, 22 Jan 2021

Recommendations/Key Takeaways



a) Preventive measures along with community awareness, establishment of early warning systems, working towards construction of disaster-resilient health facilities and infrastructure, along with apt water and sanitation systems are the need of hour for better health disaster risk management.

b) Emergencies, disasters and other crises may cause ill-health directly or through the disruption of health systems, facilities and services, leaving many without access to health care in times of emergency affecting basic infrastructure such as water supplies and safe shelter, which are essential for health services provision.

c) Health Preparedness, including strengthening policies for health disaster management and developing disaster response plans for health care facilities is imperative.

d) Health care systems provide core capacities for health emergency risk management.

e) Some countries affected by emergencies have limited basic health services and infrastructure, which in itself hugely compounds the challenges of disaster response, Emergency response, including containing hazardous materials and accessing infrastructure damage are major drawback in efficient disaster management in the Health Sector.

f) Health systems are composed of public, private and non-governmental facilities, which work together to serve the community; these include hospitals, primary health care centers, laboratories, pharmacies and blood banks.

g) Safe hospitals programmes must ensure health facilities are safely built to with stand hazards, remaining operational in emergencies. Recovery measures, such as reconstructing resilient water and sanitation infrastructure are basic needs of Environment (Non- Clinical) Risk Despite its large population, country like India has demonstrated its potential for efficient delivery and campaigning for public health services through various schemes by including provisioning of core infrastructure.

Basic Disaster Management, 22 Jan 2021



Recommendations/Key Takeaways

a) Positive and Negative Impact of Covid-19, epidemics and pandemics, suggestions & measures to boost immunity and the way forward;

b) Increasing trend of climatic disasters, fallouts of humankind taking environment for granted for years, Extreme Space Weather and its turbulence affecting Earth, Impact of Climate Change on Livelihood, Biodiversity and Food Security, Risk to Health were explained in detail.

c) Waste Management Issues, Medical Waste and its hazardous impact on civilization, proposed strategies for sustainable environment management, need for behavioral change in mankind and need for international cooperation to meet global targets.

d) Where do the targets of Paris Climate Change Agreement stand after 5 years of its inception and UNEP climate change adaptation gap report 2020.

e) Anthropogenic reasons for forest fires, fire dousing mechanisms, industrial use of pine needles, need for forest fire research centers in India, how fire hazards in the Oil Depots, Oil Installations, Oil pipelines can be doused and prevented.

f) Preparedness and critical proactive actions for safety and security of communities in earthquake prone areas, Primary and secondary hazards associated with Earthquakes, Earthquake risk reduction strategy includes structural and non-structural measures including retrofitting the old buildings.

Comprehensive Disaster Management in Collaboration with Mamta Girls Degree College, Aadmi Road, Karauli, Barabanki (UP), 22 Jan 2021

Recommendations/Key Takeaways



a) Educational Institutions must be encouraged to take up responsibilities for DRR.

b) Local and district administration must involve educational institutions for DRR awareness drives and studies.

c) As per the mandate provided by DM Act 2005, every educational institution must prepare their DM Plan and get it approved by Local / District administration.

d) Mock drills through various mandated agencies must be regularly carried out in Institutions.

Early Warning and Detection of Disasters (Early Warning Dissemination and Communication, Early Warning Detection, Monitoring and Dissemination: Best Practices) in collaboration with Vigyan Prasar, Uttar Pradesh, 25 Jan 2021

Recommendations/Key Takeaways

a) Basic aim of all scientific and technological innovations is to improve the quality of life of communities which stands true for all early warning systems developed for disaster risk management in our country as well.

b) Early warning has four components namely; Risk detection, Monitoring and Evaluation, Warning Dissemination and Response to the Warning issued. The first two components of the warning system are carried out within organizations and the agencies while the last two components are carried out in the ambit of the vulnerable community.



c) Issues in early warning and detection include language used for dissemination, understanding of the warning by the community when it is issued, whether the warning is generalized or specific in nature and whether the warning could convey the sense of urgency to the community or not. SCDR can conduct research on the various issues related to warning in our country not only with respect to floods but other hazards as well.

d) Governments need to understand and judge the response capacities of the community after the warning has been issued. The vulnerable community may or may not evacuate.

e) Past experiences of the public, their understanding of the warning signals, reliance on traditional precursors for hazards, lack of knowledge about location of safe places and shelters and concern for their livestock and livelihood may play a role in preventing them to respond in a timely manner after the warning has been issued.

Building Municipalities and Citizen Awareness for Resilient India in collaboration with EMDA Foundation Urban Update, 22 Jan 2021



Recommendations/Key Takeaways

a) Strengthening the local level bodies such as DDMA, ULBs, etc., is the most significant challenge which needs urgent attention.

b) Solutions for a better and safe living space include disaster resilient infrastructure, focus on policy interventions related to construction needs to be undertaken.

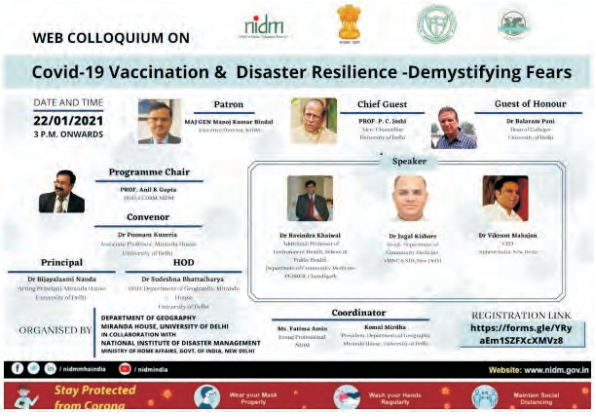
c) Capacity building of elected representatives and officials should be strengthened at local level.

d) Amendments are required in acts and policies for strengthening local governance for risk reduction.

e) Knowledge about innovations in disaster resilience and learning's from the different parts of the world should be shared provided to the officials for new changes in the policy framework.

Covid-19 Vaccination and Disaster Resilience-Demystifying fears in collaboration with Department of Geography, Miranda House University of Delhi, 22 Jan 2021

Recommendations/Key Takeaways



a) The present COVID-19 situation is not only a health crisis but also social and economic crisis. It has affected every generation including the unborn generation.

b) Confidence on the science technology of the country. Confidence and behavioral changes will encourage more people to take the vaccine and that mere slogan with not help.

c) Society needs to understand that risk exists and measured. Communication about the COVID vaccine safety will play a key important role in maintaining public confidence in the vaccine

d) Vaccine is always associated with some risk and what assurance can be given to people is questionable.

e) Vaccine hesitancy can be addressed by making vaccination as the default approach and building trust. Vaccination is the biggest tool by which we are able to decrease many diseases but the general precautions are more important than the vaccine.

f) Technological developments, the trials around the vaccine yield a very fair degree of success.

g) It will take a long time before we return to our normal way of living, till the time comes, right and preventative behavior is required.

Urban Earthquake Risk Mitigation, 20th Anniversary of the M6.9 Bhuj Earthquake of January 26, 2001, 25th January, 2021.

Recommendations/Key Takeaways

a) Not to forget the lessons we learn from our past events and document them as much as possible to make the efforts sustainable.

b) Good governance with equal people's participation, preparedness at community level will be the key to improve resilience.

c) Not to wait for another disaster to build better infrastructure rather proper planning, integration of updated maps and use of proper networking technology is required beforehand for not only disaster but to create better quality of life.



d) Importance of building earthquake resilient infrastructures, correct follows up of building regulations and urgency of registered authorized structural engineers or planners.

e) Sustainable urbanization in multi-hazard scenario is the key to build resilience.

f) Regularization of unauthorized colonies, slums and resettlement of such areas. Performance in retrofitting of structures of old areas in the cities should be checked.

g) We have to invest more to have resilient built environment in the disaster prone areas and some resilient structures need to build for response preparedness.

Prime Minister's 10 Point Agenda no. 8 & 9 SDG-3 & 4 Disasters, Educational Disruption & Children, 27 Jan 2021

Recommendations/Key Takeaways

a) To explain hazards, disasters and risks that threatens children's rights to survival, protection and education.



b) To highlight educational inequities due to pandemic, school closure and transfer to online education

c) To emphasis on extensive and hidden risks of slow onset disasters which have more cumulative impacts than the intensive sudden onset disasters.

d) To establish a Safe Schools Team (inclusive of school authorities, teachers, students, parents and other community members) at school level for build back better

e) To develop a formal mechanism for engaging school and community together and held regular meetings to form Safe Schools Team

f) To develop a Risk-informed Safe School Plan for mitigation of future risk

g) To strengthen reporting and referral procedures before reopening and operation of school after the long closures (pandemic Covid-19 like situations)

h) To accept and implement Safe School Common approach to address the problems.

i) Nurturing, Encouraging and Protecting Investment in Education for significant reduction of disaster damage to critical infrastructure and disruption of education services

j) To focus on disruption in education due to conflict/ disaster including attacks on schools, use of schools by armed groups, forced recruitment, threats against students or educational personnel, and sexual violence

k) Need to stress on scalable and comprehensive approach to reducing deaths, injuries and inequities caused by hazards to the education sector.

Prime Minister's 10 Point Agenda No. 8 on DRR Covid-19: Impact, opportunities and Way forward, 28 Jan 2021

Recommendations/Key Takeaways

a) Due to COVID-19 pandemic, the global context for development has fundamentally changed. The world faces the greatest socio-economic shock in a generation, coming at a time of acute inequality, ecological fragility and growing distrust within and amongst societies.

b) Planning, designing and implementing programme activities focusing on response and recovery measures in context of COVID-19 was required with an integration of volunteers under the UNDPs United Nation Volunteer mechanisms.



c) Implementation of interventions envisaged under COVID-19 Rapid Response Facility required constant support and monitoring.

d) An intensive survey was conducted by AIGGPA with a sample size of 450 respondents from 15 districts across Madhya Pradesh State to understand the plight of 14.79 lakh migrant workers under the "Lives and Livelihoods of Migrant Workers during COVID-19 Pandemic" study.

e) Post lockdown in Madhya Pradesh, MGNREGA has witnessed record wage labor deployment under strictly supervised monitoring, which resulted in increased agriculture output.

f) Persons with disabilities generally have more health-care needs than others and are more vulnerable to the impact of inaccessible health-care services than others. Around 600 people with disabilities who have worked as migrants across in various States were sent back home by Mr. Gyanendra Purohit, Disability Rights Advocate (Anand Service Society) during the pandemic.

g) Disability advocacy organizations, coalition of disability rights and emergency management experts should make an urgent call for adequate response facilities, addressing the specific needs of persons with disabilities to maintain their health, safety, dignity, and independence in the community throughout epidemic or pandemic like situations/ outbreak and related health emergencies.

Empowering Communities: Disaster Risk Reduction at Local Level in Collaboration with HPSDMA, 28 Jan 2021

Recommendations/Key Takeaways



a) Capacity building is a core concept of development policy; this strengthens and maintains capabilities set to achieve their own developmental objectives.

b) The top down approach response to disasters restricts the community to deal any incident effectively that often results in more losses.

c) One should push the school disaster management plan to be submitted in DDMA so that drills can be conducted according to their own DM plan.

d) It is very important to build partnership and strengthen the coordination to effectively achieve what we are envisioning from our schemes, plans and initiatives.

e) Financial needs should be reflective of ground reality for any plans and policies developed for community.

f) Need to tap unexplored potential of community by preparing village level and school level disaster management plans.

g) School is the best community with maximum return of investment for DRR, resilience must be incorporated in school infrastructures.

h) Every school should undergo risk assessment since every school has different issues and challenges both at structural and non-structural aspects.

Fire Safety (Fire Safety in Critical Infrastructure, Initiatives for Strengthening Fire Safety) in collaboration with Vigyan Prasar, Uttar Pradesh, 29 Jan 2021

Recommendations/Key Takeaways



a) National Building Code (NBC) of India, 2016, Part 4 is titled 'Fire and Life Safety'.

b) It covers the requirements for fire prevention, life safety in relation to fire and fire Protection of buildings.

c) Strict implementation of this component needs to be done all across the country.

d) Need to develop guidelines/framework to conduct a comprehensive risk-assessment for our cities.

e) Risks related to fire breakouts coexist and can be complex; they are qualitative and quantitative, hence there is a dire need to study these in city-wide and local contexts.

f) Risk-assessment studies for fire safety and prevention should be an integral part of every master planning exercise, which should be revised for changes in land use and density.

Prime Minister's 10 Point Agenda No. 8 & 9 SDG - 3 & 4 Children & Youth Responding to COVID-19 Crises, 29 Jan 2021

Recommendations/Key Takeaways

a) Applying a youth and intergenerational lens in crisis response and recovery measures across the public administration.



b) Updating national youth strategies in collaboration with youth stakeholders to translate political commitment into actionable programmes.

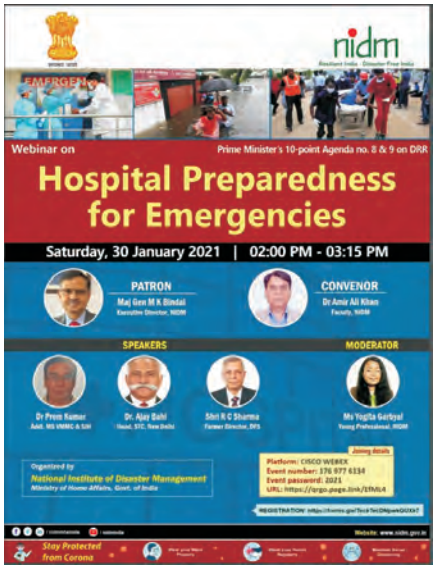
c) Promoting age diversity in public consultations and state institutions to reflect the needs and concerns of different age cohorts in decision-making.

d) Leveraging young people's current mobilization in mitigating the crisis through existing mechanisms, tools and to build resilience in societies against future shocks and disasters.

e) Aligning short-term emergency responses with investments into long-term economic, social and environmental objectives to ensure the well-being of future generations.

Hospital Preparedness for Emergencies, 30 Jan 2021

Recommendations/Key Takeaways



a) Primary goal of hospital disaster preparedness and response should be to maintain conventional and contingency care as long as possible.

b) Manpower and resource mobilization is critical requirement during disaster emergency.

c) Triage process should be followed to maintain order and avoid chaos in case of mass causality.

d) Dedicated engineering wing shall be created in Govt. hospitals for planning to maintenance of hospital infrastructure.

e) Existing old hospitals buildings need to go for retrofitting.

f) Provisions laid down on hospital safety standards need to be applied strictly to all healthcare facilities.

g) Having built in fire alarm, automatic sprinkler and hose reel can control the fire incident to 97% and also will stop spreading of fire from origin.

h) Safe electrical equipment and connected safety facilities should be checked timely.

i) Trained fire officer should be made available in hospitals for timely assistance in rescue and firefighting activities.

Adolescents Action in Disaster Risk Management (PM 10 Pt Agenda No. 9), 30 Jan 2021

Recommendations/Key Takeaways



a) The National Policy on Disaster Management, 2009, emphasizes the involvement of the community, civil defence volunteers, NGOs, ex- servicemen and youth organizations in all aspects of disaster management.

b) Environmental policy 2006, The section "Partnership and Stakeholder Management" emphasizes the role of youth clubs and community based organizations (CBOs).

c) Social norms and culture existing within society fail to incorporate youth in leadership and decision-making process during disaster situations.

d) It is often thought that youth and children are passive victims of disasters and emergencies

e) Not adequately trained in disaster preparedness and response, their function during an emergency thus gets limited.

f) Retaining the volunteers is another major challenge faced on the ground.

g) Academic pressure and lack of motivation to contribute for societal development often led to low participation of youths in voluntary actions

h) There is also a tendency to look upon volunteering opportunities as a provision for permanent employment.

Information and Communication Technology (ICT) Interventions in District Disaster Management Plan, 01 Feb 2021

Recommendations/Key Takeaways

a) DMP should be in clear structured process for risk mitigations and different level plans national, state, taluka, district level; panchayat level plans are also now targeted.



b) Sendai framework promoted evidence based information which in turn allowed capturing, assimilating and studying vast data through the use of ICTs in current times like earth observation system which is important for preserving the past evidences.

c) ICTs helped in major way to promote awareness and impart online training and consultations during current scenario with ongoing pandemics.

d) 70% of the DDMPs in Maharashtra have been updated as per the change in technology however; district level mapping is still required at many places with proper institutional management.

e) Strengthening of institutions with proper manpower and infrastructure is needed for implementing efficient use of ICT in DMPs.

f) Need to have strong data sharing policies, it is very rigid currently and should be taken as national initiatives to have better strategy and SOPs.

Prime Minister's 10 Point Agenda No. 9 on DRR Webinar on Disaster Impact on Children in collaboration with Govt. DK PG College, Baloda Bajar, 01 Feb 2021

Recommendations/Key Takeaways



a) Children's health may be more vulnerable in a disaster for a biophysical reason.

b) Destroy health infrastructure leads to illnesses or injuries caused by the disaster are difficult to treat and become worse.

c) Malnutrition caused by disruptions in food supply

d) Unhygienic conditions and lack of safe drinking water can cause infectious diseases to spread.

e) During and after floods, cases of diarrhea, cholera, and other intestinal diseases may increase.

f) Dehydration can become life threatening for Babies and very young children.

g) When loved ones are missing or injured, children may have a harder time to coping with such losses.

h) Children may become upset when their caregivers' experience fear and stress.

i) When parents have high levels of post disaster symptoms, their children have high levels as well.

Prime Minister's 10 Point Agenda no. 8 on DRR Disaster Management in Petroleum Industry Coordinating Agency: Nayara Energy, 02 Feb 2021

Recommendations/Key Takeaways



a) Need to develop systematic approach for handling DRR Policies and strategies should be multidisciplinary, inter-sectoral, and apply comprehensive, all hazards and risk management approaches.

b) Need to clear vision, plans and competent, empowered institutions acting on scientific evidence for the public good.

c) Need to be remained undistracted while pumping gas because this is the process of transferring a hazardous substance from one place to another, and it demands full attention.

d) Need to have an effective on-site emergency response plan so that employees have knowledge regarding where to find the necessary equipment used in an emergency.

e) Need to develop Building code: Flood Resistant Design and Construction.

f) Promote resistant design and construction, require equipment and utilities to either be elevated to a specified height or protected by dry flood proofing when placed in buildings located in areas with identified flood risk.

g) Extra precaution needs to be taken for unusual operating conditions such as slow dispensing of fuel, frequent alarms, customer complaints, or equipment shutdowns.

Prime Minister's 10 Point Agenda No. 9 on DRR Role of NSS (Adolescents) Volunteers in Disaster Risk Management, 03 Feb 2021

Recommendations/Key Takeaways



a) Local youth have often been found responding to disasters by rescuing people and distributing relief.

b) Examples available from across the world which demonstrate how actively youth can participate in various disaster management activities

c) Young people have important environmental concerns and responsibilities

d) Exposed to a number of environmental hazards like poor water

and air quality, high level of atmospheric pollution, noise pollution, increasing heat and cold waves, poor soil quality, deforestation, etc.

e) Accountable to take actions to protect themselves and their surroundings

f) MYAS have volunteer programmes to engage youth.

g) Involving youth volunteers in disaster risk reduction and environmental resource management

Prime Minister's 10 Point Agenda No. 1 & 8 on DRR Wetland Conservation in collaboration with The Society For Science of Climate Change and Sustainable Environment, New Delhi, 04 Feb 2021

Recommendations/Key Takeaways

a) Sensitization of need for Wetland Conservation and its importance in the whole ecological pyramid with regard to providing various important ecological services and habitat to innumerable flora and fauna species;



b) How socio-economic greeds of mankind has taken us to the fast depletion of wetlands, the related anthropogenic reasons and what should be done with regard to restoration of wetlands through curbing our unscientific growth and development;

c) Role of wetlands with regard to carbon sequestration, making a balance over the atmospheric humidity and water vapour content in nearby areas, providing habitat to rare species of biodiversity which are not elsewhere seen, playing a significant role with regard to ground water recharge and role of a controller of floods.

d) How, construction of a large number of reservoirs, canals and dams to provide for irrigation have significantly altered the hydrology of the associated wetlands.

e) Other threats to wetlands like climate change, dredging and sand mining, exotic introduced plant species, which clog waterways and compete with native vegetation.

f) Ramsar Convention for wetland conservation, India's share of wetlands in this convention and how the Government is proceeding towards meeting targets of such global conventions - National Plan for Conservation of Aquatic Ecosystems (NPCA), Wetlands (Conservation and Management) Rules, 2017 where the violation has been termed to attract penalties as per the Environment (Protection) Act, 1986.

g) How globally, wetlands are being conserved using latest S&T innovations, indigenous knowledge and making a hybrid mix of these know-how.

h) The National Wetlands Atlas (Spatial Data on Wetlands for each state and UT) prepared by Space Application Center under the National Wetlands Inventory and Assessment project and how the States and UTs should use it. Available at https://vedas.sac.gov.in/vedas/downloads/atlas/Wetlands/NWIA_National_atlas.pdf.

Prime Minister's 10 Point Agenda No. 9 on DRR Children in Disasters & Emergencies: Understanding Vulnerability, Developing Capacities, and Promoting Resilience in collaboration with Special Centre for Disaster Research, Jawaharlal Nehru University (JNU), New Delhi, 04 Feb 2021

Recommendations/Key Takeaways



a) We must understand that being in a position of authority and as adults we sometimes feel that we know everything about children, but that may not be TRUE!!!

b) Notions and constructions of 'childhood' have differentially varied in relation to children's body, space and time.

c) Engaging with children must accompany understanding of his/her Local Context that shapes his/her Perspectives.

d) Indispensable to integrate Children's perspective with our Policy and Professional frameworks of Knowledge/work!

e) Vulnerability of children in emergencies also depends on Individual characteristics of the child, the social and economic circumstances of the family, community, and the available resources in the surrounding environment.

f) Hate, mistrust, exclusion and violent incidents triggered by hate and radical beliefs have threatened social cohesion.

g) More civilians are being affected by wars and civic strife, women and children most affected.

h) Children are the most vulnerable during emergencies, survival at stake, prone to injury, malnutrition and infections.

i) Acute, recurrent and protracted activation of body's stress response in situations where protective adult support is absent.

Health and Disasters, 05 Feb 2021



Recommendations/Key Takeaways

a) Need to reduce the time for watching news as a lot of information is being bombarded from various sources. It causes anxiety in people.

b) Need to make ourselves strong and remember that the recovery rate of Covid Positive patients is high as compared to the mortality rate. We need not panic but take adequate precautions against the pandemic.

c) Need to think positively about the present scenario as this is a golden time to spend time with families.

d) Maintain a routine during lockdowns and work from home scenarios.

e) Balanced diet is essential for maintaining necessary energy levels to maintain a sound physical and mental health. Physical exercise, recreation and spirituality also contribute to the maintenance of good mental health.

Mainstreaming Food and Nutrition Security in Disaster Management Strategies of India in Collaboration with World Food Programme, 05 Feb 2021

Recommendations/Key Takeaways

a) Commissioning a detailed Capacity and Needs Assessment with support from focus states. Planning regional consultation at state level to assess the needs, develop ownership and define scope of modules. NIDM will support eliciting the information.

b) Desk review for training modules involving face to face meetings with key stakeholders and offices and studying DMPs of various departments and states. Ensure involvement of various stakeholders as per the need.

c) Identification and finalization of two focused states for pilot intervention and testing of training modules. Initiating communication with the states for support on implementation.

d) Identifying and collating Best practices on food and nutrition security during disasters from across India. Idea of incentivizing replicable models. This will be done by inviting the success stories/case studies on NIDM platform and exploring global best practices would be undertaken. A criteria for 'winning stories' and incentives will be discussed.

e) Establishing dissemination platform at regional level. Need to initiate discussion with SAARC Disaster Management Centre and other stakeholders for the international conference in October – November 2021.

e) Follow-up bilateral discussions with Ministry of Agriculture, Rural Development, Food and Consumer Affairs and Department of Education and others.

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Prime Minister's 10 Point Agenda No. 1, 8 & 9 on DRR & SDG - 3 Nutritional Needs of Pregnant Women & Neonatal, 08 Feb 2021



Recommendations/Key Takeaways

a) To maintain most relevant resources in the context of the implementation of the ANC interventions in this guideline mainly included costs for providing medicines, supplies, equipment and skilled human resources

b) To provide support in maintaining physical and socio cultural normality

c) To provide health care for maintaining a healthy pregnancy for mother and baby (including preventing and treating risks, illness and death)

d) Achieving positive motherhood (including maternal self-esteem, competence and autonomy)

e) Provide Counseling about healthy eating and keeping physically active during pregnancy

f) To provide support of govern and scheme for wellbeing mothers and neo netel.

Role of First Responders in Disaster Risk Reduction in Collaboration with Directorate of Civil Defence, Uttar Pradesh, 09 Feb 2021



Recommendations/Key Takeaways

a) Safety of first responders must be considered while preparing the DM plans.

b) Civil Defence must get due recognition not only as a first responder but also as force which can be utilized in disaster risk reduction activities as well.

c) Civil Defence roaster for community training and their own refresher trainings must be prepared and implemented.

