



ONLINE TRAINING PROGRAMME REPORT
ON
COMMUNICATION INFRASTRUCTURE RESILIENCE
IN RURAL AND TRIBAL COMMUNITIES IN INDIA

Date: 23 – 25 August 2022 | Time: 02:30 pm to 04:30 pm



Organized by
National Institute of Disaster Management
Ministry of Home Affairs, Govt. of India
in collaboration with
Community Radio Association, India

FOREWARD

Disaster management in itself is a continuous and ongoing process. It happens all year round and not only when disasters strike. Accurate information management and transmission are a part of Disaster Management. In all phases of the Disaster Management cycle- prevention, mitigation, preparedness, recovery, and rehabilitation precise data, timely information, and knowledge dissemination play a vital role. Early Warning System including accurate forecasting, warning, and alert dissemination in a densely and highly populated and disaster-prone country like India is always an important tool for mobilizing timely resources during emergencies. It is a well-known fact that broadcasting information about available resources, aid supply along warnings helps the community to prepare better according to the severity of the disaster. Community radio is an all-year-round, everyday medium, making it one of the perfect tools for community engagement and participation-based disaster management. Where community truly represents the many isolated communities that do not have reach to modern-day media.

The role of community radio is tremendous in natural calamities. Community radios are valuable assets for disaster management, also. During the time of emergency, it has been the most effective means to disseminate preparedness and relief-related information packed in their dialect. It helps in developing strategies and building awareness so that communities can prepare better in advance. Delhi are vulnerable to many hazards like fire, earthquake, flood, chemical explosion, building collapse, air pollution, road accident, and health hazards like pandemic COVID 19, dengue, chikungunya, etc. These hazards are increasingly putting its people, infrastructure, and environment at risk.

Therefore, to further equip these CR representatives with the knowledge and technical skills of resilient infrastructure this training programme would certainly contribute to strengthening the capacities of Community Radios and the community at large.

I hope the 3-day Online Training Programme on Communication Infrastructure Resilience in Rural and Tribal Communities in India Organised by the National Institute of Disaster Management in Collaboration with the Community Radio Association will provide insights on the role of CRA in Disaster Risk Reduction in and ensuring resilience in Communication infrastructure.



Dr. BS Panwar
President
Community Radio Station, India

ACKNOWLEDGEMENT

When communication infrastructure has been destroyed in a disaster, community radio stations play a major role in providing detailed disaster information. However, in India, these community radio stations are not well-recognized as a medium of disaster communication. They face a lot of issues in accordance with their respective region regarding institutional, infrastructural and financial support.

In this event, we have tried to highlight the needs of the CRS, recognizing their important role in disaster management and resilient communication infrastructure. This is also our first step to facilitating the preparation of resilient communication infrastructure across all the community radio stations in India. In the hope that the training would have unveiled the pathways for a more advanced role of CRS in Disaster Risk Reduction. These three days training programme have highlighted the needs and demands for mainstreaming them in the Disaster Management of the country. We have speakers from around the country to discuss these issues. At the outset, we would like to express our sincere thanks to the honourable Chief guest Shri Rajendra Singh (Honourable Member, NDMA and Former Director General, Indian Coast Guard), Special Guest Shri. Taj Hassan (IPS), Executive Director, NIDM & DG (FS, CD, HG), Ministry of Home Affairs, Govt. of India, Dr OP Singh country advisor in Royal Bank of Scotland & CEO of India Child Protection Fund, supported by Kailash Satyarthi Children Foundation of US branch and former IPS officer of Uttar Pradesh cadre, former DGP Uttar Pradesh & DG NDRF, Dr. B.S. Panwar (President, Community Radio Association of India), Shri. Surendra Thakur, Consultant &I/C (HR & Admin), with an additional charge of Joint Director, NIDM. I also thank the imminent speakers Shri Gauri Shankar Kesarwani, Additional Director (CRS), MoIB, GoI, Shri Rajeev Kumar Shukla (Ex. AD AIR), Prof. Chandan Ghosh, Head, Resilient Infrastructure Division NIDM, Mr. Gautam Banerjee and Mr. Kaustav Saha, CEO & Founder, Seven3 digital Pvt. Ltd.