Prime Minister's 10 Point Agenda No. 1, 2, 8, & 9 on DRR SDG - 3 Vaccination and Children: Myths & Realities, 9 Feb 2021

Recommendations/Key Takeaways

a) To restore and revitalize routine immunization services - Integrated within PHC.



b) To Address immunity gaps caused by COVID-19 response

c) To Expand immunization services to missed (zero-dose) communities

d) To provide the opportunity/necessity to push for "real" integration between the various immunization initiatives & into PHC for the most underserved – articulated in IA 2030

e) Need to deliver services in a safe manner through a human centered design could enhance quality of services and enhance service experience and trust

f) Need to be a dual focus on the core immunization agenda and efforts to prepare for the delivery of a vaccine against the COVID-19 pandemic

g) Substantial additional resources will be required for countries and partners like UNICEF & WHO to ensure necessary technical support

h) COVID-19 vaccine delivery should be used as an opportunity to strengthen systems as appropriate

Community Based Disaster Risk Assessment and Management in Collaboration with Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan, 10 Feb 2021



Recommendations/Key Takeaways

a) The community approach to Disaster Based risk

b) Community centric approach

c) How to reduce mental stress

d) Role of family as a tree

e) Strengthening the internal strength

f) Management techniques at community level

g) How vulnerability assessment has to be carried out

h) About the Agriculture DM policy

Prime Minister's 10 Point Agenda No. 8 on DRR Water Wisdom in Collaboration with Karnataka Tanks Conservation & Development Authority, 12 Feb 2021



Recommendations/Key Takeaways

a) Fresh water is used for domestic, recreational, irrigation, livestock support and industrial purposes. It is also noted that the heaviest use is for irrigation, which typically accounts for well over 60%, and industry, which accounts for a further 25% thereby causing water stress.

b) Water footprint measures the amount of water used to produce each of the goods and services we use. This can be measured for a single process, such as growing rice, for a product, such as a pair of jeans, for the fuel where we put in our car, or for an entire multi-national company. The water footprint can also tell us how much water is being consumed by a particular country or globally in a specific river basin or from an aquifer for better water management.

c) The balance between inputs and output use of water is known as the water balance or budget. The water balance can be shown by precipitation, stream flow, evaporation and change in storage.

d) We must allocate the resources fairly among competing human needs such as industries, agriculture, and cities. And the solutions have to do with finding efficiencies and closing loops to achieve "water neutrality" when an enterprise returns the same amount of clean water to the world as it uses.

e) Water governance refers to the political, social, economic and administrative systems in place that influence water's use and management. Essentially, who gets what water, when and how, and who has the right to water and related services, and their benefits are accounted here.

f) The Internet of Things (IoT) is emerging as a powerful enabler in many application domains, such as water and energy management, environmental monitoring, health, smart cities, smart industry and supply chain management. The IoT has the potential to address some of the most acute human, economic and environmental needs. It can also directly contribute to achieving the targets in the Sustainable Development Goals (SDGs).

g) Smart irrigation technologies help people precisely schedule when lawns and crops need to be watered and how much water these plants require. Using sensors, growers are able to monitor the soil moisture levels around their plants, as well as monitor weather conditions, so they can use water more efficiently and effectively

School Safety, 12 Feb 2021

Recommendations/Key Takeaways



a) Holistic approach to school safety including physical safety, psychosocial safety, school transport and safety, background verification of staff and visitor management system should be established for protecting school goers.

b) Guidelines developed by NDMA on School safety policy needs to be implemented across the states.

c) Central Board of Secondary Education (CBSE) has issued eleven separate circulars emphasizing the importance of school security and student safety. It has laid down briefs on fire safety management, structural safety, how to deal with violence and ragging in schools, how to protect children from sexual abuse, and how to ensure safety of children in school buses, among others.

d) Structural and nonstructural assessment of the school building should be undertaken by an expert along with teachers and students of the school.

e) Lessons learnt from the past school related disasters should be learnt and best practice should be adopted by schools.

PM 10 Point Agenda No. 1 & 8 on DRR Erosion Led Displacement: Unfolding Challenges & Solutions, 12 Feb 2021



Recommendations/Key Takeaways

a) Erosion let displacement is a major critical concern.

b) In displacement or migration, the context of drought also needs to be incorporated.

c) When erosion led displacement and migration happens, the preparedness of the city should be the focus.

d) There is a policy gap, therefore we require a policy dialogue for which we can have a working group.

e) Climate change issues are also intensifying these issues, so they need to be looked at.

f) Gender should be mainstreamed as it is part and parcel of half of the population.

g) Disaster can also be used as a catalyst and used in pushing our message through. Using disaster as a message.

h) Resilience building should be a kind of a continuum exercise by looking into the futuristic challenges that how large number of people can get into disaster resilience.

Prime Minister's 10 Point Agenda on DRR No. 8 "Disaster Management in Petroleum Industry" in Collaboration with Nyara Energy Ltd., Maharashtra, 15 & 16 Feb 2021



Recommendations/Key Takeaways

a) The employee deployed at the retail outlet should have fire safety training and he should be aware of fire emergency plan of that particular outlet.

b) Prepared SOPs and preparedness related plans for each outlet and impart the knowledge to each and every worker working at the retail outlet.

c) The most dangerous and first parts of any retail outlet (petrol pumps) will be windows and architectural details during any earthquake incidence. Stay away from these danger zones.

d) Lightning can travel through any metal wires or bar in concrete walls or flooring. Therefore, stay away from concrete floor/walls.

e) If you are caught out doors during a thunderstorm, crouch down and keep your head as low as possible and only let your feet touch the ground rock forward on your toes if possible to get as much of your feet off the ground. Do not touch the ground with your hands to balance yourself

Prime Minister's 10-Point Agenda No. 5, 8 & 9 on DRR Management of COVID-19 Pandemic: Experiences and Initiatives in Collaboration with Post Graduate Institute of Medical Education & Research Chandigarh, 16 Feb 2021

Recommendations/Key Takeaways

a) Importance of team work, preparedness, coordination and collaboration from all frontline workers and other stakeholders was found essential in managing pandemic.

b) The use of technology, social related lessons, stress management, social distancing and personal hygiene was seen learnt by everyone in the past year.

c) Need to invest in the healthcare system and get ready for future biological disaster in much better way.

d) All hospitals went into updating of their facilities in pandemic like establishment of screening areas and redesigning of emergency and critical services zoning, dedicated COVID hospital extension, new OPD blocks etc.

e) Other response strategies were formed in all the steps from receiving of cases, transportation, management, accommodation, testing supply of medicines and consumable, dead body management to disposal of bio waste.



f) Separate chamber and dedicated health care workers were allotted to manage dead bodies.

g) The maintenance and updating of patient logs were also found very important during the pandemic cycle and all efforts were done to maintain social distancing between patients and visitors.

Prime Minister's 10 Point Agenda No. 6 for Disaster Risk Reduction Addressing the need for Resilience in Structures and infrastructures to Build Back Better in Collaboration with Aga Khan Agency for Habitat India, 16 Feb 2021

Recommendations/Key Takeaways

a) Classification of risk need to be done at gram Panchayat level in order to avoid risk .The people in village are more interested in project, program, strategy and policy making.

b) Need for new learning in assessment, management, mitigation of risk & vulnerability hazard/ disaster need of Data analytics and intensive field level data collection is required at Gram Panchayat level to make Disaster Risk Reduction inclusive.



c) Impact of successive drought in Rural Karnataka and Evaluation of response system, its study, finding, suggestions made and policy prescription were highlighted during Webinar.

d) Challenges to Tanks Rejuvenation and Development and need for new continuous learning on charging Hydrological regime in terms of water-level, availability and crisis to crises was major highlight during Webinar session.

e) The GOI-UNDP Disaster Risk Management Programme primarily focuses institutionalization of community based disaster management plan, which helps the community and authorities of their role and responsibilities. The plans become integral part of government's development agenda.

f) The use of Geo-SPATICAL Technology to Reduce Disaster Risk by Planning, Mitigation and Learning.

Prime Minister's 10-Point Agenda No. 1 on DRR "Risk to Resilience: A Dialogue with Dr R K Bhandari" (Subhash Chandra Bose Aapda Prabandhan Puraskar - 2020) organised by NIDM, 16 Feb 2021

Recommendations/Key Takeaways



a) The defenses of disasters are to be built in the minds of men, lessons we need is to practice non-violence the lessons that we should refrain from doing human violence against nature.

b) The clarity must begin with understanding the problem, understanding the problem is half the solution and for understanding the disasters is important in clarity with which we can understand hazard vulnerability and risk is the key to it.

c) To introduce some kind of accountability in our system because fragmented approach of coordination is not helping us much because we don't know actually where the problem really went wrong and we have techno-legal regime have zero tolerance and we are not practicing it.

d) Revisit INA recommendations 2015 and see which recommendations remain unimplemented. Our method of producing DPRS for landslide control to impact assessment and emergency management plans.

e) Focus on local communities and strengthen them against hazards and promote preparedness at community level when we talk about resilience, resilience will come when people are empowered and should go more on resilience and mitigation.

f) To tell people about ancient Indian philosophy, to make people understand about five elements of which body is made of which entire body is made and to give way to the forces of nature when they are trying to restore to restore balance of universe. We must learn to talk to nature, observe nature and not to confrontation.

Prime Minister's 10 Point Agenda: 1, 8 & 9; SDG-3 Sadak Suraksha-Jeevan Raksha "Road Safety and Children", 16 Feb 2021



Recommendations/Key Takeaways

a) To emphasis on working on database related to Road safety.

b) To create or build safe systems for children for prevention and mitigation from road accident.

c) Engaging the stakeholder for advocacy and implementation of road safety rule & regulation

d) To create awareness in public about Children and Adults

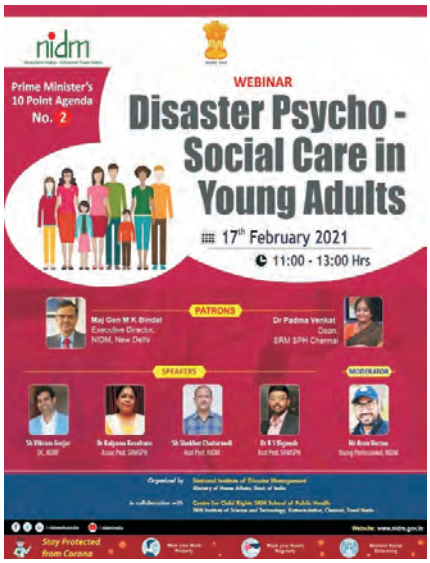
e) Work on development of a national strategy on child road traffic injury prevention with Government and partners, including around data building and analysis and in developing a pilot work plan for pedestrian safety on the route to school

f) Includes legislating around key risks such as speeding, drinking and driving, helmets, seat-belts, and child restraints and enforcing the laws in place;

g) Building roads and obliging manufacturers to produce vehicles with appropriate safety features;

Prime Minister's 10 Point Agenda No. 2 Disaster Psycho-Social Care in Young Adults in Collaboration with Centre for Child Rights SRM School of Public Health SRM Institute of Science and Technology Kattankulathur, Chennai, Tamil Nadu, 17 Feb 2021

Recommendations/Key Takeaways



a) The necessity for an efficient mental health management among youth in a disaster scenario.

b) Importance of stress management and care for co-workers during disasters was emphasized.

c) The initial mental health interventions following disasters and traumatic situations were elaborated.

d) Basic principles to survive emergency situations from a psychological perspective were discussed.

e) The specific psychological changes and symptoms following a disaster were identified.

f) Impact of stigma associated with disaster coping and ways to reduce stigma while seeking help were discussed.

g) Various techniques involved in disaster psycho-social care techniques were elaborated.

h) Issues and challenges faced during the current pandemic situation by various vulnerable populations were highlighted.

i) The webinar was an overall success and was able to meet the intended objectives.

Prime Minister's 10 Point Agenda No. 9 Children in Disasters & Emergencies: Policy Recommendation & Action Plan in collaboration with Anthropos India Foundation, 17 Feb 2021

Recommendations/Key Takeaways



a) Incorporating about Psycho-social distress in school curriculum is very important.

b) National Suicide Prevention Policy is missing in India. In India the suicides occur mostly because of social factors. People/families do not report suicide cases.

c) We have Mental Health Policy in India but needs to be made more children centric.

d) Mental Health Care facilities dealing with mental health issues do not have specific instructions for children. Categories of mental health professionals are not clearly defined which can be detrimental to the child who is seeking help. Consent to treatment in not properly defined while helping children.

e) Adolescent health clinics (as found in Meghalaya) can be replicated all over India.

f) In JJ act there are references to mental health and child care institutions. But lot of action required on the ground. The implementation of the Act has to be made by State governments but many states are still in the process of making the rules. There is an opportunity to make rules and incorporate the subject of disaster in the rules.

g) ICPS/Vatsalya Scheme specifications about convergence is given and different departments like education, health judiciary and police have been mentioned but disaster authorities are missing. MWCD to be approached and encouraged to link the Child protection mechanism with disaster.

Animal Inclusive Disaster Risk Reduction, 18 Feb 2021

Recommendations/Key Takeaways



a) Animals are sentient beings and have the same basic needs as humans for food, water, health care and shelter.

b) Livestock sector absorbs almost 8% of the economic impacts caused by natural hazards. People's ability to resist and recover from disasters is closely interlinked with their animals' wellbeing.

c) Information sharing about Iter-dependency of humans with animals, roles of animals in human's DRR, and why animals themselves need DRR.

d) India's rich biodiversity habitats, existing policies and lacunas and future pathways, in our country. India's Achievement towards Convention of Biological Diversity and the pathways.

e) Aspects of Man animal conflicts and interactions, issues and challenges and how the gaps areas can be filled, what should be done, what should be avoided and need for mass awareness in this regard.

f) Ex Situ and In Situ conservation of vary rare and endangered species in our country like Odisha Ridely Turtles, 3 species of Crocodiles, Hog Deer etc.

g) Role of botanical and zoological gardens in preserving rare species through gene banks and modern technologies in this regard.

h) Role of Veterinarians during and post disasters in animal rescue, rehabilitation and their welfare.

i) Animal Habitat degradation, human encroachment, fringe areas being destroyed in the name of growth and development.

j) NIDM and Wildlife SOS both felt the need for organizing face to face, 3 days long programme where participants can be showcased live examples of measures being adopted for Animal Safety and their welfare. Further, Wildlife SOS has invited and requested NIDM to collaborate with them in live projects at ground level for animal welfare and mentioned that they would send a project proposal to NIDM in this regard for financial support as well as joint partnership.

Prime Minister's 10 Point Agenda on DRM: Agenda no. 1, 5 and 9 "Forest Fire Management" in collaboration with Integrated Institute of Disaster Management (IIDM) Tamil Nadu,



Recommendations/Key Takeaways

a) Inter linkages of Climate change with increasing forest fires and thereby the need for management of forest fires using modern technologies and robust policies. Need for a sincere effort at global level to reduce the impact of climate change along with reduction in factors causing climate change should be a united priority of all nations.

b) A cohesive policy framework with a clear strategic direction provides foundation for successful Forest Fire Prevention and Management (FFPM) which is absent at the policy level.

c) Rationale, tools and methodologies for Forest Fire management and DRR.

d) FSI has begun the development of systems for early warning and fire danger rating, and these efforts should be continued.

e) Stronger collaboration between the State Forest Departments (SFDs), the disaster management authorities and research entities would enable states to innovate new science-based management approaches for preventing fires and rehabilitating fire-affected areas.

f) Ground-based detection will continue to be essential along with the introduction of new remote sensing technologies. So, training should be provided to field officers, seasonal fire watchers, and community volunteers involved in firefighting.

g) Provision of training should extend beyond state-managed forests to community institutions in regions such as the Northeast, where communities are responsible for managing most of the forest estate.

h) Apart from the above, NIDM and IIDM, put together, received request from Tamil Nadu forest department to provide one day Disaster management training to their 85 forest rangers, elite team, drivers and other guards.

i) Tamil Nadu 37 districts Home Guards and NYK Youth Volunteers requesting NIDM / IIDM to provide Disaster management training in Tamil language.

Disaster Management Early Warning and Detection of Disasters (Early Warning Dissemination and Communication, Early Warning Detection, Monitoring and Dissemination: Best Practices), 19 Feb 2021

Recommendations/Key Takeaways



a) Basic aim of all scientific and technological innovations is to improve the quality of life of communities which stands true for all early warning systems developed for disaster risk management in our country as well.

b) Early warning has four components namely; Risk detection, Monitoring and Evaluation, Warning Dissemination and Response to the Warning issued. The first two components of the warning system are carried out within organizations and the agencies while the last two components are carried out in the ambit of the vulnerable community.

c) Issues in early warning and detection include language used for dissemination, understanding of the warning by the community when it is issued, whether the warning is generalized or specific in nature and whether the warning could convey the sense of urgency to the community or not. SCDR can conduct research on the various issues related to warning in our country not only with respect to floods but other hazards as well.

d) Governments need to understand and judge the response capacities of the community after the warning has been issued. The vulnerable community may or may not evacuate.

e) Past experiences of the public, their understanding of the warning signals, reliance on traditional precursors for hazards, lack of knowledge about location of safe places and shelters and concern for their livestock and livelihood may play a role in preventing them to respond in a timely manner after the warning has been issued.

Impending Climate Risk and Floods of Assam in Collaboration with SEWA, Assam & Global Foundation for Advancement of Environment & Human Wellness, New Delhi, 20 Feb 2021

Recommendations/Key Takeaways



a) Majuli, the geo-cultural heritage of Assam, has been facing a dual catastrophe of river bank erosion and flood year after year and the existence of the island is under serious threat in the coming decades. The erosion problem is more acute after the flood events in most of the places, the main cause being over-steepening of the bank materials due to the deposition of high amounts of sediments during the flood.

b) The Intergovernmental Panel on Climate Change IPCC (2014) focus had moved from vulnerability to a risk framework vulnerability, hazard & exposure assessment, which will determine the risk and can be used to understand and identify the capacity to adapt.

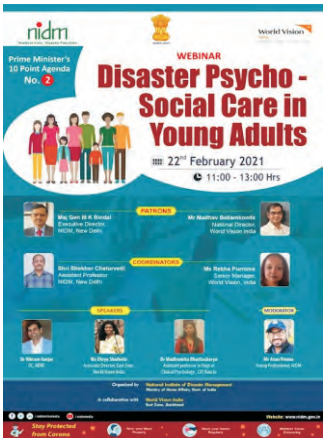
c) Differential human vulnerability to environmental hazards results from a range of social, economic, historical, and political factors, all of which operate at multiple scales and have found to have detrimental impacts.

d) Relational Cultural Theory provides a theoretical framework to help individual's foster self-empathy and help strengthen relationship.

e) The concept of flood management lies within the framework of the Integrated Water Resources Management. Integrated Flood Management (IFM) endorses this idea, aiming at maximizing the net benefits from flood plains, meanwhile minimizing loss of life.

Prime Minister's 10 Point Agenda No. 2 Disaster Psycho-Social Care with Spl. Reference to School Children in Collaboration with World Vision India, East Zone, Jharkhand, 22 Feb 2021

Recommendations/Key Takeaways



a) Promotion of child centric approach to disaster management through initiatives in protection & comprehensive School Safety with an objective to equip children with the knowledge and practical skills.

b) Organize trainings on various aspects of incident command systems. d. Undertake DRR related research/joint studies.

Management of Crowd at Large Congregations in collaboration with Bannet University, UP, 23 Feb 2021

Recommendations/Key Takeaways



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) Centre for sustainable Development and Disaster Studies, Bennett University can approach NIDM for more such collaborative activities.

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

Mapping the Disaster Risks in India Cities in Collaboration with All India Institute of Local Self Government (AIILSG), Foundation EMDA South-Asia and Urban Update, 23 Feb 2021

Recommendations/Key Takeaways



a) Need for public-private partnership for execution of risk mapping at local level.

b) A strong link between science, administration and the political system needs to be established for incorporation of risk assessment inputs in decision-making.

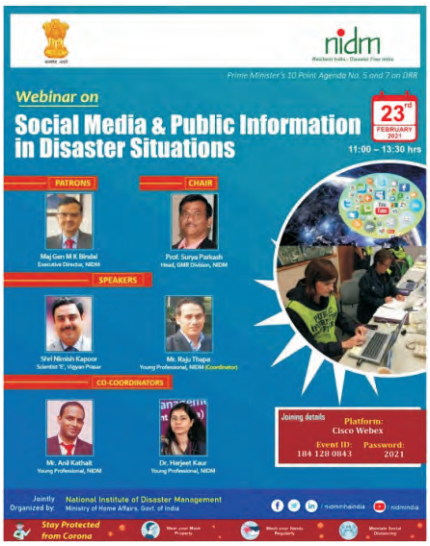
c) To execute risk mapping at the local level, we should focus on strengthening and developing capacities of our Local Self Governments.

d) The focus should also be on enhancing health and education infrastructure to build the capacity of the local self-government along with a robust DRM mechanism involving all stakeholders.

e) Information derived from risk assessment and mapping must be shared with the local self-governments for effective decision making and better preparedness at local level. Further, the sharing of the risk mapping information can also help in local contextualization and identification of discrepancies.

Prime Minister's 10 Point Agenda No. 5 and 7 on DRR Social Media & Public Information in Disaster Situations organized by NIDM, 23 Feb 2021

Recommendations/Key Takeaways



a) Journalists need to use the reverse search option to find the original source of an image or to know the approximate date when a picture was first published on the Internet.

b) We must cross-check reliability of news with websites containing reliable, factual information about this virus and infection before trusting the information.

c) Only the authentic sources have to be used to collect and disseminate information. Application of critical appraisal skills becomes necessary, so that half-baked or incorrect information is not disseminated.

d) Authorities handling disaster management need to be sensitive to the enormously positive role that media plays in support of their preparedness, rescue, relief and rehabilitation activities. They should understand and appreciate media's dynamics and compulsions also.

e) Media should be treated as an active, valuable, responsible and trusted partner in the realm of disaster management.

f) Need to come up with a one stop solution (one single app) that offers fastest, easily accessible, user friendly, most comprehensive disaster related notification system covering nearly every type of natural and man-made hazard.

g) Need to find a way to bring a sense of interest and sensitizations of people to the power of social media i.e., what is available in these platform and how to use them more effectively.

h) Need to incorporate mobile technologies and social media to extend and manage emergencies response during disaster.

Contextualizing Resilient Development in Himalayas: In Conversation with "Shri Chandi Prasad Bhatt" (Environmentalists and Social Activist) Gandhi Magsaysay Award, International Award for National Integration Organized by NIDM, 23 Feb 2021

Recommendations/Key Takeaways

a) The local level needs to be involved at all the Disaster Management processes: response, preparedness etc.

b) The disasters in mountains cause destruction in both the plains and the hills. Therefore, a hill and plain area integrated DM plan should be constructed.

c) At an international level, all the national boundary nations should be in regular correspondence with each other for monitoring and issuing of early warning in terms of any disaster situation.

d) At the local level, some insurance and financing schemes for the local villager should be adopted.

e) An amount of trust needs to be created in the local people that the infrastructure would not cause damage to the locals in future.



f) Construction in hills should actually focus on the local development of the area and not just on monetary gains of agencies.

g) Scientific agencies need to take up more research and adopt a multidisciplinary approach to analyses the projects and create awareness amongst the locals for the same.

h) Women play a very important role in any movement; therefore, they need to be involved in all activities of disaster management.

Prime Minister's 10-Point Agenda No. 1 on DRR Risk to Resilience: A Dialogue with SEEDS India, 24 Feb 2021

Recommendations/Key Takeaways

a) Focus on Preparedness, Recovery & Disaster Risk Reduction (DRR).

b) Community elevated professional benchmark through Training Courses, Guidelines and Assessments

c) Governance system to be evolved Importance of the Society in DRR

d) Lots of scope of innovation in DRR through the promotion of various innovative projects.

e) Enabling new ideas from the Community Traditional Learning's

f) Need to develop disaster related handbooks for small cities/communities



g) Need to focus on how to live with the risk

h) Need to learn from the other countries by their practical experiences of disaster related issues

i) Need to take local actions and develop the same as national policy

j) Need to focus on cooperation & Peer to Peer learning

Prime Minister's 10-Point Agenda no. 5, 8 & 9 on DRR "Hospital Safety: Experiences and Initiatives after Bhuj Earthquake" in collaboration with WHO, 24 Feb 2021



Recommendations/Key Takeaways

a) Safe response system of hospital is as important as safe site, structural and nonstructural safety measures.

b) Need to check on how many hospitals are ready with Disaster Management Plan. Agenda should be retrofitting guidelines, earthquake codes and other hazards related safety norms should be integrated with the medical guidelines.

c) Hospital becomes weakling in terms of community preparedness and response. Training of the healthcare staff in disaster scenario through mock drills and proper DM planning.

d) India has largest number of fire hazard in COVID hospitals. Hence many challenges and major gap remains in the execution part for which involvement of the community is also important.

e) NABH accreditation requirement should be linked with disaster perspective.

Children in Disasters & Emergencies: Understanding Safe & Unsafe Touch during Response & Recovery, 24 Feb 2021

Recommendations/Key Takeaways

a) Explain about inability to protect themselves makes them prone to injury, illness and abuse; long-term developmental, physical and psychological setbacks following a disaster and Social vulnerability of dealing with the stressors of a disaster

b) Need to explain about safe and unsafe touches such as being touched on a private part, being asked to touch someone else's private part.

c) Discuss about safe space where children feels emotionally and physically safe and express themselves freely, even discomfort or other difficult feelings.

d) Emphasis on preparedness to create an inclusive community and support equitable ownership;

e) Give children leadership and include 'gender analysis' in the action plan

f) Experts explained about the Legal Provision- POCSO ACT of the protection of children from sexual offences act.



Prime Minister's 10 Point Agenda no. 6 for Disaster Risk Reduction Curtain Raiser Workshop on India Universities and Institutions Network for Disaster Risk Reduction (IUINDRR-NIDM) Organised by NIDM, 25 Feb 2021

Recommendations/Key Takeaways

a) Curriculum which has to be made for different types of disasters and hazards that will be regional in nature.

b) Focus should be on revamping to absorb the values of DM and start some courses such as a capsule, credit course in every discipline on DM, so a basic knowledge in DM can be disseminated.

c) Research Topics: a list of research topics which various universities and institutions can give to the students so a good research base is developed for topics which have not been addressed so far.

d) NIDM will be a platform through IUINDRR where these research papers will be posted so that it does not get lost.

e) IUINDRR will provide a big platform for researchers/ Ph.D. students to present their PhD which can be used as inputs for lateral policy making.



f) Idealism Vs Pragmatism: to create professionals, there is a need to create skills of DM in every individual. In which empathy and commitment to assist in disaster management is a big factor. So, a need to find a balance between technical and nontechnical disciple have to

come on cross cutting issues, which should be multidisciplinary and interdisciplinary in nature so that every individual has some basic information on DM that they should have.

g) IUINDRR will be made as a resource handle for reading material, reference books etc. NIDM will be having a huge library which will have in house facilities for the researcher including printing facilities, hostel etc.

h) Need to develop training material, course books, 99 per cent of the books on DM are of foreign authors without contextualizing in Indian context. Therefore, local academia, researches and experts should be encouraged to write on this subject that is based on regional context and is also globally accepted.

i) Hon'ble minister mentioned about "Vasudev kutumbakam" & "Vishwaguru" meaning by "we as one family" and "master of the entire world"

j) Facilitation of various people certainly helps to encourage and motivate them. NIDM will think on how we can facilitate a limited number of people and give them in annual meetings.

k) Cluster of Universities: 6 zones in IUINDRR each having 5-6 states. so, these clusters will discuss the various issues on their respective region.

l) Psychosocial aspects of Disasters and practical implementation by a community should be brought out.

Health and Disasters, 26 Feb 2021

Recommendations/Key Takeaways

a) Need to reduce the time for watching news as a lot of information is being bombarded from various sources. It causes anxiety in people.



b) Need to make ourselves strong and remember that the recovery rate of Covid Positive patients is high as compared to the mortality rate. We need not panic but take adequate precautions against the pandemic.

c) Need to think positively about the present scenario as this is a golden time to spend time with families.

d) Maintain a routine during lockdowns and work from home scenarios.

e) Balanced diet is essential for maintaining necessary energy levels to maintain a sound physical and mental health. Physical exercise, recreation and spirituality also contribute to the maintenance of good mental health.

Prime Minister's 10 Point Agenda No. 6 Integrating Disaster Management Plan with Gram Panchayat Development Plan in collaboration with ICDM Puducherry, 26 Feb 2021

Recommendations/Key Takeaways



a) Insufficient understanding/appreciation of DRR-specific Capacity Development needs.

b) Key departments roles and responsibility in GPDP should be more elaborative, Risk reduction topic must cover manmade disasters

c) Lack of access to or existence of facilities, programmes, or resources to support awareness

d) Failing to provide support for or access to enhance local capacities for DRR and preparation of their respective VDMPs

e) Videos of testimonies from other states where the Gram Pachayat Disaster

f) Inadequate and insufficient availability of resources Lack of general awareness and knowledge of risk drivers and the stakeholders' DRR roles (including at the local level) and

g) Organize more seminars like this on diverse topics including Rural Development, Climate Change and Waste Management

h) Need to develop people centric planning for ease of living.

Disaster Safe Rural Housing in Collaboration with BMTPC, 26 Feb 2021

Recommendations/Key Takeaways



a) Safety of our house is paramount and most important critical aspects of our survival. So at least in those areas where hazards are common, our housing should be resilient to resist those hazards and does not convert into disasters.

b) India is undergoing the biggest housing programme which has been undertaken by Indian government and is committed to provide housing for all by 2022.

c) The growth in the hills needs to protect the natural resource base, while giving the hill folks an opportunity to improve their quality of life without eroding their traditions and values.

d) Confined masonry structures for rural areas are best solution being seismic resistant and cost effective.

e) Rural areas have large resource materials capable of burning like dry field or hay stack or pile of logs and chances of outbreak of fire is greater due to its possibility to become source of ignition.

f) Development of hill settlements, especially towns and the surrounding areas is a challenging task as hill/mountain regions are highly sensitive and has fragile ecosystems.

Community Capacity Building and DRR in collaboration with Civil Defence, Bapatla, Punjab, 27 Feb 2021



Recommendations/Key Takeaways

a) Sensitization among the participants for the need of Community Capacity Building in modern times of increasing natural and man-made disasters and the roles of individuals apart from the Government and Authorities;

b) Community Being the First Responder Community Commitment and Sense of Belongingness needs to be brought forward through participatory approach, giving them equal opportunity in decision making, giving ownership of resources and its management during crisis times, their handholding and at the same time due appreciation of their involvement and contribution to the cause.

c) Lack of enough recruitment for civil defense and home guards personnel in our institutional framework for DRM. It was informed that fresh Home Guards Vacancies under the UP Govt. for 9207 posts have been advertised today only.

d) Training and Sill development of Civil Defense Personnel and their selfless work needs to be identified, praised and supported by all of us.

e) Civil Defense set up, its role in CCB, its real time services and many success stories of their achievements during past so many disasters.

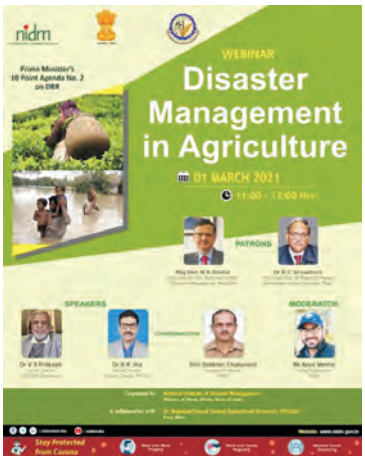
f) Issues and challenges being faced by civil defense and home guards in delivering their services, apathy from other arms of the Government, less support from community itself in times of crisis, poor coordination with other line departments and service providers.

g) SHGs, Local Youth Groups, Groups of retired personnel, Religious leaders and followers enhancing individual, organizational capacities and improving networking between them.

h) Global to Local reach of S&T Innovations, Lab to Land approach for bringing technology to the forefront of local community, finding local solutions to local problems with a fair combination of S&T innovations, customized to the local needs and the Indigenous Knowledge and local wisdom.

Disaster Management in Agriculture in Collaboration with Dr Rajendra Prasad Central Agricultural University Pusa Samastipur Bihar, 1 March 2021

Recommendations/Key Takeaways



a) A proper mechanism for assessment of drought in agriculture dependent states/ UTs is a must.

b) Alternate cropping pattern based on local conditions can be thought of to reduce drought related resultant activities.

c) Drip irrigation and other such innovative irrigation techniques must be propagated.

d) Farmers must be made aware of alternate crops such as high yield and less water consuming crops and irrigation techniques which have less wastage of water.

Challenges of Disasters: Vulnerability, Adaptation and Resilience in Collaboration with Centre for Disaster Management, Department of Geography, Jamia Millia Islamia & RRSC (North), New Delhi, 2 & 3 March 2021

Recommendations/Key Takeaways



a) Need to focus on mitigation and adaptation to disasters through disaster risk management, cooperation between government and citizens and sane policy.

b) Need to pay attention on disaster management at local levels.

c) Community can play an active role in managing disasters.

d) Role of local governance, use of techniques and creation of community level awareness is imperative for better preparedness.

e) Constructions in the floodplains cause irreparable damage to rivers and their ecosystems.

f) Need to have a holistic approach to combat disasters.

g) Need to invest in research and development for better disaster risk reduction.

h) Preparedness through effective early warning system, community participation, community sensitization is essential.

Prime Minister's 10 Point Agenda no. 2 on DRR School Safety in Collaboration with Delhi Public School Gurdaspur, Punjab, 02 March 2021



Recommendations/Key Takeaways

a) School teams to address various aspects of disaster management in schools such as Evacuation, First aid/ Basic Life support, Assistance to external teams (fire & emergency) must for every school.

b) Non-structural mitigation measures must be taken in every school to buttress the structural mitigation measures.

c) Every school must have disaster management plan (including evacuation plan) prepared with the involvement of all stakeholders of school such as Teachers, Administration and students.

d) Mock drills must be conducted in schools to disseminate the important activities to be carried out for preparedness in schools.

e) Identification of drug abuse issues in school children and effectively handling such issues must for districts like Gurdaspur.

f) Psychological counseling of addicted students and discussions with their parents can be adopted as one of the measures for addressing this issue.

Environment Degradation and Disaster Risk Reduction (DRR) in Collaboration with Society for Environment and Development, New Delhi and Department of Environmental Science Sri Venkateswara College, University of Delhi, 02 March 2021

Recommendations/Key Takeaways

a) Anthropogenic reasons for environment degradation, Lessons learnt from Pandemic and the need for mending our ways for continued development with giving equal impetus to wildlife and environment conservation.

b) Pollution at air, water and land level, soil degradation, soil salinity, acid rains, related health hazards and life threatening diseases;

c) Land use planning, land degradation, over exploitation of natural resources, finding a balance between growth for need and inclusive growth for all flora and fauna;

d) Recognition of the Rights of the Indigenous People for preserving the rich biodiversity of the region, the recognition of the rights of the forest dwellers who depend on the forests is as important as the declaration of natural habitat as a World Heritage Site;

e) Effective Implementation of the Forest Rights Act where the Government has to make an effort to build trust between its agencies in the area and the people who depend on these forests by treating them as equal citizens like everyone else in the country.



f) Traditional Knowledge of the Tribal People for Conservation: The Biodiversity Act, 2002 mentions about the equitable sharing of the benefits arising out of the use and knowledge of biological resources with the local communities.

g) Extensive biodiversity loss in the past decades has spared neither developed nor developing countries. The Convention of Biological Diversity (CBD), in its spirit, laid the foundation for environmental ethics taking priority over mindless exploitation and recognised the right of states to their genetic resources and the rights of communities to their traditional knowledge.

Prime Minister 10 Point Agenda No. 8 on DRR Children in Natural Disasters & Emergencies: Psychosocial and Health Care, 03 March 2021

Recommendations/Key Takeaways

a) Encourage your child to stay active. As well as the physical and mental benefits to being active, involvement in a club or team sports can help your child to feel included and boost self esteem

b) Talk to the school/college teacher or counsellor. It is likely that the school will have experience of helping pupils and their families. The school should be able to provide a named member of staff who your child can go to if they're struggling during the day such as a counsellor, a mentor or a nurse. Your child is at school for a large part of the day so having staff aware of the concerns and keeping an eye on them during this time can be reassuring



c) Talk to your GP. They may be able to offer counselling or, if appropriate, arrange a referral to the Child and Adolescent Mental Health Service (CAMHS)

d) Use active listening skills to facilitate controlled expression of reactions to recount trauma.

e) Implementing calming & coping strategies such as relaxation, breathing, role play to manage reactions to disaster.

f) Identify challenge & replace fearful self talk with reality based positive self talk. Using home journaling & corrective feedback for failure.

g) Use constructive communication, reflective listening, eye contact & respect while discussing disaster.

h) Increase the frequency of direct expression of respectful, positive thoughts within the family.

i) Identify positive consequence resulting from disaster use reframing to aid resilience & recovery.

One day Virtual Training Programme on India Disaster Resource Network (IDRN) for the Inter Agency Group Members of Kerala State 04 March 2021

Recommendations/Key Takeaways

a) Decided to collect all resource data in the IDRN formats from all Inter Agency Group Members.

b) The Collected Inventory details may be submitted to respective District IAG chairman. He will be responsible for the liasioning with DDMA.

c) IAG members may support the DDMA for pulling the details on the Portal

d) Hazard Analyst of respective district should ensure the free flow of data to the portal.

e) SEOC will share the Data collection formats to the IAG conveners.



Disaster Management Fire Safety, 05 March 2021

Recommendations/Key Takeaways

a) Need to reduce the time for watching news as a lot of information is being bombarded from various sources. It causes anxiety in people.



b) Need to make ourselves strong and remember that the recovery rate of Covid Positive patients is high as compared to the mortality rate. We need not panic but take adequate precautions against the pandemic.

c) Need to think positively about the present scenario as this is a golden time to spend time with families.

d) Maintain a routine during lockdowns and work from home scenarios.

e) Balanced diet is essential for maintaining necessary energy levels to maintain a sound physical and mental health. Physical exercise, recreation and spirituality also contribute to the maintenance of good mental health.

Disaster Risk Reduction (DRR) in Nagaland: Preparedness at Local Level in Collaboration with NSDMA, 5 March 2021

Recommendations/Key Takeaways



a) NEPEx is annual statewide emergency preparedness exercise of NSDMA under guidance of NDMA since 2017.

b) Many community volunteers benefitted under ApdaMitra scheme in Nagaland.

c) DDMA should consider village council or village development board as VDMA.

d) Any prepared community is a safe community.

e) Pandemic affected the CFR (Community First Responder) trainings and volunteers which include 208 villages and 2138 members since 2016, unavailability of psychological aspect training was found as a major gap.

f) School authorities should have regular meetings where they not only promote basic disaster related Do's and Donts' but also work on behavior and team coordination, hygiene habits.

g) During Mithun Caravan scheme DRR awareness was spread to many schools of the state, a total of 93 schools covered had actively participated in many disaster safety mock drills since 2016

Risk to Resilience: A dialogue with Prof. V.K. Sharma Organized by NIDM, 8 March 2021

Recommendations/Key Takeaways

a) Need to disseminate the knowledge of Science & Technology and incorporate the same in the field of Disaster Management

b) Need to create the DRR model for the country as per available resources

c) Top level Institutions should integrate the Research in the field of Disaster Management

d) Need to strengthen the community with the help of top level Institutions

e) Need to fill the gap between the academicians & policy makers

f) Implementation of the Disaster Risk Management Plan after Risk Assessment



g) Need to avoid mistakes and learn from past experiences

h) Need to provide trainings to the manpower as per the need requirement

International Women's Day Webinar on experiences from Women Managers in the Area of Disaster Risk Reduction Organized by NIDM, 8 March 2021

Recommendations/Key Takeaways

a) The widespread perception of women as vulnerable section to disaster need to be changed by identifying strengths and building inherent capacities of women.

b) Women managers are still facing issues and concerns having limited number at decision making role.

c) Flexibility in workspace with sensitive and sensitized male colleague is needed to provide enabling environment.

d) The disaster initiatives at Miranda house inspired many students to opt for disaster management in masters or go for research on disaster related studies.

e) Female engineers are working at field even in harsh conditions like others while balancing their work and life.

f) Women managers during pandemic faced many challenges and understood the need to be adaptable and process team work and distressing.

g) Training and capacity building programmes can be especially aimed for women on aspect of DRR.



h) All gender related issues and stereotypes need to be broken to emerge stronger together.

Risk to Resilience: A dialogue with Dr Prof. Santosh Kumar, 10 March 2021

Recommendations/Key Takeaways



a) Today knowledge part is available on one click of Google but how that get translated into skill and behavioral changes of the institution behavioral changes of the individual's behavioral change of professional's behavioral change of that training and education institutions. So there we need to know how disaster is going to be in public good or equally also have the changing nature ,

b) The whole idea of setting a public policy agenda for research is something that we all need to work towards may be NIDM ATI because a lot of public funds come these institutions and one needs to work on how would you frame the agenda for Public policy because we have got our development wrong. We have issues of implementation we have issues of corruption we have issues of extremely high budgets.

c) Lets us recognize the drivers of development and drivers of disasters are very often the same if we are not going to recognize this we will continue to do bad quality development and we will continue to do mop up which is post disaster money to be made by just everybody and we are not going to move ahead and do we really have government presence in Covid just told us that there is no data base that govts have to say how many people live in a given Bisty.

d) Need to work community based G.I.S and why is that our technological institutions are not being mandated to do community based G.I.S, this is internationally available and all of us who work in the disaster sector development sector we could possibly be doing community based mandated make sure that unless you know this you can't be working in the G.I.S sector at all.

e) Need to look at community participation and community knowledge base , so whenever there is any disaster or even for preparedness stage we should be going to the community gather knowledge from them understand their challenges the risk and then think about DRR rather than sitting in offices

"Pandemic and Life Beyond IT" in collaboration with St. Savier's University, Kolkata Department of Commerce (Morning Section), 12 March 2021

Recommendations/Key Takeaways

a) Last one year experience sharing about how we learnt to live with the new normal and tried to cope with various changes that came into our lives in general and in specific;

b) Loss of economy, livelihood, disruption to education and non-covid health services, mortalities and associated psycho-social and mental disturbances, mass displacement of population and shut down of Industries in India;



c) Increasing trend of positive cases, of late, in 5-7 states, need to follow strict observance of physical distancing, mask wearing and use of sanitizers etc.

d) Vaccination drive in India, the issues and challenges associated with it, sensitization about the observance of government guidelines and do away with rumour mongering in this regard;

e) Increasing trend of mental stress, especially in times of Pandemic, 7 dimensions of mental wellbeing, PERMA model of wellbeing;

f) Correlation of our life with a life of a tree. Like a tree, we have to strengthen our trunk (i.e. spiritual wellness), make concrete our trunks (i.e. stop giving the remote control of our happiness and sadness into somebody else's hands) and do charity like a canopy of a tree (i.e. our contributions back to the society).

g) St. Xavier University expressed its desire to sign an MoU with NIDM to further such collaboration and requested NIDM to organize a 5 days face to face programme at the earliest in the campus of St. Xavier University, Kolkata.

School Safety (Structural and non-Structural Safety of Schools, Developing SDMP), 12 March 2021



Recommendations/Key Takeaways

a) Holistic approach to school safety including physical safety, psychosocial safety, school transport and safety, background verification of staff and visitor management system should be established for protecting school goers.

b) Guidelines developed by NDMA on School safety policy needs to be implemented across the states.

c) Central Board of Secondary Education (CBSE) has issued eleven separate circulars emphasizing the importance of school security and student safety. It has Laid down briefs on fire safety management, structural safety, how to deal with violence and ragging in schools, how to protect children from sexual abuse, and how to ensure safety of children in school buses, among others.

d) Structural and nonstructural assessment of the school building should be undertaken by an expert along with teachers and students of the school.

e) Lessons learnt from the past school related disasters should be learnt and best practice should be adopted by schools

Prime Minister's 10 Point Agenda no. 6 "Integrating Disaster Management Plan with Gram Panchayat Development Plan in collaboration with IIDM, Chennai, Tamil Nadu, 12 March 2021



Recommendations/Key Takeaways

a) In the technical session, First presenter Shri. Shekher Chaturvedi, Assistant Professor, NIDM, well presented with PPT, explained about high light points on "Role of PRI in Disaster Management" and how we are integrating Disaster Management plan with Gram Panchayat Development Plan [GPDP].

b) Based on the government policies and planning [DM plan and GPDP], how to strengthening what we have, Rural development and panchayat Raj department roles and responsibilities in pre disaster, information sharing to right place and right people.

c) Confidence of the committees, teams and First Responders, knowledge and preparedness activities during the pre disaster, bridge between Government and public, servicing at relief camps and shelters. Need to do planning, training, identified safer places, evacuation tools and techniques, identifying sources and placing them at right place and time.

d) Utilization of funds which are available, raising funds as per requirement for disaster Risk reduction, Capacity building programs, planning for distribution and relief camps with local stakeholder agencies, contact persons for each activities in the GPDP.

e) Shri. Shekher Chaturvedi, also presented about muckle attitude with equal gender aspects by following protocol. Whatever best possible to mitigate the risk and hazards at grass roots level with Sympathy and empathy.

f) The Second presenter of webinar Dr. Sushma Guleria, Assistant Professor & Coordinator, NIDM, started her great presentation and explained all in very detail.

g) Main streaming of disaster risk reduction through Gram panchyat Development Plan, convergence 29 sectors in XI schedule, tools and techniques for risk and hazard prevention to mitigation.

h) Explained, integrated enthusiasm and self involvement in participation by all to prepare gram panchayat level design, plan and mapping based on past 10 years disasters lesson from elders for their new normal way of better preparedness, economical development and social

justice. It must be even a layman in corner of habitation can understand easily and must avail its benefits.

i) Due to tremendous changes in the climate, global warming, modernization, westernization, rapid population growth, industrialization with high level pollution of carbon dioxide, new virus spreads, other natural and human induced activities lead to devastation / disasters at global level now - a- days .

j) In order to minimize the losses to be caused to the lives of human beings, domestic animals, properties, economical, environmental, ecological, health and services and to our connectives, we need to integrate all Plans with Gram Panchayat Development plans, Sustainable Development Goals, department's plan, global stakeholders and others towards the upliftment & betterment of our Nation with resilience by effective Preparedness at all level.

National Education Policy-2020 & Emerging India in collaboration with Teacher's Training (P.G.) College, Sitapur (U.P.), 14 March 2021

Recommendations/Key Takeaways



a) Salient features of the New Education Policy and India's aim of becoming global knowledge super power, renaming of Ministry of HRD as Ministry of Education to give more thrust in the area;

b) Intent of the Government to enthuse more of funding into education sector with a target of achieving 6% of GDP input for this important segment;

c) Move towards an education system of 5+3+3+4 and giving importance to the formative years of a child for learning cognitive skills through Anganbadi, Prenursary and Nursery Education system;

d) Giving due importance to the mother language, system of providing at least primary education till class V in the mother tongue across the country; Moving towards a harmonical society with multi-linguism and respect for other languages;

e) Cap on high fee for professional courses in India and bringing in a regulatory mechanism for that;

f) Imparting skill development and technology upgradation for the teachers community so that the transition to new education policy is smooth for them;

g) Scheme of credit bank system so that anybody can leave education at any time and rejoin anytime to further pursue it;

h) A new and comprehensive National Curriculum Framework for Teacher Education (NCFTE) 2021, will be formulated by the National Council for Teacher Education (NCTE) in consultation with National Council of Educational Research and Training (NCERT).;

i) Need for the creation of 'inclusion funds' to help socially and educationally disadvantaged children pursue education. Need to set up a regulatory process that can check profiteering from education in the form of unaccounted donations

Role of Youth in DRR in Collaboration with UNDP Major Group for Children, Youth for Resilient Community, World Vision India, UNICEF, India, 16 March 2021

Recommendations/Key Takeaways

a) Strengthening partnership with educational institutions and academia for knowledge building, research and Building Capacity of existing Youth workers through certification courses and training programs.



b) Promoting convergence, youth budgeting, implementation of gender and social inclusion policy, strengthening monitoring and reporting mechanism along with strengthening partnership with various stakeholders for greater youth involvement in DRR.

c) Participation of youth in environment management can be sought at different levels ranging from grass root activism, community conservation projects, and climate change adaptation projects to influence policy decisions and establish environment networks

d) During any disaster the local community and particularly the youth members are the first responders. There is an increasing consensus that building resilience to disasters requires a bottom up approach focusing on community capacity building and voluntary initiatives rooted in the community with emphasis on empowering the youth.

e) Youths are better connected through social media and have faster access to information, which help them to connect to larger audience and influence their peers and initiate innovation slogan and jargon.

f) Nature based solutions with involvement of Youth, such as forest restoration or sustainable agriculture are crucial to address climate change as well as biodiversity loss and must be integrated to current policies at international, national & local levels.

Biodiversity Conservation in Collaboration with Dada Ramchand Bakhru Sindhu Mahavidyalaya, Nagpur Maharashtra, 17 March 2021

Recommendations/Key Takeaways

a) Awareness generation among the participants about the importance of biodiversity, its loss pattern and human existence dependent upon it;

b) Information dissemination with respect to international and national conventions for biodiversity conservation;



c) India's role, achievements in biodiversity conservation and way forward in this regard;

d) Carrying Capacity of an Ecosystem - Size of population that can be supported indefinitely with available resources and services and Sustainable development - Maximum use of resources without damaging system's regenerative capacity.

e) Need for ensuring that our economy and society continues to exist without destroying natural environment. For this, women sensitization and education toward reproductive choices can also play a dominant role in controlling pollution.

f) Nature Based solutions, projects being undertaken at different parts of our country in this regard and how we need to associate the economic values to such NBS for the benefit of policy makers and local community;

g) Increase ecosystem productivity; each species in an ecosystem has a specific niche—a role to play. Need to support a larger number of plant species and, therefore, a greater variety of crops.

h) Protect freshwater resources, promote soils formation and protection, Provide for nutrient storage and recycling.

i) Air pollution, Water pollution, Land pollution and Aid in breaking down pollutants, Contribute to climate stability, Speed recovery from natural disasters.

j) Provide more food resources, provide more medicinal resources and pharmaceutical drugs, and Offer environments for recreation and tourism.

School Safety (Structural and non-Structural Safety of Schools, Developing SDMP), 19 March 2021

Recommendations/Key Takeaways

a) Holistic approach to school safety including physical safety, psychosocial safety, school transport and safety, background verification of staff and visitor management system should be established for protecting school goers.

b) Guidelines developed by NDMA on School safety policy needs to be implemented across the states.



c) Central Board of Secondary Education (CBSE) has issued eleven separate circulars emphasizing the importance of school security and student safety. It has Laid down briefs on fire safety management, structural safety, how to deal with violence and ragging in schools, how to protect children from sexual abuse, and how to ensure safety of children in school buses, among others.

d) Structural and nonstructural assessment of the school building should be undertaken by an expert along with teachers and students of the school.

e) Lessons learnt from the past school related disasters should be learnt and best practice should be adopted by schools

Disaster Psycho-social care with Spl. Reference to School Children in collaboration with World Vision India South Zone Karnataka, 19 March 2021

Recommendations/Key Takeaways

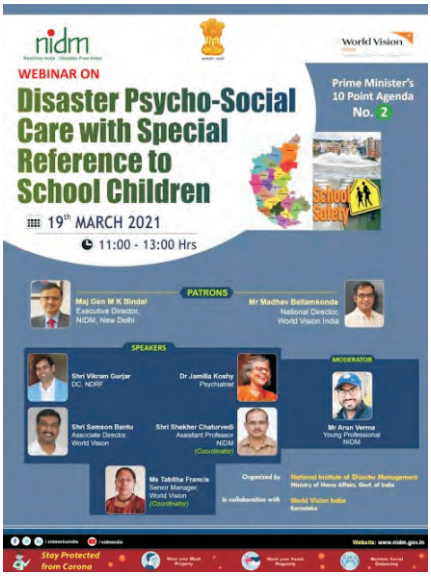
a) What is in our ability to control is the internal factor which will help to deal with the stress/ problem.

b) Need to reach out to others, talk with friends, teachers, social workers to increase our knowledge level to deal with the issue.

c) Form network with our family and friends to build on the relationship to depend in times of stress/ problem.

d) Participants also learn about the Government programs to reach out in times of disaster/ problem.

e) NIDM and WV will collaborate closely in the WV operational areas of Karnataka, exploring joint initiatives for the following areas:



- o Promotion of child centric approach to disaster management through initiatives in protection & comprehensive School Safety with an objective to equip children with the knowledge and practical skills.
- o To strengthen community-based disaster management.
- o Undertake DRR related research/joint studies.

Child Friendly Initiatives to Develop Resilience PM Agenda (1,8&9) SDG (3&4) in collaboration with Smile Foundation Bihar, 23 March 2021

Recommendations/Key Takeaways

a) Strengthening Psycho-Social Support: Parents/Teachers/ Community/State

b) Need to emphasis on engaging / assuring / stimulating campaigns / awareness programs / advertisements / programs / offline/online

c) Opening up the schools with extended roles / orientation of stakeholders

d) To establish small centres for Community Learning

e) Child helpline services should be made essential/and responsive

f) To strengthen responsive mechanism at all level

g) Need to focus on Orientation/Digital Skill/ Proper safeguarding

h) Reformulation of Social Priorities and develop strategic plan for the future of child services especially social and protection



Ecosystems Health and Disasters in collaboration with HRDC, GNDU, Amritsar, Punjab, 24 March 2021

Recommendations/Key Takeaways

a) All the disasters are directly or indirectly human-induced.

b) For the Disaster Risk Management. we need to find Nature Based Solutions.

c) Ecosystem destruction has led to the emergence of infectious diseases including COVID pandemic.



d) Mental well-being essential for DRR.

e) Need to focus on Sustainable development without ecosystem disruption.

f) Innovative Health Technologies need to be developed for combating the current COVID pandemic.

g) Animal Disaster Risk Reduction strategies need to be strengthened.

Building Mindful Relations with Children in Disasters & Emergencies PM Agenda (1, 8&9) SDG (3 & 4), 24 March 2021

Recommendations/Key Takeaways



a) Need to understand the component of mindfulness

b) Ensure that your disaster plan accounts for the care, evacuation and transport of children and employees with disabilities and those with access and functional needs.

c) Provide clear reunification protocols for unaccompanied or separated children to facilitate family reunification with the opportunity to resume normal activities, such as school and child care, as soon as possible.

d) Need to psychosocial support to children for developing building resilience.

e) Need to talking about building mindful relationship with Children

f) To engage children in recovery activities.

g) To create awareness among children about dangers situation

h) Model a healthy coping behavior.

Capacity Building of Municipal Engineers for Earthquake Safety in Mizoram in Collaboration with Directorate of Disaster Management & Rehabilitation Government of Mizoram and Aizwal Municipal Corporation, 25 March 2021

Recommendations/Key Takeaways

a) Reasons for Poor Performance of the RC Frame Buildings (i) Inadequate Design for Earthquake forces (ii) Substandard Quality of Materials and poor Construction techniques (iii) Long Period Effect on concrete (iv) Soft Storey used without necessary strengthening design provisions (v) Local soil conditions or improper foundation.

b) To check for poor performance of the Reinforced Concrete Frame Buildings should undergo (i) Thorough Visual Inspection of the structure (ii) Structural Condition Survey through NDT (iii) Study of the Structural Drawings, If available (iv) Soil Investigations & Geotechnical Studies (v) Conducting Seismic Analysis (STAAD / E-Tab) (vi) Designing the Rehabilitation Scheme.



c) Identifying the vulnerability and RVS survey is important starting point so that necessary corrective measures can be taken.

d) The engineers attending the programme should select more demonstrative building so that the task can be carry forward for not only earthquake but also for landslide and fire etc. and accordingly plan for structural and non-structural hazards mitigation measures.

e) Three groups of engineers, architects and planners did undertake RVS survey and found lot of challenges in terms of detailed plans and layout of buildings, however many weakness points of selected buildings were highlighted and discussed for mitigation measures.

PM Agenda (1, 8 & 9) SDG (3, 4 &5) Issues & Challenges of Girl Children Amidst Covid19: Ways Ahead organized by NIDM South Campus, 26 March 2021

Recommendations/Key Takeaways

a) Conduct High level of preparedness: Mock drills and basic first aid training at schools (Hazard specific)

b) Conduct Targeted Campaigns: Shaken baby syndrome, suicide prevention

c) Systems and Services available to cater to the needs of special children: Counsellors, psychotherapist, Mental and emotional health support for children and adolescents,

d) Ensuring children grow up with the provision of safe and effective care, with dignity

e) Taking action to enable all children and young people to participate and be part of solution



f) The Paris Principles. Principles and Guidelines on Children Associated with Armed Forces or Armed Groups

g) Community education programs were conducted to raise awareness about root causes, trends, and consequences of child abuse and supplies strategies and resources for those who are concerned about a child or a parent.

h) Trained Specialist/ Trauma Counselors utilized a carefully crafted treatment plan that helped children to manage hurtful memories and created an environment that aids in their recovery.

Fire Safety (Fire Safety in Critical Infrastructure, Initiatives for Strengthening Fire Safety), 26 March 2021

Recommendations/Key Takeaways



a) National Building Code (NBC) of India, 2016, Part 4 is titled 'Fire and Life Safety'. It covers the requirements for fire prevention, life safety in relation to fire and fire protection of buildings.

b) Strict implementation of this component needs to be done all across the country.

c) Need to develop guidelines/framework to conduct a comprehensive risk-assessment for our cities.

d) Risks related to fire breakouts coexist and can be complex; they are qualitative and quantitative, hence there is a dire need to study these in city-wide and local contexts

e) Risk-assessment studies for fire safety and prevention should be an integral part of every master planning exercise, which should be revised for changes in land use and density.

Biodiversity Conservation and Disaster Risk Reduction in collaboration with Central University of Jharkhand, Ranchi, 26 March 2021

Recommendations/Key Takeaways



a) Need to reduce our carbon foot print by reducing our use of Single-Use, Disposable Plastics, switching to Renewable Energy, eating Less Meat, reducing our wastes, recycling responsibly, choosing to drive less and use more of public transports, reducing our day to day water use and by supporting the local technologies, products and innovations;

b) Biodiversity remains the answer to a number of sustainable development challenges. From nature-based solutions to climate, to food and water security, and sustainable livelihoods, biodiversity remains the basis for a sustainable future;

c) The year 2020 is a reflection, opportunity and solutions for biodiversity issues. The end of the 2011-2020 United Nations Decade on Biodiversity, and start of other new pivotal biodiversity related decades for the period 2021-2030: the UN Decade of Ocean Science for Sustainable Development and the UN Decade on Ecosystem Restoration.

d) Sustainable Goal 15 aims to "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss".

e) Threats to Biodiversity Loss:- Habitat Loss through clear cutting forests, polluting oceans, or anything that alters the natural habitat. Urbanization has increased over the last 100 years more and more land has been repurposed, destroying the natural habitat, increasing noise, and pollution. Climate change goes hand in hand with urbanization and habitat loss.

f) Threats to Biodiversity Loss:- Climate change alters regional climates, making many species specifically adapted to those regions struggle to survive. Additionally, as the climate changes species will move into new areas, altering the ecosystems already present there.

PM 10 Point Agenda No. 9 Child Protection in Disaster & Emergencies (CPiDE): Policy and Practices in Collaboration with Chitkara University, Himachal Pradesh, 26 March 2021

Recommendations/Key Takeaways



a) To prioritize critical violence-prevention and response services for children

b) To ensure child rights and child protection measures are embedded in the immediate COVID-19 response and longer-term recovery planning.

c) To provide peer-to-peer learning and information sharing between children, adolescents and young people to support their mental health.

d) To support meaningful participation women & children in the development and implementation of programmes responding to COVID-19.

e) To maintain regular psychiatric treatment to women & children in emergencies

Socioeconomic Impact of Pandemic on Wetern Ghats Tribal Communities: Way Ahead in collaboration with Bangalore University, 30 March 2021

Recommendations/Key Takeaways

a) Western Ghats Tribal communities already suffer from a severe shortage of basic healthcare facilities, healthcare professionals, lack of information and awareness etc leading to prevalence of diseases such as malnutrition, malaria, leprosy, tuberculosis (TB) and others during non-disaster times. Absence of healthcare facilities can severely limit the capacities to deal with any major COVID 19 outbreak in tribal areas posing a serious threat to the tribal population.

b) Lock down and physical distancing during covid times has affected collection, use and sale of minor forest produces (MFP) by tribals and forest dwellers.



c) MFP collection season from April to June provides major income support to tribals (almost 60 percent of annual collection takes place during this period). It coincided exactly with the lockdown impacting the tribal communities which may have a drastic and long-term impact on their livelihood and survival.

d) Administration needs to coordinate with the concerned agencies to provide immediate relief to the tribal communities by ensuring information and awareness, providing health care and testing facilities in the tribal areas, support for MFP collection and sale

Prime Ministers 10 Point Agenda No. 9 on DRR Child Rights in Emergencies & Disasters in collaboration with Society for Empowerment, Bihar, and AJK, College of Arts and Science, Coimbatore, 30 March 2021



Recommendations/Key Takeaways

a) Need to create awareness generation material where children, teachers and parents are aware of laws like POCSO.

b) Also the present Judiciary systems struggles to deliver justice to children who discourage the families to report abuse to the authorities. A culture of silence prevails and there is underreporting of cases.

c) It is seen that in most cases the perpetrators are known to the child and the neighborhood and home are the most unsafe places for children.

d) Need to redesign and redefine our policies and a comprehensive policy has to be put in place.

e) After disasters, we generally capture the direct damages and loss and often fail to capture about the mental health issues especially among children. There is need to develop the public policy in this area. Families face poverty after disasters, and children face the trauma which is not quantified (children dropout from school, work in fields, child trafficking).

f) Need to create a legitimate platform to which children can approach especially during/after disasters. No track of children after disasters.

g) Need to capture local stories before and after disasters. For instance, longitudinal studies would help policy makers and influence the state level policies.

"Comprehensive Disaster Management" in collaboration with UPES Uttarakhand University, 31 March 2021



Recommendations/Key Takeaways

a) Disaster risk reduction must be mainstreamed into development activities.

b) Community, being the first responder, must be strengthened for better utilization of golden hour and effective management of disasters.

c) Future collaborative training and awareness programme may be conducted.

d) Universities must also get themselves involved in disaster awareness activities and preparation of DM plans of their own premises.

"Comprehensive Disaster Management" in Collaboration with TERI School of Advanced Studies, Delhi, 31 March 2021



Recommendations/Key Takeaways

a) Universities and Institutions such as TERI SAS have an important role to play in risk reduction activities and must come forward for undertaking risk reduction activities.

b) Future collaborative training and awareness programme with the involvement of students and scholars of the University may be conducted. DM Plan within the University must be prepared and drilled.

c) Universities, as a consortium of youth force, can play a vital role in providing awareness for disaster risk reduction in the country and also engage themselves in research-oriented activities in the field of disaster risk reduction.

d) Universities must undertake awareness drive to strengthen the community.

Prime Minister's 10 Point Agenda No. 1 & 4 Sendai Framework for Disaster Risk Reduction (SFDRR) "Translating for Priority one to two" in collaboration with Birla Institute of Technology and Science (BITS), Pilani-Hyderabad, Andhra Pradesh, 31 March 2021

Recommendations/Key Takeaways



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) The Sendai seven Campaign is an opportunity for governments, local governments, UN agencies and all stakeholders including the private sector, science and technology partners, community groups, civil society organizations, international organizations, to promote and advertise best practice at international, regional and national level across all sectors, to reduce disaster risk and disaster losses.

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 cross-cutting issues such as environment, gender, and governance

Online Training Program

Prime Minister's 10 Point Agenda No. 1,2,3,4 & 8 for Disaster Risk Reduction Training Programme on Basic of Disaster Management, 04-06 Jan 2021

Recommendations/Key Takeaways



a) COVID-19 sensitization covering the evolution of the new variant of COVID in UK and how deadlier it is than the existing strain, preventive actions, Vaccine updates, WHO approved medicines and immunity boosting measures that could promote immunity and reduce the chance from getting infection.

b) Big bang theory and the formation of earth and how life formed on earth and trends of human activities, increasing population on earth which resulted in beginning of anthropogenic impacts on the planet.

c) The factors responsible for Zoonosis in Humans - Ecological factors, Control and eradication of major diseases effect of human settlements, Fluctuation in animal populations due to food supply & climate changes, Natural and manmade disasters, Human behaviors & food habits, Poor socio economic status and Poor health facilities etc.

d) Vaccination, Reduction of Vector/ Source of infection, Environmental modifications, Behavioural modifications, Use of advanced technology, Food hygiene, Local and National Surveillance, IEC at all levels, Training of health providers and Occupational health program etc. Hazard, Vulnerability and Capacity analysis with regard to preparation of DM Plan. Hazard analysis and various tools - Transect walk, Historic profile, Seasonal calendar etc.

e) Various yogic techniques such as Office yoga, Cow stretch yoga and seat forward bend yoga in order to reduce the stress level and to calm down the nervous system.

f) Determination of 3 factors that lead to a perfect wellbeing i.e Ayurveda, Yoga and Knowledge (Dhyan).

Child Centric Disaster Risk Reduction, 05-07 Jan 2021

Some Key takeaways/Recommendations



a) 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.

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

c) 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).

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

e) 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, social media or online sources, etc.

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

g) Reinforce frequent hand washing and sanitation and procure needed supplies.

h) Prepare and maintain hand washing stations with soap and water, and if possible, place alcohol-based hand rub (hand sanitizers) in each classroom, at entrances and exits, and near lunchrooms and toilets.

Child Centric Disaster Risk Reduction, 05-07 Jan 2021

Some Key takeaways/Recommendations



a) Specific attention needs to be given to children and other vulnerable groups in times of disaster.

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

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

IRS: Basic & Intermediate, 06-08 Jan 2021

Some Key takeaways/Recommendations



a) Understand about IRS as a system and its application on existing disasters such as Covid 19.

b) How IRS execution can streamline the response process and help reducing the issues such as coordination and duplication of efforts.

c) Participants also worked on use of IRS as a tool for upcoming disaster such as Bird Flu.

d) The importance of unity of command and delegation of authority in the time of incident, learnt about the importance of clear communication and involvement of locals to control spread of rumours and rapid response. The use inventory of government and private resources beforehand to improve preparedness, etc.

e) The training content as well as the expert opinion given by the speakers during the sessions was quite relevant in enhancing our preparedness. We learnt how to efficiently and effectively put to use, the minimum resources at our disposal to tide over the situation. Also the feedback provided at the end of our presentation enabled us to rectify our approach and overcome the shortcomings.

Child Centric Disaster Risk Reduction (CCDRR), 11-13 Jan 2021

Some Key takeaways/Recommendations



a) Understanding about the 5 stages of life and how they are impacted during a disaster as well as effective practices to reverse the effects of disaster.

b) The joint effort of parents and children in overcoming trauma related to disaster.

c) Clear understanding of concepts such as risk, hazard, resilience, capacity, exposure and vulnerability.

d) Relevance of mental health in disaster situations especially during the COVID-19 pandemic.

e) Significance of carrying out preventive practices such as hand washing, wearing masks, maintaining social distance and avoid contact with others.

f) Avoid attending community gatherings and practice online tasks to carry out meetings and official activities.

g) Alterations in school curriculums with a focus of programs and activities on educating the students about COVID-19 and ways to prevent them from acquiring the virus.

h) Creating awareness about falling sick and teaching more responsible behavior to students for safety of self and those around them.

i) Introducing mental health to children in schools and create awareness about negative impacts of COVID-19 on one's mental health.

j) Clarity on concepts such as Trauma, Stress, Eustress, Basic Stress, Cumulative Stress and burnout.

Community Based Disaster Risk Management with ICDM, Puducherry, 19-21 Jan 2021

Some Key takeaways/Recommendations



a) Knowledge about impact of COVID – 19's current status and pandemic management by the Government.

b) Community being the first responder, its comprehensive and absolute awareness is necessary

c) Understanding about the vulnerability for Disasters in Pondicherry.

d) A robust institutional mechanism to support the efforts of disaster management is the need of the hour.

e) Assessment of Disaster Risk at community level with the help of community members adds to its effectiveness and ownership.

f) Role of a community in Early Warning dissemination can help in utilization of golden hour concept and save many lives.

g) Risk auditing at community level helps mainstream mitigation aspects in schemes.

Child Centric Disaster Risk Reduction, 19-21 Jan 2021



Some Key takeaways/Recommendations

a) 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).

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

c) 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.

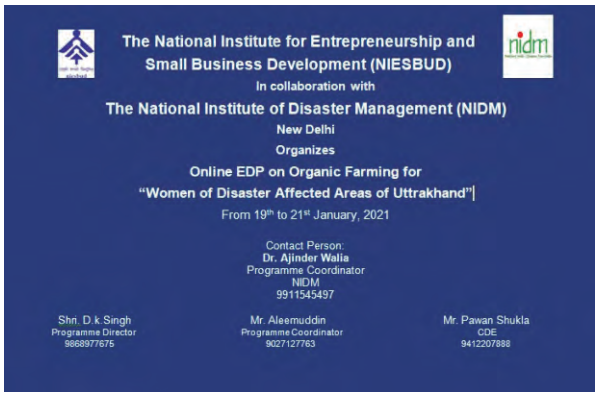
d) Consider cancelling any community events/meetings that usually take place on school premises, based on risk.

e) Prepare and maintain hand washing stations with soap and water, and if possible, place alcohol-based hand rub (hand sanitizers) in each classroom, at entrances and exits, and near lunchrooms and toilets.

f) Provide an overview of CCDRR with an emphasis on Life Cycle Approaches and Risk Informed Programming.

EDP on Organic Farming for the Women of Disaster Affected Areas, 19-21 Jan 2021

Some Key takeaways/Recommendations



a) The programme sensitized the women of Madhya Pradesh to develop the skills to start their own business in a post-disaster scenario.

b) The participants understood the importance of organic farming and horticulture by knowing the significance of vegetable farms and fruit Orchards for strengthening their livelihood.

c) For successful agribusiness, the three critical practices are: forecast the future, keep contingencies in mind and regular monitoring of status of each policy.

d) Organic farming is a method of farming which primarily aims at cultivating the land and raising crops in such a way, to keep the soil alive and in good health.

e) Reserve 3-5% of farm space for utilities such as space for cattle, vermicompost bed, compost tank, Vermiwash/compost tea unit etc. 5-7 trees should be planted only on this space, as all utility infrastructure needs shade. Irrigation well, water pumping infrastructure etc can also be in this utility area.

f) For high nutrient demanding crops and for intermittent soil enrichment use of oilcake, poultry manure, concentrated manures (mixture of oil cakes, poultry manure and rock phosphate) can also be an ideal low-cost option of manuring.

g) The trainees were able to understand the cost involved in various equipment required for a horticulture farm and how to implement a small to medium size Organic Horticulture Farm.

h) The learners have imparted a thorough insight into the various aspects of emerging allied activities & revenue generation at Organic Farm. They came to know that new technologies are helping agribusiness to increase efficiency and cut costs.

i) While turning towards organic it is essential that the basic requirements of the system and the area are properly understood and long term strategies are addressed first.

Prime Minister's 10- Point Agenda no. 5 & 8 Basic Training on Disaster Management for the Town and Country Planning Department, 20-21 Jan 2021

Some Key takeaways/Recommendations

a) Land & Building needs to be monitored physically and through GIS and all illegal construction/building needs to be reported for appropriate action

b) All public buildings needs to be audited as per National Building Code of India (NBC) 2016 to

conduct periodic safety audit of all buildings, every 3 to 5 years which will expose vulnerability of existing buildings in terms of Fire Safety, Structural Safety as well as in Electrical Installations etc.



c) Public Streets & exit routes to be made free of all encroachments, width of stair cases/doors to be checked for violation as per building use etc.

d) Buildings in immediate neighborhood to be checked for tilting/collapse and old & dilapidated buildings are to be demolished or retrofitted.

e) Electrical cables are to be fixed properly and Fire safety in buildings to be made functional and to be checked periodically.

f) Every village must build community shelters including Panchayat Bhavans, and Anganwadi Kendras – disaster resistant buildings.

g) NIDM should carry out various Information Education Communication (IEC) activities to train-up governmental officials, volunteers, media personnel, academician to promote use of social media and mobile technologies in disaster management.

Basic of Disaster Management, 27-29 Jan 2021

Some Key takeaways/Recommendations

a) Insufficient understanding/appreciation of DRR-specific Capacity Development needs

b) Lack of access to or existence of facilities, programmes, or resources to support awareness

c) Linkages between disaster and development still not addressed and are seen is silos.

d) Lack of general awareness and knowledge of risk drivers and the stakeholders' DRR roles (including at the local level) and;



e) Roles of various stakeholder must be clearly identified for integrating disaster management plans into developmental planning to minimize impacts of various disasters and especially generating from natural hazards

f) Convergence of SDGs and Sendai Framework becomes imperative to achieve DRR at all levels

g) Role of Geophysical Methods, Early Warning systems in Disaster Management is imperative for better structural mitigation and preparedness.

h) Cross-cutting concerns in Disaster Management are less addressed and needs an inclusive approach for mainstreaming.

Disaster Risk Reduction in Hydrocarbon Sector, 27-29 Jan 2021

Some Key takeaways/Recommendations



a) Disaster risk reduction and resilience are achieved by making ongoing efforts at all stages to ensure that pipelines are designed, commissioned, operated, and maintained in accordance with established guidelines and best practices, as well as applicable codes.

b) In the event that we are unable to avoid or prevent a disaster, we must act quickly in terms of response, investment, early warning systems, and risk assessment. Preparedness has a lot of advantages in terms of avoiding avoidable economic losses.

c) Employees with the minimum qualifications and experience required by Codes/Standards/Regulations must be hired to reduce disaster risk in the hydrocarbon sector.

d) Coordination among stockholders must be promoted so that timely action can be taken by the concern parties.

e) We need to emphasis in promoting local skills, local technologies, and local infrastructure and also enhances the capability at the local level.

f) The dispatcher/service provider will be able to send the appropriate responders and equipment if you provide complete and accurate information to emergency services during a disaster.

g) Using technology to improve safety functions such as work permit systems, incident/accident reporting and analysis, risk assessment, and compliances, among others.

Climate Change and Future Trends in Disaster Management, 27-29 Jan 2021

Some Key takeaways/Recommendations



a) The virtual training programmes that are focused on climate change and disaster risk management largely cover the theoretical aspects, linkages, cause and effects/influences of these through the interactive lectures very comprehensively.

b) Departement of Geography and Disaster Management Environment, Climate and Disaster Risk Management Group 22 Something that has been felt necessary at a time when we are faced with a pandemic situation. However, many such type of trainings need to be provided offline so that more practical/fieldwork aspects

in a real-time situation are covered as well. This is essential to cultivate a pool of disaster and climate crisis managers across the country.

c) Dearth of trained people who have knowledge and skills in understanding, modelling and mapping climate and disaster risks. Hence, proper training is very essential for developing the people's capacity for immediate and effective emergency response. Trainings like this help people build their capacities at all levels in an organized and well-coordinated manner.

d) Huge gap in the knowledge of short and long-term implications of climate change impacts on water resources and potential natural hazards in the Himalayas. To close such a gap there is a need to establish monitoring schemes for snow, ice, and water; downscaling climate models; applying hydrological models to predict water availability - by taking water demand and socioeconomic development into account

e) Need for introduction of nature based solutions, innovative techniques and consideration of using appropriate earth observation technology to reduce/minimise the risks from these hazards which if go unnoticed can prove disastrous because the anthropogenic activities have worsened the problem.

School Safety, 27-29 Jan 2021

Some Key takeaways/Recommendations



a) All Schools need to carry out all inclusive risk assessment (all stakeholders need to parting) & needs to disseminated to all occupants of school premises.

b) Necessary resources for disaster risk mitigation need to be provided to all schools at regular intervals.

c) Departmental funding for DRR need to be catered in the Annual Budget.

d) In jeevitnadi activities, we stress on people participation, we encourage people to play their part, take responsibility for their rivers, instead of blaming everything on the government. Through our "Adopt a river stretch" program, citizens have come one step forward. However, response time from the local governance is slow. There are some quite complex issues when it comes to the rivers. However, there are many easily rectifiable issues as well. Prompt action from local governance would help and improve the people participation.

e) Joint projects, with citizen and local governance should be designed. This will help bridge the gap between people and local governing authority, help people understand their responsibility and cut short the delays in implementation.

Three Day-e-Faculty Development Programme (FDP) cum Training Workshop on Post Disaster Need for Psycho Social Care, 27-29 Jan 2021

Some Key takeaways/Recommendations



a) a) Covid 19 Sensitization, some important Do's and Don'ts in this regard and how to deal with mental trauma associated with it post recovery.

b) Existing Institutional Mechanism for DRM in our country, gap areas for coordination, Lessons to be learnt from past disasters, success stories that can be replicated elsewhere and areas of concerns towards our goal of disaster resilient society;

c) Need for Psycho Social Care in any post disaster scenario, its evolving growth in Indian scenarios and how to go about it getting institutionalized for long term recoveries;

d) Issues and Challenges being posed for rightful facilitation of psycho social care and mental health care services in our country and possible solutions to them;

e) In a disastrous situation, how the front line workers suffer mentally and emotionally and why their being safeguarded first is crucial to long term continuation of such services in our country;

f) Social Stigma attached to such services, need for awareness generation, community outreach programmes, youth groups, women self-help groups and sensitization with regard to not remaining silent and being vocal about such issues;

g) Roles and responsibility of individual and community for guidance and support for psychosocial care for the disaster affected population;

h) Capacity building of community, participatory approach, strengthening their knowledge base, mock drills, shared learning by way of training, workshop

Child Centric Disaster Risk Reduction (CCDRR), 27-29 Jan 2021

Some Key takeaways/Recommendations

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

b) Stay informed about COVID-19 through reputable sources such as UNICEF, WHO and national health ministry advisories.

c) Be aware of fake information/myths that may circulate by word-of-mouth or online.

d) Update or develop school emergency and contingency plans.

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

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

g) Reinforce frequent hand washing and sanitation and procure needed supplies.

h) Prepare and maintain hand washing stations with soap and water, and if possible, place alcohol-based hand rub (hand sanitizers) in each classroom, at entrances and exits, and near lunchrooms and toilets.



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

j) 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.

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

l) 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).

School Safety in Covid-19 Times, 28-30 Jan 2021

Some Key takeaways/Recommendations

a) To give a safe protected and enabling environment to all students without any discrimination, all stakeholders from state govt., parents, care providers and community need to come together for child's rights.

b) School safety plan should be incorporated and taught to all educational staff members as per the NDMA guidelines. This should form a clear planning with defined role and responsibilities for headmasters and teachers including safety measures for COVID-19.



c) Fire safety should be at highest priority for planning school safety management. Simple mock drills like how to use fire extinguisher, evacuation procedure and how to end small fire through various methods should be taught at all level from students to school staffs.

d) For rural areas awareness and training to artisans and demonstrative constructions can help them for replicating resilient structures in their area especially for earthquake prone areas.

e) Retrofitting measures should be adopted for identified old and weak structures such as for columns and joints to provide additional safety to old school constructions from earthquake hazard.

f) With the increasing fatality rate after the COVID-19, reopening of schools should follow general health and sanitation inspection to provide basic sanitation required to be provided to children.

g) Training of teachers is must for additional school safety during COVID-19 times. These should include humanitarian considerations, triage education, stress management, management of violence and planning in case of disaster.

i) Provisions should be made for educational institution to receive additional financial support to ensure they are adequately funded to implement health and safety equipment.

3 Day e-Conclave on Fostering Cyclone Resilience in Industries, Infrastructure and Communities, 28-30 Jan 2021

Some Key takeaways/Recommendations



a) Infrastructure damages due cyclones are colossal and resilient infrastructures for the cyclone prone areas are elaborated

b) Early warning for cyclone by IMD, nodal agency for the same and evacuation mechanism evolved through centre-state coordination teams are phenomenal and death due to cyclone has come down to double digit in the last two decades

c) National Cyclone Risk Mitigation Project (NCRMP) running since 2009 with a view to address cyclone risks in the country is now in the 2nd phase in coordination with participating 13 cyclones prone State Governments and UTs.

d) Need to look into livelihoods regeneration after cyclone and more so on the Power Sector, which is also one of the worst affected due to Cyclones.

e) Improving infrastructure & establishments of resilience to cyclonic conditions have been explained by risk assessment & modeling approach that includes wind effect through buildings, interaction effects with vulnerable items such as solar panel, non-structural items of airport building, etc.

Orientation on CCDRR, 01-03 Feb 2021

Some Key takeaways/Recommendations



a) All inclusive approach in Disaster Management and active involvement of children even in decision making.

b) Rights of children are enumerated in various acts and regulations and needs implementation during and after disasters.

c) Sound Mental Health and Children in their childhood is essential for their personality development and need to be given special attention.

d) 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.

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

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).

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

3-day Online Master class on Industrial Safety, Planning and Disaster Resilience, 03-05 Feb 2021

Some Key takeaways/Recommendations



a) Online training programs on Industrial Safety covers the principles and practices of Industrial Disaster Management in a comprehensive manner. More such types of training programs need to be organized so as to aware the Industries about Safety Management. The country needs a structured response group that will prepare to handle a community based disaster systematically.

b) Spillages/leak arising out of hazardous wastes need to be carefully investigated in manner similar to leaks/spillage of hazardous materials with a recognition that hazardous waste encountered may me multi-physic/multi-component waste therefore more complicated to handle.

c) Proper PPEs are recommended for handling hazardous waste contaminated sites with the recommendation that personnel managing the site should begin with level A PPEs if the hazards at site are unknown and gradually may relax the requirement if and when more information gathered allows that.

d) The contaminated site remediation option needs to be chosen based on level of clean up required and sensitivity of the receptors at the site 5.

e) Creation of National cadre of Safety officers to give protection to safety officers who exercise veto powers and take tough safety stand in the factories. Even, if such safety officers lose their job, they will get an interim finance protection, new job search assistance and will be rewarded for standing by the interest of safety. This National trust of Safety officers will work for fraternity building, specific knowledge dissemination and protection against job removal for conflict of interest with the management.

School Safety, 04-06 Feb 2021

Some Key takeaways/Recommendations



a) School teams to address various aspects of disaster management in schools such as Evacuation, First aid/ Basic Life support, Assistance to external teams (fire & emergency) must for every school.

b) Non-structural mitigation measures must be taken in every school to buttress the structural mitigation measures.

c) Every school must have disaster management plan (including evacuation plan) prepared with the involvement of all stakeholders of school such as Teachers, Administration and students.

d) Mock drills must be conducted in schools to disseminate the important activities to be carried out for preparedness in schools.

e) Overall, the entire three-day workshop was very informative, and the students, parents and teachers did carry a lot of message.

f) Some of the students were very curious to know more about Disasters and then what steps to be taken during an emergency.

g) If more visuals could have been included in presentations, it would have brought in more interest in the kids and increased their participation.

Crowd Management, 10-12 Feb 2021

Some Key takeaways/Recommendations



a) Understanding of Crowd Dynamics in essential for organizing and responding to crowd management & crowd control.

b) In crowd dynamics there is a need to focus on development of social force to physical force (crowd density).

c) A well Planned mass gathering event can prevent crowd related disasters & even if it happens will keep the damage to minimum.

d) Actions to prevent or mitigate disasters & prepare for anticipated contingency before event starts can greatly reduce stress on administration.

e) Need to update knowledge on Legal provisions & various Court decisions / case laws on crowd management for initiating appropriate actions during management of incidents / events.

f) Police role in crowd management changes with the crowd characteristic this need to be integrated in the training for eg in the event of disasters, religious gathering or sports / music events, police need to adopt soft measures but in case of riots or political crowd management they need Hard Management measures (Use of Force).

g) Technological development in Non-Lethal weaponry for crowd control need to be evaluated in Indian scenario for its use, however technological interventions for Crowd Management needs to be adopted for prevention / mitigation of crowd related disasters.

h) Lastly there is a need to introduce this subject in all police training establishments.

Orientation on CCDRR, 15-17 Feb 2021

Some Key takeaways/Recommendations



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

b) 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).

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

d) 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.

e) Update or develop school emergency and contingency plans.

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

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

h) Reinforce frequent hand washing and sanitation and procure needed supplies.

i) Prepare and maintain hand washing stations with soap and water, and if possible, place alcohol-based hand rub (hand sanitizers) in each classroom, at entrances and exits, and near lunchrooms and toilets.

Food, Livelihood & Human Security in Disaster Risk Reduction, 17-19 Feb 2021

Some Key takeaways/Recommendations

a) Safety isn't expensive, it's priceless:

b) Asia bears most of the brunt due to over-population, poverty and disaster prone regions.

c) Safety is considered as a value, not a priority.

d) Nutrition goes the base for the Food Security and Nutrition, we must look into the details of the types of food needed for increasing the immunity

e) We should follow the Japanese word "GENBA Walk", meaning to run effectively and efficiently so that we can avoid a lot of dangers in everyday life.

f) Disaster Management ids the need of the hour,

g) Various types of hazards, accidents, injuries and msds occurring while working and how to reduce them. 8

h) Don't be a fool – use the proper tool.

i) Climate change is posing additional threat to our existence



Chemical, Biological, Radiological and Nuclear Emergencies, 17-19 Feb 2021



Some Key takeaways/Recommendations

a) This was the first such programme organized with NISA and hence major take away from this programme was awareness about the subject.

b) Another takeaway was that more such programmes must be conducted to spread the knowledge about CBRN emergencies.

c) More focus on off-site emergency plan was also another key take away from this programme

Climate Change Adaptation & DRR, 17-19 Feb 2021

Some Key takeaways/Recommendations

a) Insufficient understanding/appreciation of DRR-specific Capacity Development needs

b) Linkages between disaster and development still not addressed and are seen is silos.

c) Lack of general awareness and knowledge of risk drivers and the stakeholders' DRR roles (including at the local level) and;

d) A lack of understanding of existing legal instruments for CCA

e) Need to develop people centric planning for ease of living

f) Roles of various stakeholder must be clearly identified for integrating disaster management plans into developmental planning to minimize impacts of various disasters and especially generating from natural hazards

g) Convergence of SDGs and Sendai Framework becomes imperative to achieve DRR at all levels

h) Role of Geophysical Methods, Early Warning systems in Disaster Management is imperative for better structural mitigation and preparedness.

i) Cross-cutting concerns in Disaster Management are less addressed and needs an inclusive approach for mainstreaming.

Disaster Management for Indian Postal Service, 17-19 Feb 2021

Some Key takeaways/Recommendations



a) There is a widespread general need to overcome weaknesses in existing services, to speed up the technological development of postal processes and procedures, and to systematically organize the postal market based on clear ground rules ensuring the continuity of the universal postal service.

b) Authorities handling disaster management need to be sensitive to the enormously positive role that media plays in support of their preparedness, rescue, relief and rehabilitation activities. They should understand and appreciate media's dynamics and compulsions also.

c) Need to encourage postal operators to utilize the network of regional/global resources and partners to strengthening the disaster management capabilities for organization.

d) Need to conduct an assessment of the damage to postal facilities along with an accurate evaluation of the status of critical infrastructure (utilities such as electricity, water, roads, airports, etc.).

e) Investing in disaster risk prevention through structural and non-structural and functional measures to enhance the organization's resilience is the need of the hour.

f) New infrastructure assets should be prioritised, planned, designed, built and operated to account for the climate changes that may occur over their lifetimes.

g) Need to promote utilization of social media for quick response and rescue measures helping in adapting to vulnerable situation.

Prime Minister's 10 Point Agenda No. 8 & 9 on DRR Three Days Online Training Programme on Safe Construction Practices in Rural Areas of Himachal Pradesh, 17-19 Feb 2021

Some Key takeaways/Recommendations

a) Lot of knowledge were used which were passed through generations and there is a need to revive that art, culture and traditional knowledge by changing the mindset of people.

b) Kangra, Una, Bilaspur, Chamba, Hamirpur, Kullu and Mandi are at very high damage risk zone –V and require structural safety to reduce the damage and loss from earthquake.



c) The modern housing and materials like RCC are commonly used however ignores the design and framings used for safe construction and add lot of carbon footprint.

d) Follow ABCD of construction practice; A anchorage, B bracing, C connections D durability/ductility; E exposure/Experts; F foundation and if we incorporate a to f lead to G- Good construction.

e) Climate consious architecture in vernacular structures is oldest technique of sustainable development in hill areas.

f) In present scenario few authorities promote retrofitting and nor people readily accept retrofitting as an option to be adopted hence awareness programs in communities is crucial for promoting retrofitting.

g) Training programs for rural community should be promoted and fire safety parties like self-help groups should be formed in every village.

"Resilient Infrastructure in Hilly Areas: Avalanche, GLOF &Debris Flow", 18-20 Feb 2021



Some Key takeaways/Recommendations

a) Debris flow event on Feb 7, 2021 in Chamoli district, Uttarakhand state, has triggered once again for the urgency of deploying proper surveillance system in the Glacier Mountain areas, where many strategic constructions, like DAM, Roads, Tunnels are underway or haven in existence

b) Scientific studies, taken up by WIHG, Dehradun, GSI, Defense Geo Informatics Research Establishment (DGRE) and many other professional organizations in the country in coordination with nodal ministry of Centre/state govt. are to be thoroughly peer reviewed and appropriate actions for the establishment of Warning Systems to be initiated

c) Use of AI-ML and RADAR controlled Early warning system along with wearable devices, like Panic Button, moisture sensors, weather station, etc. are to be deployed at the NTPC-Tapovan DAM construction site and the same have to be developed for other such sites, where danger of Debris Flow are imminent

d) Debris removal from DAM site and finding out the missing workers at the construction site to be harnessed by utilising GPR aided tools

"Resilience Pathways for Natural and Manmade Disasters" PM's Agenda on DRM No. 1, 5 and 9, 22-24 Feb 2021

Some Key takeaways/Recommendations



a) Antibiotic Resistance - Man-made disaster needs to be addressed with urgency. Disease causing microbes that have become resistant to antibiotic drug therapy are an increasing public health problem. Irresponsible use of antibiotics in farm animals can lead to the development of resistance in bacteria associated with the animal or with people who eat the animal. We need prudent approach of searching for new antibiotics, stopping the use of antibiotics as growth-promoting substances in farm animals, use the right antibiotic in an infectious situation as determined by antibiotic sensitivity testing, stop unnecessary antibiotic prescriptions and also finish antibiotic prescriptions.

b) Psychosocial Care and Women's Disaster Risk Reduction. Evolving process of PSSMHS in India, poor community faces the brunt of any disaster the more and their PSSMHS is always denied or overlooked. Long term planning in PSSMHS, need for skilled manpower, Women, having specific biological make up and socio-economic deprivation conditions, requiring specific PSSMHS services etc. Lack of participation in planning, no say in decision making, no control over financial resources, subject to physical and mental abuse, health vulnerabilities and many more such attributes make women the worst sufferer.

c) Genome sequence studies of Covid 19 showed beta coronavirus as the aetiological agent, its close homologies with the similar viruses from China, fastest spreading human pandemic infections leaving no ethnic group, environment or socio-economic strata untouched for its spatial expansion. For the appropriate public health control measures, the knowledge on transmission extent of the virus need to be known to the public health, stake holders and administrators.

d) United Nations Platform for Space based Information for Disaster Management and Emergency Response (UN-SPIDER) - Universal access to all types of space-based information and services relevant to the disaster management. Global navigation satellite systems enable us to obtain the positional information on events that have to be mapped.

FDP on CCDRR, 22-24 Feb 2021



Some Key takeaways/Recommendations

a) Children and adolescents have safe and uninterrupted access to health services through functional health facilities, school and community-based activities and at the household level

b) Aware of key public health risks related to water, sanitation and hygiene and can adopt measures to reduce them

c) Coordinate and follow guidelines from the national health and education authorities.

d) Share known information with staff, caregivers and students, providing updated information on the disease situation, including prevention and control efforts at school.

e) Reinforce that caregivers should alert the school and health care authorities if someone in their home has been diagnosed with COVID-19 and keep their child at home.

f) Utilize parent-teacher committees and other mechanisms to promote information sharing.

g) 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.

h) Update or develop school emergency and contingency plans.

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

Earthquake Risk Mitigation, 23-25 Feb 2021

Some Key takeaways/Recommendations



a) All heavy loose items at home should be fixed with floor or wall to avoid risk of falling during earthquake.

b) Emergency exit of the house should be properly planned and should always be kept open.

c) Amateur HAM radio can also be learnt and licensed for emergency connectivity apart from mobile communication.

d) Help earthquake affected people by providing them psychological counseling or mental first aid to reduce their stress and panic.

e) Earthquake kit should be kept at home and at appropriate safe place.

f) Before buying any house makes sure you ask few earthquake safety questions to contractor or building supervisor.

Media in Disaster Management, 24-26 Feb 2021



Some Key takeaways/Recommendations

a) 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.

b) NIDM has a very important role in spreading knowledge and information to the communities and make them competent to use the existing terrestrial broadcasting infrastructure to support emergency communications in disaster situations to the best extent.

c) Broadcasting techniques and systems for use in emergency communications needs to be continuously improvised.

d) Journalists need to use the reverse search option to find the original source of an image or to know the approximate date when a picture was first published on the Internet.

e) We must cross-check reliability of news with websites containing reliable, factual information about this virus and infection before trusting the information.

f) 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.

g) NIDM should take initiative to develop a network of community radio in India which will bring together all the community radio operating in India under one umbrella

h) Local innovation needs to be harnessed and integrated with new technologies wherever possible while strengthening early warning and communication system.

i) Need to promote utilization of social media for quick response and rescue measures helping in adapting to vulnerable situation.

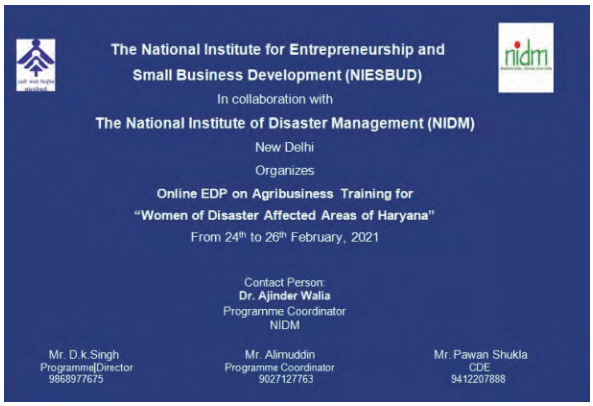
Agribusiness Training for "Women Disaster Affected Areas of Haryana", 24-26 Feb 2021

Some Key takeaways/Recommendations

a) Agribusiness is evolving from a local and regional model to a global structure, making this sector of increasing interest to corporations, public agencies, and society at large.

b) Do scenario planning to get a good understanding of how each issue may impact not only your business and operating models but your competitors' as well.

c) While doing agribusiness keep contingencies in your mind. Develop detailed operational plans for every scenario that could have major ramifications for your business.



d) Regularly revisit your scenarios. Actively monitor the status of each policy and adjust your scenarios as needed.

e) Women of disaster-affected areas of Haryana, as trainees came to know about the infrastructure required for practicing organic farming in a vegetable and fruit farm.

f) As organic management is an integrated approach, manipulation and adoption of one or a few steps may not yield significant results. For optimization of productivity, all the essential components need to be developed systematically. These steps include (i) Habitat development, (ii) on-farm facilities for input production (iii) cropping sequence and combination planning, (iv) 3-4 year rotation plan and (vi) growing of crops suiting to the region, soil and climate.

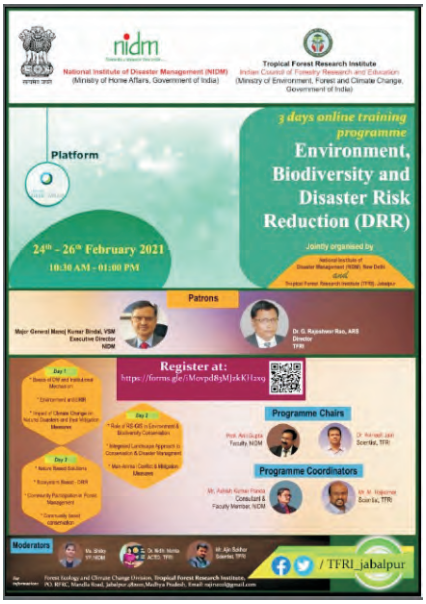
g) By the end of the programme, the participants came to know how one can attain or improve the access to markets and secure reliable commodity supplies. They also became aware of how to build an organization and operational capabilities to support new strategies.

Environment, Biodiversity & Disaster Risk Reduction PM's Agenda on DRM No. 1, 5 and 9, 24-26 Feb 2021

Some Key takeaways/Recommendations

a) Sensitization with respect to DRM Institutional Mechanism in our country, DM Act, DM Policy, NDMP, Roles and Responsibilities of various Ministries/Departments, Financial set up, Training/Capacity Building, Role of Mock Drills, Agencies like NDMA, NIDM, NDRF, their roles in DRM mechanism, Global Concepts of DRR and India's stand with regard to them, Holistic approach of DRM, Evolution and refinement of DM practices and services in our country.

b) Hon'ble PM's 10 point agenda and its role in modern concept of every aspect of DM cycle, community reach, Industry-Academia-Pvt Sector cooperation build up, International Cooperation, R&D impetus in the field of DRM, Curriculum inclusion of Disaster as a subject.



c) In the Man-animal conflict situations, real time field experiences, general challenges faced during veterinary operations and various capacity building exercise and creation of rehabilitation centres.

d) Community participation in forest management, role of local community groups in DRM and capacity building, TFRI experience with SHGs, uses of NTFPs, lac culture, importance of agroforestry, various agroforestry models practised in central India and impact of these models in protecting environment and ecology.

e) Threats to ecosystem services and Nature Based Solutions, Study on spatial, temporal and land use changes in Nagpur city and quantified tree carbon stock in historically conserved urban forests of the region.

i) Issues and Challenges with respect to Biodiversity Conservation, Agenda 2030 for sustainable development, Biodiversity loss not slowing down despite conservation efforts and various related interlinking challenges, 3 interconnecting priorities for biodiversity conservation.

Industrial Safety: Multi Hazard Scenario in Oil/Gas/Petroleum Industry, 24-26 Feb 2021

Some Key takeaways/Recommendations

a) Online training programs on Industrial Safety covers the principles and practices of Industrial Disaster Management in a comprehensive manner. More such types of training programs need to be organized so as to aware the Industries about Safety Management. The country needs a structured response group that will prepare to handle a community based disaster systematically.



b) Spillages/leak arising out of hazardous wastes need to be carefully investigated in manner similar to leaks/spillage of hazardous materials with a recognition that hazardous waste encountered may me multi-phasic/multi-component waste there for more complicated to handle.

c) Proper PPEs are recommended for handling hazardous waste contaminated sites with the recommendation that personnel managing the site should begin with level A PPEs if the hazards at site are unknown and gradually may relax the requirement if and when more information gathered allows that.

d) The contaminated site remediation option needs to be chosen based on level of clean up required and sensitivity of the receptors at the site.

e) Industrial disasters like any other disasters have highlighted the need for psycho-social care, which is an essential dimension that adds to overall well-being of the workforce.

f) Climate Change has brought forth one of the biggest challenges of the century and it should be part of the mainstream disaster management planning for any industry.

School Safety, 25-27 Feb 2021

Some Key takeaways/Recommendations



a) Need to carry out all inclusive risk assessment (all stakeholders need to parting)& needs to disseminated to all occupants of school premises.

b) Necessary resources for disaster risk mitigation needs to be provided to all schools at regular intervals.

c) Departmental funding for DRR need to be catered in the Annual Budget.

d) In jeevitnadi activities, we stress on people participation, we encourage people to play their part, take responsibility for their rivers, instead of blaming everything on the government. Through our "Adopt a river stretch"program, citizens have come one step forward. However, response time from the local governance is slow. There are some quite complex issues when it comes to the rivers. However, there are many easily rectifiable issues as well. Prompt action from local governance would help and improve the people participation.

e) Joint projects, with citizen and local governance should be designed. This will help bridge the gap between people and local governing authority, help people understand their responsibility and cut short the delays in implementation.

Climate Change Action and Disaster Risk Reduction: Focusing on Urban Communities, 02-04 March 2021

Some Key takeaways/Recommendations

a) Urban areas is spreading very fast, but have to think about our planning strategies regarding climatic change and disaster management.

b) If the emission of greenhouse gases is not controlled then it will be impossible to sustain the lives in the planet.

c) We have to create resilient structure and plan our buildings and cities with energy efficiency model.

d) The Government of India through its various schemes are in tune with SDGs goals to promote inclusive and sustainable urbanization.

e) Blue-green infrastructure can be a significant component of sustainable urban drainage systems, perfectly designed to manage water quantity and quality.

f) Traditional practice should be researched, improved and effectively used to reduce vulnerability.

g) Modelling using GIS system based on building types will help correlate our urban infrastructure to climate parameters.

h) Urban Planning & design principles should adhere to bylaws and disaster resilience sustainable development.



Management of Crowd at Large Congregations, 03 -05 March 2021

Some Key takeaways/Recommendations

a) Crowd related issues need focussed 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) Clear cut roles of every stakeholder must be defined.

e) Temple administration must have advance information about number and profile of congregating crowd so that they may plan accordingly.



Child Centric Disaster Risk Reduction (CCDRR), 03-05 March 2021

Some Key takeaways/Recommendations

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

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) 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.

f) Update or develop school emergency and contingency plans.



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

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

i) Reinforce frequent hand washing and sanitation and procure needed supplies.

CFDP cum Training Workshop on Geo-Spatial Technology, Inclusive and Accessible Disaster Risk Reduction (DRR), 04-06 March 2021

Some Key takeaways/Recommendations



a) Leveraging Science and Technology innovations for the cause of DRM in our country. GIS, GNSS, Remote Sensing and GPS technologies and how wisely they are being utilized globally for risk identification and management. It's important role in decision making at the time of crisis.

b) Disasters affect the already vulnerable and marginalized groups of our society in a disproportionate manner. Most of the times, their specific needs are avoided, put closed eyes to it and not given due important due to lack of policies or their proper implementation, lack of resources both HR and Finance etc.

c) Disadvantaged group of PWDs, their specific need for DRR, existing policies and schemes for their benefits during crisis time, over all mainstreaming their issues with developmental planning, need for compassionate attitude towards them by one and all.

d) Changes in the snow cover in the Spiti Valley, how snow cover has receded in the last 25 years, climate change issues there, detailed data and comparative spatial and temporal analysis of snow cover, use of geo-spatial technologies to map the changes in snow cover and the subsequent mapping, importance and scope of geo-spatial technologies in the field of DRR and DRM.

e) Risk and exposure faced by the mountain ecosystem of the Himalayas from the Shivalik to the Karakoram Mountains, Inaccessibility and a unique social niche make the region more vulnerable to degradation, increasing dependence on the mountain regions for tourism, and becoming a major source of livelihood for the local population, fragility of the region has increased, Climate change and marked retreat in glaciers, need for protecting local livelihoods through processes such as watershed management and spring shed management.

Prime Minister's 10 Point Agenda no. 1 & 5 on Disaster Risk Reduction 3 Days Online Training Programme on "Disaster Risk Reduction in Oil & Gas Sector", 08-10 March 2021

Some Key takeaways/Recommendations



a) Need to develop effective onsite and offsite disaster management Plans for every industries dealing with petroleum sectors.

b) It is important for all of us to play our respective roles so that the vision can be translated into action. Coordination among stockholders must be promoted so that timely action can be taken by the concern parties.

c) Need to emphasis in promoting local skills, local technologies, and local infrastructure and also enhances the capability at the local level.

d) We must make efforts by concerted action and clear deliberation to come out with a road map to enhance India's overall preparedness in the field of petroleum sector.

e) Need to build right social cohesion in our communities to support local governments builds strong, socially cohesive communities.

f) To enhance engineering related safety in various oil and petroleum plants, following action can be considered: push buttons on the MOV should be brought outside the dyke; operation of push buttons should be modified, so that action required for opening is different than action required for closing; push button assembly should be mounted at a place where it is easily visible to the operator; lighting adequacy should be checked to ensure the adequate visibility at the posh buttons of MOV & HOV; feasibility study for providing a limit switch on the HB with interlocking for MOV operation; Main emergency S/D switch which should be located in

the C/R, should also active the MOVs to close; only a closed system design should be adopted; the first body valve on the tank should be remote operated shut-off valve (ROSOV) inside the dyke with remote operation fork outside the dyke as well as from the C/R; adequate lighting should be provided in operating areas.

Comprehensive Disaster Management in collaboration with O.P.Jindal University, Raigarh Chattisgarh, 10-12 March 2021



Some Key takeaways/Recommendations

a) Educational Institutions, particularly Universities are an important stakeholder in terms of disaster risk reduction measures by virtue of their location presence and student workforce.

b) Universities must participate and contribute in DRR activities and awareness drives being undertaken by the State Governments and District administration.

c) Universities must capture the traditional practices which were followed by community to cope up with disasters in their region and explore ways if these can be buttressed through use of science and technology.

Geospatial Technologies and Data Management in DRR, 15-17 March 2021

Some Key takeaways/Recommendations

a) Online training programs on Industrial Safety covers the principles and practices of Industrial Disaster Management in a comprehensive manner. More such types of training programs need to be organized so as to aware the Industries about Safety Management. The country needs a structured response group that will prepare to handle a community-based disaster systematically.

b) The ultimate purpose DRR is to save lives, preserve the environment and protect property and the economy of the country. The protection of life is of utmost importance. In the broadest sense, it raises the understanding of risks and contributes to a safer, sustainable, disaster resilient society.



c) Geospatial database building is a continuous process and it needs to be strengthen for build a comprehensive database system. There is a need to develop a mechanism for sharing of database across institutions/organisations.

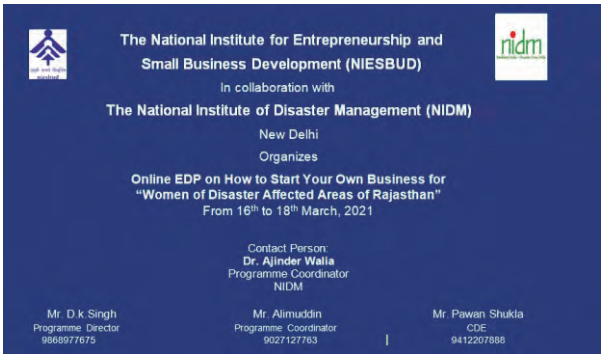
d) Need to develop a strong communication system across the country to reach the last mile. Strengthening the communication networks among first responders, emergency management personnel, hospitals must be given top priority.

e) Use of downstream impact along with potential flood volume for both dynamic and self destructive failures to rank glacial lakes as with sizeable flood volume, proximities of the area of settlement and socioeconomic consequence are equally essential to recognize a lake as potentially dangerous. Some of the notable lakes with very high PFV include Gurudongmar Lake, Tso Lhamo Lake, and J R B Lake, whereas some of the lakes with high PFV and very high risk include Khangchung Tso and Shakho Cho. The use of hydrodynamic model, along with field based assessments, is strongly suggested before implementing any risk mitigation measures.

f) As higher temporal resolution DEMs become available, the hazard assessment should be repeated as it will enable DEM differencing which will significantly improve the identification of ice cores and the modelling of dynamic failures.

EDP on how to start/Upscale your Business, 16-18 March 2021

Some Key takeaways/Recommendations



a) The programme sensitized the women of disaster-affected areas of Rajasthan to develop the skills on how to start /upscale business in a post-disaster scenario.

b) Entrepreneurs play a pivotal role in the economic development of any country. They make use of the factors of production to the fullest advantage of the society, generate employment, create innovation, improve the standard of living, develop backward areas, etc. which lead to higher economic growth.

c) The participants understood the different characteristics through various behavioural exercises and case studies. The trainees were able to understand what are the different characteristics required to become an entrepreneur.

d) The trainees were able to understand the concepts of identification/ selection of projects and setting up of own enterprise to run their business successfully.

e) Entrepreneurship Development Program promotes self-employment and entrepreneurship among the budding and existing entrepreneur to set up and scale up their enterprise in an effective manner respectively.

f) The learners have imparted a thorough insight into the various aspects of enterprise creation, technical know-how, credit sources, marketing of products and changing trends of the market in a global scenario.

g) The learners were made aware of entrepreneurial opportunities after any disaster by upgrading the skills and knowledge of participants on entrepreneurship.

h) By the end of the programme, the participants were having an understanding of the role of various stakeholders, including both a broad command of the field and a deeper knowledge of specific areas. They were imparted with insight into current research and development work and demonstrated deeper methodological knowledge related to their field in training the community for management and preparedness of disaster.

CCDRR, 17-19 March 2021

Some Key takeaways/Recommendations

a) It is learned from this Content Orientation programme on CCDRR training that, disaster risk reduction planning is must in the time of COVID19 outbreak.



b) During this COT–CCDRR programme a basic understanding of the pivotal concepts i.e., risk, capacity, mitigation, preparedness and prevention were explained among the participants.

c) The discussion during the COTCCDRR programme provided necessary ways for reconstruction, recovery, resilience approach to fighting a post-disaster situation. Participants have gained knowledge, how to recover from COVID 19 with an orientation of CCDRR.

d) The presentation during the COTCCDRR programme highlighted the different essential behaviour for containment of the spread of COVID 19 (i) norms for physical distancing (ii) hand washing (iii) avoidance of crowded places (iv) wearing of a mask (v) healthy hygiene behaviour during COVID 19 spread.

e) The COT-CDDRR also made awareness among the participants on social distancing measures and avoidance of crowded places to contain the second wave of COVID 19. The discussion during the COTCCDRR programme highlighted that children should (i) maintain safe distance during meeting with outsider (ii) practice regular hand washing (iii) Involve in indoor games and (iv) avoid socializing with other to contain the COVID 19 spread.

f) The COT-CCDRR training programme highlighted that the loss of lives for children has been higher than adults, therefore adequate preparedness activities should be there in places delivering services to children especially while reopening of schools.

Rapid Visual Screening of Buildings for Earthquake Safety, 17-18 March 2021

Some Key takeaways/Recommendations



a) One must understand the concept of Hazard, Risk and Vulnerability analysis in high hazard prone areas like Mizoram before undergoing RVS of building.

b) NE region is one of the six most seismically active region of the world, recent earthquake swarms like in 2020 Champhai district calls for urgent and sustained mitigation efforts.

c) RVS is more of judgment based on authentic records than a simple "book keeping" exercise.

d) AMC building regulation requires concerned architect/engineer to supervise to ensure compliance to sanctioned drawings and specifications and finally submit a certificate of completion.

e) Aizawl being cut off from all sides takes long time to recover and reach to medical care after any disaster making the people more vulnerable than other states.

f) Due to ineffective short time early warning system for earthquake, preventive measures like retrofitting of existing construction especially for all critical infrastructure and buildings becomes crucial for safety.

g) Poor construction quality, irregular opening, complex structure, cantilever projection with slant extension of beam, no inbuilt firefighting system and opening at different orientation construction are some of the most common practices found in non -engineered buildings which increase the vulnerability of the building.

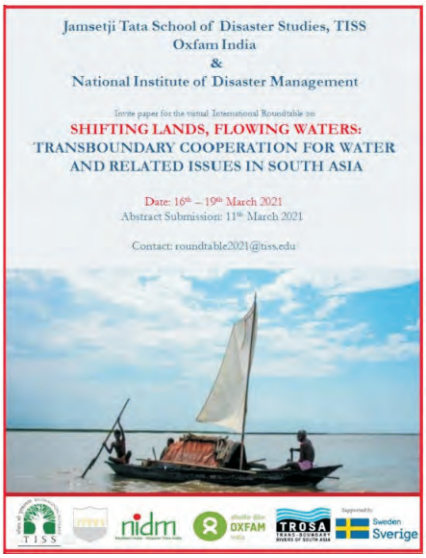
International Round Table Conference on Shifting Lands, Flowing Waters: Tran boundary Cooperation for Water and Related Issues in South Asia, 16-19 March 2021

Some Key takeaways/Recommendations

a) Nature-based solutions to enhance mutual benefits to all the parties through mechanisms of joint planning and conflict sharing needs to be prioritized.

b) Need of evolvement of countries for their future strategies to manage and respond to these climatic changes and disasters, experience and situation on ground demands that intergovernmental regional platforms like SAARC and ASEAN needed to develop greater convergence on transboundary issues of livelihoods, trade, use of natural resources, disaster response and recovery.

c) In addition, these approaches need to be risk informed! There is need for strengthening the risk information for efficient governance; and, rethinking the approach to disasters risk reduction in the policy frameworks in order to go beyond just the usage of water to DRR in a transboundary water course. Both water professionals and policymakers are likely to focus their attention on cooperation and collaboration between the countries, not only with respect to water but also in terms of a whole spectrum of development issues, such as agriculture, energy, industrial development, intermodal transportation (including navigation), which will invariably result in a very significant win-win situation for all the countries concerned



d) Need for policies in South Asia to deepen their agenda towards just and equitable sharing of water resources across riparian regions by orienting administrative approaches towards water security of local communities

"Climate Resilience and Sustainability in Disaster Management", 17-19 March 2021

Some Key takeaways/Recommendations

a) Planning for implementation of early warning is critical at the local, national, and international levels and must include all of the potential participants in the warning process

b) Local communities must be made familiar with the potential hazards to which they may be exposed along with action to be taken by them to avoid the damage/ harm

c) Ensuring the availability of essential resources for mitigation of natural disasters

d) The planning to be accomplished should adopt strategies that are:
   a. Technology-Driven
   b. Pro-Active
   c. Capable to tackle multi-hazards
   d. Affect multi-sectors

e) Governmental organizations, NGOs, Private, Public sectors have to cooperate for building a Safer, Disaster Resilient and Dynamic India



Child Centric DRR, 17-19 March 2021

Some Key takeaways/Recommendations

a) The necessity for child centric disaster risk reduction (CC-DRR) was evident.

b) Importance of comprehensive school safety programs was highlighted.

c) The various parameters of structural and non-structural mitigation measure were identified.

d) The importance of planning for natural disasters and emergencies in every educational institution was noted

e) The child rights that should be exercised were clearly discussed along with the role of family and society in exercising the rights



f) The major unintended child injuries and their preventions were covered.

g) Need for investigating the full extent of child injuries was evident.

h) Importance of psycho-social care for children and adolescents following disasters was highlighted.

i) Problems surrounding suicide prevention and support were emphasized.

Orientation on CCDRR, 18-20 March 2021

Some Key takeaways/Recommendations

a) Use hand sanitizers or soap to wash your hands regularly.

b) Don't touch your eyes or face while you are at a public place.

c) If you are sick, do not visit public places.

d) Ensure to follow guidelines provided by the government while going out.

e) Wear mask and maintain social distancing.

f) Ensure to maintain your hygiene.

g) Cleanliness is the most important factor in preventing any kind of disease so try to keep your surrounding clean.

h) Do not drink unsafe water or go near unsafe water.



i) Keep communicating with children during disaster so they do not feel lonely or depressed.

j) Focus on yours and your kid's mental health.

k) Try to understand your role as a caregiver during disaster.

l) Try to keep yourself distant from sick person.

m) Do not try engaging yourself in social activities during the COVID-19 pandemic.

n) Children are more vulnerable during any disaster or pandemic so try to focus more on their safety needs.

Basic Principles of Disaster Management, 23-25 March 2021

Some Key takeaways/Recommendations

a) We must participate in all the capacity building programmes organized by the government/voluntary organizations/ industrial units.

b) Need to enhance recognition of the vital role of universities in implementation- oriented education and research in disaster risk reduction and related field.

c) Need to encourage Private sector engagement in every aspect of DRR

d) Need to acknowledged and leveraged Women's skills, knowledge about their communities and contributions by formally allocating roles and responsibilities to them.

e) We have to come up with innovative ideas to share and work together in promoting disaster risk reduction in higher education

f) We have to balance vulnerability and resilience for effective disaster management.

g) Need to consider disaster risk reduction measures as a public good.

h) We have to emphasize on providing a platform for interface between academia and policy across the country in different states.

i) Need for flood resistant urban infrastructure resilient to both future climate uncertainties and increasing urbanization.



j) There are limited employment opportunities in disaster a management sector demotivating student which needs to be looked up very seriously.

k) Need to develop a habit of reading, writing, and comprehension in the current digital context, which is dynamic and increasingly hyper connected

l) We must take part in preparing disaster management plan and explain it to all the family members.

m) We must make the family aware of the basic characteristics of various poisonous chemical and the first aid required treating them

Face to Face Training Programme on Disaster Management for Security Officials of Punjab National Bank, 22-26 March 2021

Some Key takeaways/Recommendations

a) The necessity for a more efficient Disaster Management in banking system was eminent in order to maintain business continuity.

b) The institutional framework and the more on the legalities related to Disaster management Act were elaborated

c) Importance of mental health post disaster along with all possible psycho social aspects also need to be taken up in banking sector as well.

d) Inclusion of risk reduction activities are must for continuum in banking operations.

e) For holistic approach, coordination and involvement of other banking officials are a must.

f) Every bank must analyze its risk and prepare its disaster management plan in close coordination with local administration.

g) The mobile ATM and mechanism for second line of defence in terms of data and records must be put in place.

Basic of Disaster Management, 24-26 March 2021

Some Key takeaways/Recommendations

a) Insufficient understanding/appreciation of DRR-specific Capacity Development needs

b) Lack of access to or existence of facilities, programmes, or resources to support awareness

c) Linkages between disaster and development still not addressed and are seen is silos.

d) Lack of general awareness and knowledge of risk drivers and the stakeholders' DRR roles (including at the local level) and;



e) A lack of understanding of existing legal instruments

f) Need to develop people centric planning for ease of living

g) Roles of various stakeholder must be clearly identified for integrating disaster management plans into developmental planning to minimize impacts of various disasters and especially generating from natural hazards

h) Convergence of SDGs and Sendai Framework becomes imperative to achieve DRR at all levels

i) Imperative need for Rainwater harvesting measures must be adopted for better flood and Drought Risk Management for better mitigation and preparedness.

j) Cross-cutting concerns in Disaster Management are less addressed and needs an inclusive approach for mainstreaming.

Environment, Biodiversity and DRR, 24-26 March 2021

Some Key takeaways/Recommendations

a) Importance of preparedness, mitigation and long-term recovery and reconstruction measures to manage a disaster;

b) Global concepts of SFDRR, SDG and Paris Climate Change Agreement, Institutions like NDMA, SDMA, DDMA, NDRF, SDRF, NEC and important documents like NDMP, NPDM etc;



c) 6 Mass Extinction getting speeded up due to Anthropogenic Reasons;

d) Antarctica's rapid ice melts. Melting of glaciers impact on snow fed agriculture, Beach erosion in Texas, Heat wave turning Europe brown, Temp rising in Siberia, Australian Bush Fires, Shrinking of Nevada lake & Irans' Urmia lake, Aral sea getting vanished leaving salt desert, Heavy metal pollution at Mt. Everest, Great Garbage patch floating in pacific Ocean, Alaska Oil Spill, Mauritius oil spill;

e) Bioremediation, an upcoming sector, Microbial Anzymes are eco-friendly;

f) Need to give importance to climatic emergencies, save forests, land use to be checked, employ green business and energy for desired disaster risk reduction;

g) Hazard profile of Rajasthan, Rajasthan rainfall getting fluctuations with some cities declared drought zone, Locust Attacks, Drought, Lightening, Flood and Sand Storms etc.

h) Importance of the Biological Diversity Act, 2002, enacted to preserve the biological diversity in India which provides mechanism for equitable sharing of benefits arising out of the use of traditional biological resources and knowledge; National Biodiversity Authority, State Biodiversity Board, and Biodiversity Management Committee for proper management of biological resources;

i) How to respect and protect knowledge of local communities traditional knowledge related to biodiversity;

Concurrent Disaster and Engendering Coastal Community Resilience, 24-26 March 2021

Some Key takeaways/Recommendations

a) On the occurrence of any disaster, women are expected to play the role of caretaker to the family without paying attention to their own losses. Feeding the children or other family members becomes their first concern and they immediately start getting involved in various activities. Thus, with trauma and stress added burden of duty and responsibility make the women more vulnerable to physical, mental and emotional stress.



b) In the Indian Ocean Tsunami 2004, the ratio of death between women and men was 3:1 because women had not learned to swim, and women's long hair got entangled in debris.

c) Pregnancy complications and childbirth in unsafe conditions (especially in crisis situation) increase maternal and infant morbidity and mortality. Hence the relief team must have experts in maternal and women's health in order to improve women's and families' long-term health outcomes.

d) If affected women can meet and benefit from the experiences of other women who have managed to deal successfully with disaster-related issues, much valuable time can be saved and mistakes avoided.

e) Gender issues must be urgently and effectively integrated into disaster research, planning, and organizational practice. Women have a definite role to play in disaster relief and reconstruction activities. Considering this a new approach to disaster needs to be developed out and disaster research, planning and practice should look into their vulnerabilities and requirements.

Mainstreaming Disaster Risk Reduction in Higher Education, 30 March-01 Apr 2021

Some Key takeaways/Recommendations



a) Need to bring policy related issues and research activities at one platform.

b) College campuses are at high risk of becoming COVID-19 super spreaders.

c) Universities and professional institutes can develop professional curricula or modules that contribute to DRR and hospital safety.

d) Higher education system should contribute to the development and periodic review of national building standards.

e) Every human should devote some time in learning safety skills common to all hazards to respond to sudden crisis.

f) Student youths in community take leadership in communities, can be aware of Govt. programmes and participate in disaster preparedness planning and recovery efforts.

g) Youths can act like a catalyst for DRR through social media.

h) We should create a collaborating space for a multidisciplinary approach to deal with the complexity of resilience building.

i) Guidelines should come out for educational sector so that duplicity is removed and courses are competent enough.

Other Activity

Consultation Meeting for NIDM Outreach Programme

As the nodal national institute, NIDM envisages implementing the "NIDM Outreach Programme" by institutionalising a system of continuous intervention through a network of State Centres of Disaster Management/State Institute of Disaster Management, as NIDM alone cannot fulfil the expectations of the country. The Centre/Institute will be made functional at the State level as State Institute of Disaster Management (SIDM) or as part of Administrative Training Institutes (ATIs) or in any university/institution within the State/UT for capacity building for mitigating disaster risk. The primary aim of the project would be to systematically accelerate the capacity building initiatives at the state and local levels to involve all sections of society. The NIDM Outreach Cell would provide support to the SIDMs/ATIs to facilitate capacity building in DRR for all stakeholders at the local level. The idea is to build the resources of the SIDMs/Centres and handhold them until they function independently and adequately. All the Centres of NIDM at the state level would be focusing on all the activities with a multi-hazard approach to capacity building on a sustainable basis. They would work for cascading and multiplier model, which takes the capacity down to the village/ward level.

A Panel Discussion on "Climate Migration in Indian Sub-Continent" in Collaboration with CECCSD, IMPRI Impact and Policy Research Institute, New Delhi, 23 March 2021

Climate Change is emerging as a stressor that is hindering the development of the Indian sub-continent as it is leading to the disruption in people's lives to a large extent. This is clearly visible in increasing occurrences of floods, for example, in Kerala, Assam and the Sundarbans region in the Indian sub-continent, and tsunamis in Sri Lanka, Bangladesh, and India. Global reports claim that there is a 21 percent decrease in global farming productivity due to climate change, thus, it becomes very important to engage deeply into this issue to build a constructive outlook. To deliberate upon this important and emerging global issue, the National Institute of Disaster Management, Ministry of Home Affairs, Government of India in collaboration with the Centre for Environment, Climate Change, and Sustainable Development (CECCSD), IMPRI Impact and Policy Research Institute organized a panel discussion on 23rd March 2021 at 2:30 pm on the topic "Climate Migration in Indian Sub-continent".

First Meeting of Working Group on NEFC-DMP for MoEFCC on 26th March 2021

- The first meeting of working group was organized to discuss the landscape of National Environment Climate and Forest Disaster Management Plan (NEFC-DMP) for the Ministry of Environment, Forest and Climate Change (MoEFCC) and its framework and template for Hazard Risk Vulnerability and Capacity Analysis (HRVCA). Prof. Anil K Gupta (PD) welcomed all the members and said that the plan will be developed on the behalf of working group and NEFC-DMP-NIDM team will execute and facilitate the same as per the guideline.

- Further the discussion was led by Prof Anil K Gupta and NEFC-DMP team (Ms Richa Srivastava and Dr Sanayanbi Hodam) with other experts and few points were suggested to incorporate in the HRVCA format to make it more comprehensive. It was informed that the HRVCA exercise will be done with each division of MoEFCC and the format of the template will be prepared according to the Divison's mandate. Once the HRVCA exercise is done with all divisions of MoEFCC, A HRVCA workshop will be organized in MoEFCC with the Nodal officers of all divisions.
- Working group members gave their useful inputs on the questionnaire format of background information, components and indicators should be added more to Hazard analysis, Vulnerability analysis and Capacity Analysis exercise.
- All the suggested changes are incorporated to the HRVCA template and an updated HRVCA template is enclosed here with as Annexure II.

Sectoral Consultation Workshop for Preparation of Disaster Management Plan of the Ministry of Environment Forest and Climate Change, Govt. of India, 22 March 2021

NIDM organized a Sectoral Consultation workshop on preparation of DM plan of the Ministry of Environment Forest and Climate Change (MoEFCC) on 22nd March 2021 at 11.00 AM. The workshop was chaired by Prof. Anil K Gupta, Head ECDRM, NIDM and Shri Suneesh Buxy, IGF, MoEFCC. The objectives of the workshop were a)- To develop better understanding of environmental, forest and climate change sectoral landscape and disaster risks b)- Defining guiding principles for NEFCDMP c)- Develop a practical template/framework to conduct Hazards-Risk, Vulnerability and Capacity Assessment (HRVCA) at the national level d)- Develop better understanding of capacity needs e)- Scoping exercise. Shri SuneeshBuxy, IGF, MoEFCC presided over the inaugural remark in the workshop and advised that design of the ministry's DM plan should be dynamic. Context and background presentation was given by Prof. Anil K Gupta, Head – ECDRM, NIDM. The workshop was attended by experts and senior officials from NDMA, IISc, N Safety Council of India, DG FASLI, BIRD, SDMAs (Sikkim, J&K, Himachal Pradesh, Kerala & Uttar Pradesh), IUNCN, TFRI, GIZ, NERIWALM, ICAR CRIDA, UNEP, WHO, NITI Ayog, UNDP and GEAG. Diverse comments and suggestions came from the delegates towards developing the dynamic DM plan for the ministry. Major Gen. Manoj Kumar Bindal, ED-NIDM gave his closing remark and encouraged ECDRM team to work with full spirit on NEFC-DMP. The entire workshop was coordinated and compared by Ms Richa Srivastava and Dr SanayanbiHodam from NIDM. The workshop was concluded with the formal vote of thanks from Ms Richa Srivastava, Research Consultant, NIDM. The programme was throughout graced by distinguished experts and senior officers from the different government institutes and organization.

Proposed Final Consultation Workshop for Crisis Management Plan for Contamination of Water Bodies in Collaboration with CPCB-NIDM Consultation Workshop, 16 March 2021

- The Crisis Management Plan to deal with the Contamination of Water Bodies (CMP-WB) is being developed by the Central Pollution Control Board (CPCB) with technical support of the National Institute of Disaster Management (NIDM).
- The aim of the plan is to strengthen multi-dimensional strategies and capacities to deal with risk, likely impacts, emergency management, remediation, and recovery in case of sudden contamination of the water bodies.
- The strategy will include hazard-risk vulnerability capacity analysis, prevention, mitigation, response, and recovery elements on which a framework is to be elaborated.
- As part of the planning strategy, a Final Consultation Workshop on the theme I was scheduled on 16th March 2021 from 2:30 pm to 4:30 pm (online) to discuss the Final Draft of the Crisis Management Plan to Deal with Contamination of Water Bodies (CMP-WB).
- The workshop was attended by the representatives of key government agencies, scientific/ academic/ research institutions, subject matter experts, and key stakeholders working in related fields of water, health, environment, and disaster management.
- Building the resilience of water bodies and their ecosystems to such emergencies is part of a preventive approach to protecting the environment and people.
- Additional investment is needed to strengthen key functions and to ensure that the water sector is ready to respond to the challenges posed by both natural and anthropogenic activities, including acute shocks such as natural disasters and disease spills, sudden effluent discharges, etc.
- It also refers to the Sustainable Recovery Framework, Post-Disaster Need Assessment (PDNA), Creates Pre-Disaster Basic Information, Built Back Better Recovery Approach, Major Recovery Process Steps, and the provision of funds for specific sudden contamination of water bodies.
- This plan also includes the principles of the Sendai Framework for Disaster Risk Reduction, the Prime Minister's Agenda 10, the 2009 DM Act and the 2009 DM Policy, as well as the National Disaster Management Plan.
- It will further help to achieve the Sustainable Development Goals by 2030, to achieve universal and equitable access to safe and affordable drinking water for all.

Consultation Meeting for NIDM Outreach Programme, 19 March 2021

Recommendations/Key Takeaways

a) Over all accepted by all the states and they welcomed this initiative and agreed for providing space for housing NIDM's outreach programme.

b) Joint engagement with the state and NIDM for execution of the project.

c) Duration of the project should be of 10 years, irrespective of the old and new centres. NIDM should support all the states for 10 years.

d) State level steering committee may be formed for its smooth execution. Chief Secretary may chair the steering committee.

e) Duplication of centres may be avoided. The centre should not necessarily be located at the ATI but state govt may be given choice for better sustainability.

f) Control, command and coordination of the centre with SDMA and government should be ensured.

g) National Cadre and state cadre of DM professionals should be created.

h) Budgetary flow should be very smooth and directly reaching to the Centre.

i) All attempts should begin for building strong SIDM since its inception.

j) Recruitment should be done by NIDM with the involvement of the state.

k) Activities of the centre should /must address the need of the state – capacity building, policy research, advocacy etc.

Thematic Write-up

The Hard Truths: Integrating Compassion and love for the 3rd wave of Pandemic Preparedness.

Prof Santosh Kumar

Colleagues and friends I do not know what to write and what not to? I also do not know how many actually read our these writes up and take ideas, if it is worthwhile, and move further? But I am an optimist and so I am writing with the hope that even if you do not like please gives us the feedback for improvement.

I am really confused today after my three decades of engagement in disaster risk management. While growing up in the smallest township of Bodh Gaya I was thinking that life is very cool. I used to go to the Buddhist temple/monastery almost thrice in a week. It was a stone throw distance from my house. I and one of my friends, after listening to the vibrating sounds of a bell, used to take our bicycle and in five myths we are the prayer site. It looked so simple. We did not understand much but used to get connected from within. We were in search of solace but it was such a fulfilling experience just being there and listening to the following mantras.

Buddhamsaranamgacchami
(I go to the Buddha for refuge.)
Dhammamsaranamgacchami
(I go to the Dhamma for refuge)
Sanghamsaranamgacchami
(I go to the Sangha for refuge.)

In the pandemic of the first and second wave happened so much that whenever I started writing, after collecting all my thoughts and feelings starting from March 2020 to till date I recall very sad experience, nothing very exciting, countless numbers of affected people, deaths from family, friends, relatives and known acquaintances made me realise that this is one catastrophe which has really shaken the World. Fighting unprepared with an unknown enemy puts everyone into anxiety, trauma, stress, hypertension and mental trauma. Wherever and whoever I was making a call especially in the month of April and May 2021 I did not get the good news. From everywhere only one thing was echoing either someone has died or struggling for life. Family members were literally begging for oxygen cylinder, bed in the hospital, medicine etc, and after the death even the crematorium was not able to take the load off the large number of dead bodies coming for the burial or cremation. No one of this generation had seen such scenario ever in their memory. People were just imagining the 1918 pandemic and their plight.

I also saw that many of the agencies, individuals, professionals, and volunteers stepped forward to help people in crisis situations. Many innovative solutions they could bring on the floor. I was also wondering that whenever a crisis happens, it's true for all societies in the world; it is people who come forward to help people in humanitarian crises. And most of the time people in governance get criticized as the government has failed in ensuring fundamental rights of the citizen- Right to Life with Dignity. Disaster /catastrophic or humanitarian crisis can be addressed only when people, system, governance start looking at lives with full compassion and love. In the absence of compassion and love in the planning and in execution we will not be able to value our people and precious lives, what we are losing in one after disaster and waves after waves.

Recently, while social media print and electronic media were showing all images of deaths and distress, the childhood memory reflected back what we used to chant without knowing the meaning.

Just to quote the meaning "These words are not just for uttering, but for investigating, to go deep into their meaning, to meditate upon. Buddha means the one who takes us from Darkness to Light, towards wisdom. Towards higher consciousness towards mindfulness. Dhamma is 'Here – and – Now', it is not taking refuge into some intellectual writings or anything but something we can access here and now. **Sangha Means community, community where people support, help each other in the meditation practice. It is very important to have a community, so that when you are feeling down, when you are not feeling your 100%, or when you are stuck somewhere, the Community is there to Help you, to pull you up.**

Without community solace it is impossible to drive any disaster risk reduction or for that matter any development initiative on a sustainable basis. Based on experiences and expert advice I would suggest following hard thinking has to be done with compassion and love as in built thread for facing the third wave of pandemic for better preparedness.

1. Institutional Involved in the execution of both the health sector and disaster management should make a joint plan in anticipation of likelihood of affecting children.
2. Empowered groups constituted by the Govt of India should aggressively share their recommendations to the various non-government players and community institutions and simulate, if needed.
3. High preparedness of hospitals for paediatric care - doctors and nursing specialized with different age groups - 0-5 years, 6-10 yrs. and 11-18 yrs. with specific to girl child and male child
4. As mother and child cannot be separated, especially during the tough times and also by acknowledging our cultural practices it is important to create facilities by keeping them together. Hospital facilities should be revisited accordingly.
5. Home Care concept should be developed with Psycho social care intervention for providing treatment at home. Tele-medicine consulting facilities for those who are treated at home should be strengthened from now itself.

6. For Rural areas, trained nurses, ANM, Anganwadi workers should be given special training for catering to the rural health crisis.
7. Special quarantine facilities in common property of the villages (panchayat ghar, schools, cyclone shelter, PHC, and any other community facilities with rains/flood and high wind speed resistance (keeping monsoon and flooding in mind) should be earmarked well in advance. And in the low lying or flood prone areas it must be in the higher ground with good sanitation and hospital waste facilities.
8. Community engagement, faith based organisations, youth, volunteers those have been fully vaccinated be involved since the beginning of the planning.
9. All state government cross cutting departments put on alert for monitoring and surveillance for testing. Department of food and civil supplies should take the charge of food security as the children population are malnourished and they are vulnerable within the vulnerable.
10. Drug controller and association will cap the price on the most recommended drugs for the treatment and set up a good mechanism for handling shortages. The blueprint should be shared with a common website with name and phone numbers. Same may be the case of oxygen suppliers, concentrators (special to paediatric care) be done.
11. Strong public campaign for adhering to and enforcement of covid appropriate behaviour at all levels is must. Local universities/colleges may be engaged in the effort.
12. The most important is the vaccination. A campaign is also to be designed for the vaccination- Hon'ble PM **Tikotsava** with ensuring availability of the jab needed. Those in rural areas are having a myth toward the vaccine. That has to be demystified with proper campaign in local vernacular audio/video. We need to make it success and also quickly vaccinate our children, once it is approved by the experts and government.

If all the above steps are done in the true spirit of serving people with compassion and love as part of service to the human, I am sure the third wave will be taken care of with little damage. The bell which I used to listen to is ringing even today. The only thing that we need to do is to listen to our soul. I am sure compassion and love would resonate.

Assurance to Earthquake Safety – Showcasing a Base-Isolated Building

Prof. Chandan Ghosh

The Indian subcontinent has experienced a number of devastating earthquakes in the last 3 decades, repeatedly reminding us about the high level of seismic hazard and risk prevailing in the country. Every time earthquake hit, our response centric sentiment go haywire but reality of earthquake resisting measures into the built environment since 1962, when 1st earthquake code was published by BIS, are nothing more than but abject failure of our earthquake engineering professional footprint into practice front. It is realised that the Indian earthquake management is not merely an engineering problem, rather it's socio-cultural acceptance of the fact that expert agencies, academia and building construction industries have to come forward with LIVE as well as Prototype demonstration projects.

While on the awareness front, the Central and State Governments have launched various training programmes for the capacity building of engineers, architects and engineering college teachers besides funding research projects on the mitigation measures required at the earthquake affected areas, the extent of ignorance as well as facilitation by Civil Engineering professionals at par with BIS codes have been a reclusive blame game. Therefore, there is an urgent need for the testing and evaluation of earthquake impact on buildings and application of base isolation technologies. In this regard, the country has been in the back front when Bhuj (2001) earthquake shook us and then we had to buy all base Isolators for the new Bhuj District Hospital from abroad with a high cost. Now after a decade, country's R&D in association with few indigenous Industries, have come forward with high level collaboration and manufacturing of Base Isolators in the country.

Incidentally all the training and capacity building programmes for Architects, Builders, Contractors, Designers, etc. usually focus largely on new buildings that being added 1.5 to 2% per year, but the real challenge remains with the existing buildings stocks and their poor resilience against impending earthquake encompassing 60% of India's land mass. With every passing year, our vulnerable building stocks are increasing with alarming rates. There is no such effective campaign to implement basic principles of earthquake resistant guidelines. The onus in this respect not only lies with the Govt. but also with the building professionals, who must care for the common man's requirement in the affordable technologies for which expert guidance as a basis of showcasing "Make in India" spirit. With this objective in the core of Resistoflex showcase building, it's earnestly desired to reach common mass.

Most retrofitting initiatives in the country have been in the Post earthquake scenarios. Currently, few efforts have been directed to assess the vulnerability of lifeline buildings and transportation structures, monuments and heritage structures. Some retrofitting initiatives in the country have taken place in areas damaged by earthquakes such as Latur (1993), Jabalpur

(1997), Bhuj (2001), Kashmir (2005), Sikkim (2011), Nepal (2015), Imphal (2016) and this year at Sonitpur District of Assam (2021) earthquakes. But, the problem with retrofitting in a recovery and rehabilitation scenario is that there is little scope for learning or effective technology transfer. Nationally, thus we are in need of effective interventions that carry the message of the need and means of retrofitting to the construction fraternity. The Base Isolators being used at Resistoflex can take care of all existing seismically deficient buildings into a formidable earthquake tolerant. For this, we have to create nationwide awareness campaign and it's possible through current initiative, i.e., showcase building in the earthquake prone area of the country.

Earthquake-Resistant Design Conception considers that the seismic behaviour of the structures improves when the following conditions are observed:

- Symmetry, for mass distribution and stiffness as well.
- Minimum weight, especially for higher levels.
- Adequate selection and use of construction materials.
- Adequate resistance.
- Continuity in the structure, in plan and elevation.
- Ductility.
- Limited deformation.
- Inclusion of successive resistance lines.
- Consideration of ground local conditions.
- Good constructive practice and strict structural inspection.

Having stated all as above, in addition to recent revision of National Building Code (2016) and IS:1893-2016, where we are still divided in the acceptance/limitation of "performance" criteria in the earthquake resistant building design in the country, the Showcase base-isolated structure is an eye opener for the nation. The building, so constructed, is going to be a live example for the building industry, common people and government policy makers.

According to Earthquake – Resistant Design Philosophy, structures damaged by earthquakes or expected to hit by damaging earthquake should be evaluated and repaired in such a way that the possible structural defects that might cause the failure can be amended and they can recover their resisting capacity toward a new seismic event. When the seismic event occurs, the structure should be evaluated by a qualified Civil Engineer, who should determine if the actual state of the building makes necessary its reinforcement, repair or demolition. The repairing process should be able to give the structure an adequate combination of stiffness, resistance and ductility and should guarantee its good behaviour for future events. The repairing or reinforcement project will include the details, procedures and constructive systems to be followed. Criteria and processes to repair and reinforce existing buildings not indicated the existing building code can be used with the approval of the competent authority. With base Isolators as similar other recent technologies in place, the above mentioned

hegemonies can be eventually avoided. Therefore, it's right time to create a national level demonstration or pilot study of such technologies, which is going to be going to be exemplary on its own account.

It's well known fact that, buildings if constructed following Codes and expert's guidance, they are able to resist earthquake threat at the desired level of safety. There are some established methodologies to assess the weakness, if any, in buildings but adopting strengthening/ retrofitting measures as per expert guidance, could be a novel exercise for those buildings that are having working spaces all sides at least. However, there are partial measures for retrofitting that could be decided after realizing the availability of skilled manpower and expertise. Though, the country has been taking few such challenges, especially after Bhuj (2001) earthquake, there is paucity in proper documentation and more so efficacy of those measures later by another earthquake has yet to be proved/tested. In the current scenarios, documenting the entire construction process, design, testing and process of functioning of the base isolators as model example for the whole country.

Good practices of COVID pandemic management: a case study of Bhutan

Prof. (Dr.) Surya Parkash and Dr. Raju Thapa

Bhutan has displayed an excellent example in managing COVID pandemic by prioritizing social well-being over a long period of time. When the world was paralyzed with COVID-19 infection, Bhutan's preparedness played a significant part in restricting the spread of COVID-19. In Bhutan, contact tracing has been rigorous and efficient. Bhutan detected its first COVID-19 case in March 2020. Since then, it had more than 910 COVID-19 positive cases and one reported death case. Bhutan received its first 150,000 doses of the AstraZeneca vaccine from India in January 2021, Bhutan has vaccinated nearly 93% of its adult population till March 27, 2021. Overall, the country has vaccinated 62% of its 800,000 people. Graphically, the vaccination curve of Bhutan is one of the best in the world above Israel, United States, Bahrain etc. For most of the countries, it took them several months to carry out vaccination. However, Bhutan's vaccination campaign is nearly finished — just 16 days after it began. Thus, a small country (as compared to its giant neighbour India and China) with limited resources presented a good example in management of COVID-19 pandemic in times when powerful countries are still struggling to fight against the COVID-19 pandemic.



Buddhist monk taking vaccination at a school in Thimphu, Bhutan's capital
(Source: https://www.nytimes.com/)

V3ISESH FPC: Infrastructure Solutions and Business Continuity Resilience with Sustainability - Insights for Disaster Management Curriculum

Prof. Anil K Gupta

Issues of environment, health, safety and sustainability are integral to 'disaster risk reduction', and the policy-planning framework, hence, need to represent a blend of 'science and art of survival' and 'culture of safety and prevention'. The CUSP principle in the backdrop of Prime Minister's 10 point agenda on Disaster Risk Management (point 1) calls greater emphasis on sectoral and planning solutions.

Time is set-on by the Covid-19 pandemic and the complexity of disasters, environmental emergencies, health risks, industrial mishaps and social disruptions in the recent times, for advancing the 2nd generation paradigm shift in resilient development. The focus here needs to be infrastructure systems, sustainability and economic pace up for 'Aatmnirbhar Bharat' (Self-reliant India). Fundamentally, “infrastructure” is known as the “the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise”. Common infrastructures across the nation include a wide range, examples of which are following:

- Highways, Streets, and Roads, Bridges
- Mass Transit, Airports, and Airways. .
- Water Supply and Resources, Harvesting, Sanitation ...
- Waste Management and Waste Water Management. ...
- Hazardous Waste Removal and Storage.
- Pollution prevention and control..
- Natural infrastructure, gardens, parks, water bodies..
- Power Generation and Transmission. ...
- Telecommunications. ...
- Hospitals, health centres, pharmaceuticals…
- Laboratories, institutions, colleges and schools….
- Petrochemicals, chemicals, manufacturing…
- Housing, public amenities, …

Interestingly, the interest across the policy domains internationally and in most of the nations across developed and developing world has grown improving infrastructure and their functioning across the domains of economic, environmental, industrial, health and social services, with impetus for achieving the Sustainable Development Goals by 2030. However, the economic growth rate anticipated for the same looks like far reaching goal given the ongoing fiscal slowdown globally over these two decades. This remains a fact, despite the data and pictorials showing huge achievements, though partly contrary to the ground realities and with

the fact that several of these infrastructure components are since beginning or often go out of order. The onslaught to the ecological services 'system' and, hence, the irreversible "ecological slowdown" manifested as reduced supplied and qualities of natural resources including water, air, land, food, etc. and diminishing economic dividends out of it.



Prime Ministers Agenda on DRR (item 6) - Disciplines to host DRR courses and research

The dream of true 'disaster risk reduction' or crisis resilience would, therefore, need to follow the 2nd generation paradigm shift, i.e. designated as V3ISESH FPC (Vital, Viable and Vibrant Inclusive Safety Environment-Sustainability Health (V3ISESH) Framework is a wisdom-driven, innovative and effective tool to address the prevailing and future complexity of risks faced by people, governments and businesses (Gupta, 2020, Tidings, December, NIDM). The PDM (Preventive Disaster Management) Framework by Gupta &Yunus (2004, Current Science) which preceded the 2005's Disaster Management Act of India argued for a holistic, proactive and risk- mitigation - centric approach.

Infrastructure resilience, therefore, would need a 'sustainability' imperative to embrace, as most of such investments are huge and for long-term service aims. Health concerns at core, is a new normal with lessons from Covid-19 pandemic, besides 'ecological compatibility' a pre-requisite in functional continuity of the 'systems' as well as addressing the vulnerability attributes relating to landscape and climate dynamics. The discipline of Infrastructure system's functioning continuity and resilience in the context of recent lessons emerges as a new management subject that relates with sustainability and change management. This would also relate to crisis management and strategic policy planning domains.

National Human Resource and Capacity Building Plan (2012) for disaster risk management and resilience in the country envisaged for integrating disaster management curriculum across the three interdisciplinary schools/programmes, viz. Environmental studies, Social work, Development studies, and four professional streams, viz. Management, Engineering including planning, Health, Law. However, the progress has been slow, despite the strong message from Prime Minister's 10 Point Agenda on DRM (NPDRR- proceedings, 2017; Gupta et al. 2016) prescribing the role of UGC, AICTE and Universities, IIMs and IITs, etc. UGC and AICTE as a proactive measure, notified model curriculum on disaster management in 2008-09.

Looking to the complexity of challenges with frequency, types and implications of environmental emergencies, disasters and climatic extremes, our regions and cities face almost on regular basis, the V3ISESH FPC attains critical role but, however, would require professional expertise and policy environment at all levels for addressing the needs for risk reduction and crisis management. Institutions in their curriculum land haphazard may be due to domain bias or deficiency of interdisciplinary expertise to guide the process and, hence, would need a broad framework for developing and designing the courses. Following are some of the key words and reference points for this purpose across a few streams of interdisciplinary and professional education:

Common to all domains/ programmes:	Basic understanding of disasters, environmental emergencies, climatic risks, industrial-chemical disasters, accidents and mishaps, etc. Vulnerability factors – environmental, physical, social, economic, systemic, Risk analysis and characterization, Approaches in disaster risk management, Impact Assessment, Mitigation and prevention, Forewarning and preparedness, Response, Relief, Recovery, Mainstreaming along sustainability, health, ecological and social-economic well-being, etc.
Environmental studies:	Environment-development-disaster nexus, Environmental changes – climate change, land-use and natural resources, and hydro-meteorological and geo-disaster risks, Chemical & Industrial hazards, Predictions, Landscape dynamics in DRR, Tools like EIA, DIA, LCA, Risk analysis, Auditing, environmental laws, Air and water emergencies, Pest and disease epidemics, Fires, Conflicts, Wastes and disasters/emergencies, Land degradation, Occupational & Environmental-health and safety risks, Ecosystem services in DRR (ecoDRR) & Natural Based solutions, Innovations, etc.
Management Studies:	Environment-development-disaster nexus, Environmental emergencies, Health risks including occupational and industrial health, Disaster resilient business continuity, Change management, Disaster and climate risk including Business Impact Analysis, Resource sustainability and management, Circular economy and Life cycle analysis, EIA, Auditing, DIA, Risk analysis, Vulnerability dynamics, CSR in DRR, Business opportunities in DRR and Environment, Greening businesses and industry, Infrastructure systems resilient management, Supply chain adaptation & resilience, Innovations, etc.
Engineering Studies	Engineering Studies Environment-development-disaster nexus, Environmental emergencies, Accidents and safety risks, Climatic extremes, Change management, Fires, Wastes and disasters/emergencies, Circular economy and Life cycle analysis, Resource efficiency, EIA, Auditing, DIA, Risk analysis, Reliability, Vulnerability dynamics, Safety analysis, Communication and alert systems, Green & clean technology, Infrastructure systems resilient management, Safe design and materials, Ecosystems& local solutions, Disaster response & safety equipment, Packaging, Innovations, Technology policies, etc.

With the advances in need recognition towards professional expertise on different aspects of disaster management, sustainability and safety together as an interdisciplinary domain of integrated resilience, especially to cater to the needs of cities, businesses, industry and other major sectors of development in the country, region and for enabling effective South-south cooperation, it calls for an ambitious thought of international level specialized University institution on Sustainability and Resilience in India. The institution need to go beyond disaster management in its narrow sense, towards inculcating robust capacities of risk management integrated planning and management for V3ISESH integrated solutions. This would also go in sync with the vision of India for promoting prosperity with sustainability as well as extending cooperation to all the developing nations – more particular in the Asia Pacific and Africa.

Vaccination for Covid -19 Pandemic

Dr. Amir Ali Khan

The humanity is passing through one of its toughest phases in terms of the ongoing pandemic. In the history there were several pandemic diseases, which had resulted in hundreds of millions of deaths. Bubonic plague, Smallpox and the Influenza pandemic had killed millions of people till their eradication from the world.

Since the start of the spread of Corona virus in December 2019 from Wuhan, China about 3,777,097 people have died due to the Covid-19[1]. The death and related miseries of the people are still continuing. The worst affected countries include USA, India and Brazil in addition to counties in Europe, Americas and Asia. Following Table 1 indicates the top 10 countries in terms of reported Covid-19 cases and resulted deaths.

Table 1 : Top ten countries impacted by Covid-19[1]

#	Country	Total Cases	Total Deaths	Cases/Tot 1M pop	Deaths/ 1M pop	Total Tests	Tests/ 1M pop
1	USA	34,264,727	613,494	102,952	1,843	491,081,281	1,475,502
2	India	29,183,121	359,695	20,954	258	372,198,253	267,246
3	Brazil	17,125,357	479,791	80,034	2,242	50,127,012	234,264
4	France	5,725,492	110,202	87,534	1,685	87,626,503	1,339,668
5	Turkey	5,306,690	48,428	62,293	568	56,123,336	658,809
6	Russia	5,156,250	124,895	35,318	855	141,100,000	966,483
7	UK	4,535,754	127,860	66,487	1,874	191,044,609	2,800,397
8	Italy	4,237,790	126,767	70,187	2,100	67,851,729	1,123,777
9	Argentina	4,038,528	83,272	88,594	1,827	14,861,736	326,027
10	Germany	3,715,870	90,187	44,218	1,073	61,380,686	730,41
	World	175,177,177	3,777,097	22,474	484.6		

Source: Corona Worldometer

Based on the experiences of managing the Covid-19 for more than a year, it can be concluded with confidence that in addition to (i) putting good quality masks, (ii) regular hand washing and (iii) maintaining safe social distance, vaccination has to play a decisive role in mitigating the severe impact of the disease. The Covid-19 vaccines have the potential to save millions of lives. The vaccines improve the immune system of human body to fight off the viruses. After

[1]https://www.worldometers.info/coronavirus/?fbclid=IwAR35ZFiRZJ8tyBCwazX2N-k7yJjZOLDQiZSA_MsJAfdK74s8f2a_Dgx4iVk
[2]https://www.worldometers.info/coronavirus/?fbclid=IwAR35ZFiRZJ8tyBCwazX2N-k7yJjZOLDQiZSA_MsJAfdK74s8f2a_Dgx4iVk

vaccination, the body is immediately ready to destroy the disease causing viruses, preventing illness. The disease like Covid-19 will keep on causing death until effective vaccination against disease causing viruses is done.

There are number of vaccines already available since February this year against Covid-19. According to WHO[3] as of 18 February 2021, at least seven different vaccines across three platforms have been rolled out in countries, which include the vaccines developed by Pfizer, Astrazenica (Covishield) and Johnson & Johnson. Few vaccines like Covaxin, Moderna etc. are at different stages of approval by WHO. However, their use has been authorized by many countries under emergency conditions. A comparison of key characteristics of the select Covid-19 vaccines has been shown in Table 2. In addition, more than 200 vaccine candidates are in different stages of development, of which more than 60 are in clinical development stage.

Table 2: Comparison of various vaccine available at international level

Name/ Manu-facturer	Country of origin	Availability in India	Approved by countries so far	Technique	Number of shots	Second dose after (days)	Efficacy (%age)	Time to max. immunity	Storage	Side effects
Covaxin	India	Yes	9	Inactivated Virus	2	28	70-80			
Covishield (Astrazenca)	UK, Sweden and India	Yes	130	Viral Vector (Modern Chimpanzee Adeno)	2	84	70 -90 (After 1st dose 70% and after 2nd dose 90%)	15 days after 2nd shot	Standard refri-geration	Yes
Sputnik V	Russia	Yes (by June)	-	Viral Vector (Modified Adeno)	2	28	85-95	2 weeks after 2nd shot	Dry form 2-8 C	
Moderna	USA	Not now	Majority of countries	mRNA	2	28	90-94	2 weeks after 2nd shot	-20	Yes
Pfizer & Biotech	US-Germany	Not now	Majority of countries	mRNA	2	21	90-94	2 weeks after 2nd shot	-70C	Yes
Jonson & Johnson	US-Belgium	Not now	-	Viral Vector (Human Adeno)	1	-	70-85	2 weeks	Standard refri-geration	Yes
Sinovac	China	Not now	22	Inactivated Virus	2	21-28	65-91	2 weeks after 2nd shot	Standard refri-geration	
Novax	USA	Not now	-	Protin subunit	2	21	92		4-8 C	

Source : Compiled from various sources

[3]https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines

Vaccines are a critical new tool in the battle against Covid-19[4]. In India, Covaxin and Covisheild, two vaccines manufactured by Bharat Biotech and Serum Institute of India respectively have been approved by the Government for public use. A total of 24,27,26,693 people have been vaccinated so far (as on June 10, 2021)[5]; out of which 4,72,43,748 people have been fully vaccinated.

Based on the experiences gained in India during the second Covid-19 wave during the month of March-April-May, 2021 it has been observed that people who got fully vaccinated didn't require intensive care treatment or got seriously ill. However, there was very limited number of cases of people with single dose vaccination requiring intensive care treatment. Based on the above statements, it may be concluded that vaccination plays a critical role in minimizing death threat due to Covid-19. Another conclusion may be drawn is that vaccination, in general, don't provide protection against infection from the virus, however, it is quite effective in preventing the serious illness due to the virus infection and prevention of death. To conclude, all vaccines play a crucial role in mitigating the impact of Covid-19 and efforts need to be made to fully vaccinate all eligible people as per government guidelines. Until full vaccination is achieved people need to continue taking all possible precaution to protect lives and limit disease spread by wearing masks, maintain safe physical distancing and avoiding crowded places.

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Pandemics and Vaccination

Dr. Ajinder Walia

The World Health Organization (WHO) states that vaccination is a simple, safe, and effective way of protecting people against harmful diseases. Vaccines reduce risks of getting diseases by working within the natural defense of the body to build protection. When we get a vaccine, our immune system responds to it as it recognizes the invading germ, such as the virus or bacteria and produces antibodies which are proteins produced naturally by the immune system to fight disease. The immune system remembers the disease and how to fight it in future. If ever, the individual is exposed to the same germ in the future; the immune system can quickly destroy it before the individual becomes unwell.

The process of vaccine development, as identified by WHO, usually needs a few years or even decades. The potential vaccine identified during the research undergoes scrupulous laboratory testing and preclinical studies. Post testing, the manufacturer proceeds to apply for clinical trials. The clinical trials are bound by strict regulations and take place across three phases:

- Phase I: Small groups (approximately 20-50 people) receive the vaccine. This phase assesses the safety, side effects, appropriate dosage, and method of administration and composition of the vaccine.
- Phase II: After the success of Phase 1, the vaccine is then administered to several hundred people. This group will have the same characteristics (e.g. age, sex) as the people for whom the vaccine is intended to be given.
- Phase III: The vaccine is usually given to thousands of people to help ensure it is safe and effective for broader use.

The results of all these studies are rigorously assessed when regulators decide whether to approve a vaccine. Once a vaccine is approved for use, the vaccine must be continuously monitored to ensure the safety for the vaccinated peoples.

However in the case of Covid-19, the process of development of vaccines has been subjected to emergency approvals. Certain steps have been shortened in order to reduce the mortality rate of the pandemic. India has allowed the use of two vaccines currently. Covishield, the Oxford-AstraZeneca vaccine is being manufactured locally by the Serum Institute of India, the world's largest vaccine manufacturer. On the other hand, Covaxin, India's indigenous COVID-19 vaccine, is developed by Bharat Biotech in collaboration with the Indian Council of Medical Research (ICMR) and National Institute of Virology (NIV). Oxford-AstraZeneca made Covishield by genetically engineering adenovirus that normally infects chimpanzees. It uses double-stranded DNA. Bharat Biotech made Covaxin is based on an inactivated form of the corona virus. More vaccines, being developed indigenously as well as in other countries are yet to follow. India, being a pharmaceutical hub has played a vital role during this humanitarian crisis by exporting huge doses of vaccine to other countries as well. Due to the decrease in the

number of Covid infections and rare instances of side effects of these vaccines, the process of vaccine rollout was a little slow in the initial stages. However, it is expected that the process will pick up soon. Along with getting the vaccination done, people should continue to follow personal protection recommendations. At the individual level, people should follow procedures for reducing the risk of spread, such as proper hand-washing, covering nose when sneezing, coughing into elbow, not to touch face, and keep practicing physical distancing along with getting vaccinated against corona virus as soon as possible.

Pandemics and Vaccination

Dr. Sushma Guleria

When the pandemic started, India defied expectations by having a milder outbreak than had been predicted. Now, it is seeing a deadly second wave that is bringing the country's health system crashing. This time last year, theories about India's astonishingly low rates of COVID-19 infection included hot weather, natural immunity and the country's high proportion of young people; some also attributed it to the country's harsh lockdown. India was doing so well that in megacities like Mumbai and Delhi, officials had begun dismantling temporary COVID-19 facilities. Unfortunately, in April 2021, cases and deaths have been soaring, leaving hospitals running out of oxygen. The shortage of beds and space is so acute that daily rates are currently over 300,000, the world's highest-ever daily infection rate.The extraordinary surge in cases had been unexpected given that, by some estimates, as much as 20% of the population were thought to have antibodies to COVID-19, with this figure rising to 50% in large cities. In addition, India started its vaccination drive on 16 January and by the start of April had declared that it had given more than 100 million vaccines in a record 85 days, compared to 89 days for the USA. But this number is a drop in the ocean for a population of 1.4 billion people, and there is a long road ahead.

Several factors seem to have come together in a perfect storm to create one of the worse COVID-19 outbreaks the world has seen so far. Of great concern is a new 'double mutant' B1617 variant, identified in India last year, that is spreading across the country. Although scientists are still investigating whether or not the variant is more deadly, it does contain the L452R mutation that affects the virus' spike protein. This protein is key to the way the virus hooks on to our cells. Early research suggests that this mutation makes the virus more infectious. This doesn't necessarily mean that the variant will be any more deadly, but it means that more people are at risk making pro-active accelerated vaccination drive imperative. Vaccination is a simple, safe, and effective way of protecting people against harmful diseases, before they come into contact with them. Vaccines train your immune system to create antibodies, just as it does when it's exposed to a disease. However, because vaccines contain only killed or weakened forms of germs like viruses or bacteria, they do not cause the disease or put you at risk of its complications.

How does Vaccine Work? Vaccines reduce risks of getting a disease by working with your body's natural defences to build protection. When you get a vaccine, your immune system responds.

- Recognizes the invading germ, such as the virus or bacteria.
- Produces antibodies. Antibodies are proteins produced naturally by the immune system to fight disease.
- Remembers the disease and how to fight it. If you are then exposed to the germ in the future, your immune system can quickly destroy it before you become unwell.

The vaccine is therefore a safe and clever way to produce an immune response in the body, without causing illness. Our immune systems once exposed to one or more doses of a vaccine, typically remain protected against a disease for years, decades or even a lifetime. This is what makes vaccines so effective. Rather than treating a disease after it occurs, vaccines prevent us in the first instance from getting sick.

How do vaccines protect individuals and communities?

Vaccines work by training and preparing the body's natural defenses the immune system to recognize and fight off viruses and bacteria. If the body is exposed to those disease-causing pathogens later, it will be ready to destroy them quickly which prevents illness.

When a person gets vaccinated against a disease, their risk of infection is also reduced so they're also less likely to transmit the virus or bacteria to others. As more people in a community get vaccinated, fewer people remain vulnerable, and there is less possibility for an infected person to pass the pathogen on to another person. Lowering the possibility for a pathogen to circulate in the community protects those who cannot be vaccinated (due to health conditions, like allergies, or their age) from the disease targeted by the vaccine. 'Herd immunity', also known as 'population immunity', is the indirect protection from an infectious disease that happens when immunity develops in a population either through vaccination or through previous infection. Herd immunity does not mean unvaccinated or individuals who have not previously been infected are themselves immune. Instead, herd immunity exists when individuals who are not immune, but live in a community with a high proportion of immunity, have a reduced risk of disease as compared to non-immune individuals living in a community with a small proportion of immunity.

When vaccine coverage is very high, the risk of disease among those who are non-immune can become similar to those who are truly immune. World Health Organization (WHO) supports achieving 'herd immunity' through vaccination, not by allowing a disease to spread through a population, as this would result in unnecessary cases and deaths. For COVID-19, a new disease causing a global pandemic, many vaccines are in development and some are in the early phase of rollout, having demonstrated safety and efficacy against disease. The proportion of the population that must be vaccinated against COVID-19 to begin inducing herd immunity is not known. This is an important area of research and will likely vary according to the community, the vaccine, the populations prioritized for vaccination, and other factors.

Coronavirus disease – 2019 (COVID-19) vaccination is a crucial part of a multi-faceted public health response, and possibly, the best hope for ending the pandemic. In one ecological study, the relationship between Gross Domestic Product (GDP) per capita and early vaccination rates was examined across the world. Spearman's correlation analysis was utilized to assess the strength and direction of the relationship between countries' COVID-19 vaccination rates and GDP per capita. In the study, it was observed that countries with high vaccination rates had higher GDP per capita (Spearman's $\varrho = 0.35$, p-value $= 0.01$). India has now become the fastest country in the world to cross the landmark of 14 crore COVID-19 vaccine doses. India achieved this feat in just 99 days. The Serum Institute of India, the world's largest producer of vaccines by volume, is

producing the Covid-19 vaccine developed by AstraZeneca and the University of Oxford at its facility in the city of Pune in western India.

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Pandemic and Vaccination

Shekher Chaturvedi

As COVID-19 cases continue to occur in India, there is a need for stronger collective efforts by one and all to curtail the virus transmission. Vaccination is one of the measures to create immunity and curtail virus transmission. WHO has also urged countries to plan for efficient roll out of COVID-19 vaccines?

India began administration of COVID-19 vaccines on 16 January 2021. As of 10 June 2021, India has administered 246,085,649 doses overall, including first and second doses of the currently-approved vaccines. Two vaccines received approval for emergency use in India at the onset of the programme; Covishield—a brand of the Oxford–AstraZeneca vaccine manufactured by the Serum Institute of India, and Covaxin, which was developed by Bharat Biotech. In April 2021, the Indian government approved the Russian Sputnik V vaccine (which is distributed locally by Dr. Reddy's Laboratories) as a third vaccine, which began use in May 2021.

As on date, the distribution of Covid Vaccine as per the age cross-section is as follows:

Above 60 years – 32 %

Between 45 to 60 years – 40.8% and

Between 18 to 44 years – 27.2%

(Source: Twitter @CovidNewsbyMIB)

This vaccination drive had initially brought lots of confusion in the minds of common man but with the concerted efforts of Government of India with the help of various other stakeholders the confusion was addressed. This resulted in increase in number of vaccination.

This vaccination drive has not only given mental respite from fear of Covid infection to common man but also given strength to Government's response drive against this pandemic. This will serve as preparedness measure against the expected third wave which has been admitted by a NITI Ayog Member. Dr. Khetrapal Singh, Regional Director, WHO has also said that COVID 19 vaccination should aim at minimizing the impact of the pandemic. She also gave nine priority areas for COVID 19 vaccination and said training of staff responsible for providing vaccination is a must.

Ensuring continued WHO support, the Regional Director said, "Together we must continue to strengthen the COVID-19 response by aggressively applying the basic public health measures, and also looking ahead and ensuring that we make full use of emerging tools to control spread, save lives and minimize impact."

Covid-19 Vaccination: Issues & Concerns for Children

Dr. Kumar Raka

The second surge of Covid-19 has hit children very hard. The rate of infection and mortality amongst children has increased manifold in this current resurgence. The second wave of corona has seen a rapid increase in the number of younger patients and the severity of infection compared to 2020. The second wave of Covid-19 also grasps the country with a dangerously alarming rise in Covid-19 infections affecting the youngsters as well, apprehensions have been raised about its impact on children and what can be done to protect them against the virulent wave as a third wave is also predicted to arrive this year in 2021. As a lot remains unknown to the masses about the impact of Covid-19 in children during the first wave, and also currently there is no vaccine for children. Data from the Union Health Ministry, in first quarter of April, 2020, shows 79,688 children have been infected in five states of the country. There are evidences showing that children aged a few months to 18 years are getting infected. Children aged 8 months to 12 years had got severely infected in Delhi, Haryana, Gujarat, Maharashtra and Chhattisgarh. It has also been reported by the media that about 15 percent of young patients died in Gujarat of the total deaths due to corona. In Haryana, only one percent children were infected in the last wave, now eight percent children effected[6].

The child protection against is SARS-CoV-2, popularly known as Covid-19, infection is both an ethical obligation and a practical necessity. Although research is still ongoing, several doctors from across the world have cited concerns pertaining to the added risk of symptomatic infections in kids. While kids suffer from fewer implications of the virus, or get asymptomatic cases, kids testing positive right now are showcasing a lot more symptoms than before. This is being increasingly seen in kids aged between 2-16. It is important to focus on how to protect them as well as they are the future of any nation. Children probably aren't super-spreaders but emergence of faster-spreading variants, along with rising adult vaccination rates means that children & adolescents might soon be contributing more to spread. In recent ongoing Covid-19 second wave in India, children are more susceptible to the virus and affected severely particularly because of their vulnerability and differentiated vulnerable socio-economic conditions. Loss of educational years during the second wave and continuity of education is yet another concern as most of the western countries are opening and their schools have started functioning. Also, billions of economically poor class of children in India is dependent on one time nutritional Mid-day meals that is provided in the schools and hence it is also mandatory considering the need to open schools[7].

[6]https://navbharattimes.indiatimes.com/india/corona-cases-in-delhi-corona-gurgaon-ncr-children-more-vulnerable-in-Covid-19-second-wave-in-india/articleshow/82077027.cms dated 15th April 2021

[7]The presentation made by Dr. Naveen Thacker in the Workshop held by Child Centric Disaster Risk Reduction Centre, National Institute of Disaster Management on April 24, 2021 on the Theme "Resurgences of Covid-19: Concerns & Safety of Children"

According to various report of epidemiologist and virologists, some new variants of Covid-19 like B117 have higher risk of infection for children and vaccination for kids are now the essential need of the hour. Children rarely develop severe forms of Covid-19 and fall to death, but now hundreds of such cases are being reported. Also on rare occasions (around one case in 1,000) kids who have experienced even mild infections can later develop a serious entity called MIS-C (Multi-System Inflammatory Syndrome in Children). Evidence is building that vaccines might block transmission of Covid-19, so vaccinating children would also have beneficial knock-on effects in the wider community[8].

Children's immune systems are different from those of adults and can vary significantly depending on their age. Children were not included in the initial trials for Covid-19 vaccines, so there is currently limited or no data on the safety or efficacy of vaccines for children below the age of 16. More research is needed and we will be updated about the recommendations as trials are conducted and more information becomes available[9]. The tolerability of new vaccine is major concerns for children because they usually show greater reactogenicity than adults. Many of the vaccine candidates have relatively strong side effects, low-dose vaccines might be needed for this age group, especially for AdV (Adenoviruses) & mRNA (messenger Ribonucleic Acid) vaccines.

Children are not little adults; we can't just assume a vaccine will have the same effect on a child as it does for someone older. Children's immune systems are brimming with cells that haven't seen pathogens, so they tend to produce a strong immune response to vaccines. Early trial results have shown that 12-15 years old who received two standard doses of the Pfizer–BioNTech vaccine developed substantially higher levels of virus blocking antibodies than did 16-25 years old in earlier trials. Before Covid-19 vaccines become available for younger teens and children, clinical trials need to be completed. This is to ensure they are safe and effective for what age groups of children. The major challenges of pediatrics are to show lack of interference with immunity generated by routine childhood vaccinations. It is important that vaccination should be integrated in National Immunization Programme of for safeguard of children. The safety concerns is paramount in clinical trials involving children[10].

According to Dr. J. Raj Kumar, pediatrician of Global Hospitals Chennai, “We have seen that COVID is going to exist for next two to three years, and it takes time to decline. Over the period and again we have seen, in the first wave that older people and people with comorbidities were affected and, in this wave, we see more younger people, between 30 to 45 getting effected and the problem of next wave is going to be children who will get severe symptoms and that is one aspect that we need to be careful about and on what we need to act upon earlier”. Important to mention that on May 05, 2021 Health Canada has approved a Covid-19 vaccine for use in children aged 12-15 years. The United States quickly followed the suit. Singapore has also approved vaccination for children ages 12-15. India's drug regulator has also accepted the recommendation of the

[8]Ibid
[9]UNICEF
[10]The presentation made by Dr. Naveen Thacker in the Workshop held by Child Centric Disaster Risk Reduction Centre, National Institute of Disaster Management on April 24, 2021 on the Theme “Resurgences of Covid-19: Concerns & Safety of Children”

Subject Expert Committee (SEC) and given a nod to the Hyderabad-based Bharat Biotech to conduct Phase II/III clinical trial of Covid-19 vaccine Covaxin in the age group 2 to 18 years. Children in India would be able to receive jabs of Covid-19 very soon to avert the 3rd wave of this deadly pandemic.

Covid 19 Vaccination: Status & Logistical Concerns

Ranjan

Vaccines are one of the most crucial modern health tools. It has potential to save lives. It create immunity by harnessing the power of our immune system and also to make this same immune response using weakened, dead, or non replicating microorganisms to create immunity (WHO). The same is true for Covid-19 popularly known as SARS CoV-2 (Severe Acute Respiratory Syndrome Corona virus 2). Although the spread of the virus can be mitigated through physical distancing, face coverings, and testing and tracing and potentially with therapeutics the risk of outbreaks and disruption to economic and social life will probably remain until effective vaccines are administered to large portions of the global population to prevent hospitalisation and severity of disease, and preferably achieve herd immunity to halt transmission of the virus[11]. To bring this pandemic to an end, a large share of the world needs to be immune to the virus. The safest way to achieve this is with a vaccine. Vaccines are the technology that humanity has often relied on in the past to bring down the death toll of infectious diseases[12].

A Covid-19 vaccine is intended to provide acquired immunity. Prior to the Covid-19 pandemic, there was an established body of knowledge about the structure and function of corona viruses causing diseases like severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), which enabled accelerated development of various vaccine technologies during early 2020[13].

On 10 January 2020, the SARS-CoV-2 genetic sequence data was shared through GISAID, and by 19 March, the global pharmaceutical industry announced a major commitment to address the issue[14]. In Phase III trials, several Covid-19 vaccines have demonstrated efficacy as high as 95% in preventing symptomatic Covid-19 infections. As of April 2021, 15 vaccines are authorized by at least one national regulatory authority for public use: two RNA vaccines (Pfizer–BioNTech and Moderna), six conventional inactivated vaccines (BBIBP-CorV, CoronaVac, Covaxin, WIBP-CorV, CoviVac and Qaz Vac), five viral vector vaccines (Sputnik Light, Sputnik V, Oxford–AstraZeneca, Convidecia, and Johnson & Johnson), and two protein subunit vaccines (EpiVacCorona and RBD-Dimer). In total, as of March 2021, 308 vaccine candidates are in various stages of development, with 73 in clinical research, including 24 in Phase I trials, 33 in Phase I–II trials, and 16 in Phase III development[15].

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[11]Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment Olivier J Wouters, Kenneth C Shadlen, Maximilian Salcher-Konrad, Andrew J Pollard, Heidi J Larson, YotTeerawattananon, Mark Jit

[12]https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/

[13]Li YD, Chi WY, Su JH, Ferrall L, Hung CF, Wu TC (December 2020). "Coronavirus vaccine development: from SARS and MERS to COVID-19". Journal of Biomedical Science. 27 (1): 104. doi:10.1186/s12929-020-00695-2. PMC 7749790. PMID 33341119

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Many countries have implemented phased distribution plans that prioritize those at highest risk of complications, such as the elderly, and those at high risk of exposure and transmission, such as healthcare workers[16]. The biggest vaccination campaign in history is underway. More than 1.54 billion doses have been administered across 176 countries. The latest rate was roughly 25.6 million doses a day. More than 1.54 billion doses have been administered enough to fully vaccinate 10.1% of the global population. About 150 million shots have been given, equivalent to 11.5% of India's 1.3 billion people (Bloomberg Data). According to a report from Lancet published in Feb 12, 2021, present original data from a 32-country survey (n=26 758) on potential acceptance of COVID-19 vaccines, conducted from October to December, 2020. Vaccine acceptance was highest in Vietnam (98%), India (91%), China (91%), Denmark (87%), and South Korea (87%), and lowest in Serbia (38%), Croatia (41%), France (44%), Lebanon (44%), and Paraguay (51%)[17].

Despite being the world's biggest producer of vaccines, India is suffering an internal shortage and has placed a temporary hold on all exports of AstraZeneca to meet domestic demand. According to Govt. report, India with biggest vaccine making capacity, only 14% immunized of 1.36 million people either with one or both doses of the vaccine as on May 21, 2021.[18]

The production of Covid-19 vaccines is limited by the highly concentrated situation of global vaccine manufacturing capacity and for increasing productivity of vaccine there is an urgent need to established relationships between the lead developers and contract manufacturers. There is need to focus on the core efforts to prepare for the delivery of a vaccine against the Covid-19.

The delivery services of vaccine should be in a safe manner for enhancing quality of services and building trust among people. It is also important to ensure strengthening substantial additional resources required for countries and partners like UNICEF & WHO for necessary technical support.

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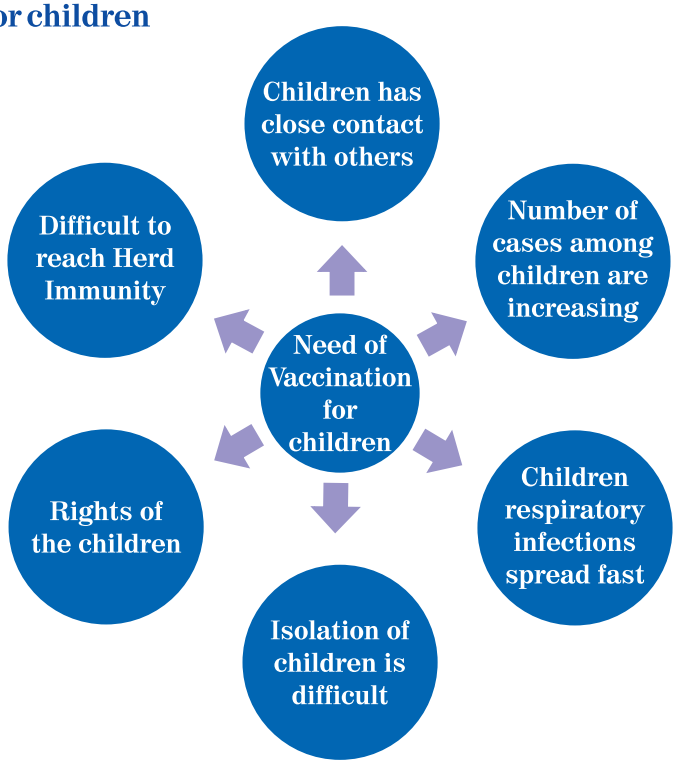
Need of Covid-19 Covid Vaccine for Children

Dr. Balu I

The resurgence of Covid is in which the numbers are skyrocketing in India , is hitting younger people and children - unlike the first wave when the elderly, and those with co-morbidities were seen to the most vulnerable group. Now a huge number of children below the age group of 18 are being infected, with some even having severe symptoms. Among the total cases, about 3.03 percent Covid positive cases are below the age group of 10 years whereas 6.73 percent of the total positive patients are between the age group of 11 years to 20 years. The Union health ministry data shows 79,688 children were infected in the five states are affected worst by the Corona Virus.

Now most children with mild or asymptomatic fight with COVD-19, but they can spread it to others who are not vaccinated and vulnerable. In children respiratory infections spread fast because of close contact and droplet spread.In a joint family system, a child could catch the virus and pass it on to other family members. Children are carriers of the novel coronavirus and can spread the disease easily to the others. It is "very important to safeguard the children" and the vaccination is the only way to safeguard them.

Need of Vaccination for children

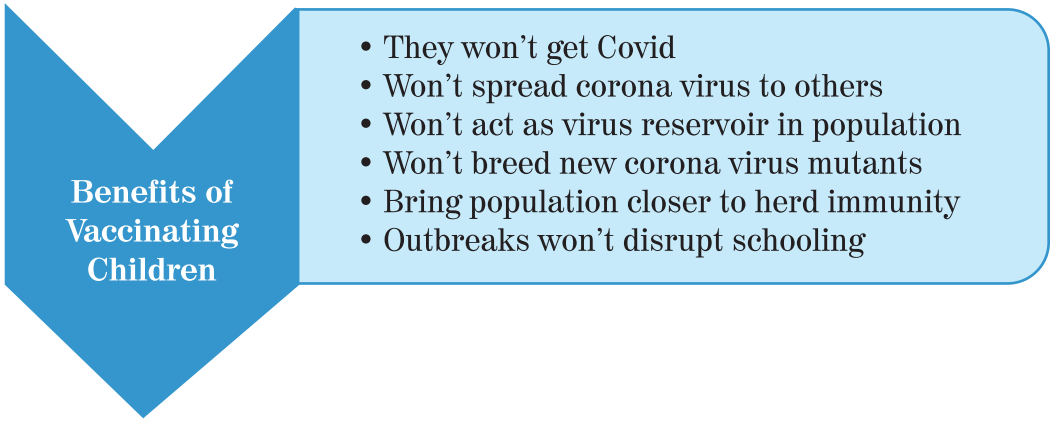


Children between 10-18 years are the most active age group where children play and mix with their friends and families. Quarantine of children below the age of 14 is very difficult as they always want to be with their parents. Therefore Vaccination for children especially in the age

group of 10-18 years will only help. From May 1, person aged 18 or above is eligible for a Covid vaccine. Out of country's total population of 1.3 billion, around 450 million are under 18 and, as such, no vaccine available.

Canada became the first country in the world to approve Pfizer's Covid-19 vaccine for ages as young as 12. The vaccines are not yet approved for person below 18 in India; Bharat Biotech is conducting phase 2 and 3 clinical trials of Covaxin in children aged 2-18 years. The number of medical companies conducting trials of vaccines for children is limited across the world.

Benefits of Vaccination for children



Children are future of our country. The COVID-19 pandemic disease outbreaks effects on children's education, mental health, protection and overall well-being. Vaccination can only deserve a life of children free from disease. It is the responsibility of stakeholders to ensure the Availability, Accessibility and Affordability of Vaccination for all children.



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