It gives me immense pleasure in acknowledging your cooperation and I extend my gratitude to Dr. Garima Aggarwal, Senior Consultant (Resilient Infrastructure) NIDM, Mr. Shreyash Dwivedi, Junior Consultant, NIDM, Mr. Shaad Warsi, YP, NIDM and Dr. Tanushree Verma, Head (Training and Research), Zone4Solutions who immensely organized the training programme. I would also like to thank the participants and the supporting staff as without them it would not have been possible to organize the training programme.



Jayesh Joshi
Secretary General, CRA

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1 INTRODUCTION

The unique geo-climatic and socio-economic attributes of India have marked it as one of the highly vulnerable countries to different hazards in the world. Earthquakes, landslides, floods, droughts, tsunamis and cyclones are some of the major natural hazards that affect the country frequently. Human-induced disasters such as industrial accidents, fires and Nuclear-Biological-Chemical warfare are other events that have the potential to destroy humanity. It is a well-known fact that broadcasting information about available resources, aid supply along warnings helps the community to prepare better according to the severity of the disaster. With the availability of technology, in the recent few decades, disaster management methods have shifted from the post-disaster (response and recovery) approach to the pre-disaster (preparedness and mitigation) approach. This bottom-top pre-disaster approach emphasizes localized understanding and community preparedness to reduce damages and losses with reduced costs and recovery.

Disaster management in itself is a continuous and ongoing process. It happens all year round and not only when disasters strike. Community radio is an all-year round, everyday medium, making it one of the perfect tools for community engagement and participation-based disaster management. Where community truly represents the many isolated communities that do not have reach to modern-day media.

Community radio specializes in providing local information for the local people. In situations of Natural Calamities, often radio networks are the only surviving means of connection. Community Radio is a tool that is location specific and often in the local language/dialect making it the ideal tool for communication in such a situation. There are some instances in Japan and abroad in which community radio became the prime vehicle for information sharing for communities during disaster emergency relief as well as post-disaster recovery. Community radio also plays an important role in disaster risk reduction, especially in pre-disaster preparedness and mitigation through awareness raising that targets different community groups. However, in order for community radio to take its effective role, participation, involvement, ownership and capacity-building training of representatives of Community Radio Stations is extremely important.

In this context, the National Institute of Disaster Management in Collaboration with the Community Radio Association NIDM has organised an Online Training Programme on Communication Infrastructure Resilience in Rural and Tribal Communities in India from 23rd August 2022 (Tuesday) to 25th August 2022 (Thursday). M/s Zone4Solutions is providing technical support to Community Radio Station.

1.1 RATIONAL

In India, community radio stations are not well recognized as a medium of disaster communication. They face a lot of issues in their respective regions regarding institutional, infrastructural and financial support. Keeping in view CRA's collaboration with one4Solutions, a national-level program is organized to identify those areas of concern where the DRR process can be enhanced with the support of CRA. These events highlight the need for CRS, recognizing their important role in DRR. This highlights the needs and demands for mainstreaming them in the Disaster Management authority of the country. This is achieved through establishing resilience in communication infrastructure in rural and tribal communities of India

1.2 OBJECTIVE OF THE TRAINING

Community radio's accessibility, participatory, localized, customized, and deinstitutionalized characteristics make it unique and therefore, vital to reaching the last mile. Local communities can minimize emergency damage and raise the voices of vulnerable groups, especially women in such situations, which are often invisible. In India, community radio stations are not well recognized as a medium of disaster communication. They face a lot of issues in their respective regions regarding institutional, infrastructural, and financial support. Keeping in view CRA's collaboration with NIDM, organised a national-level program to identify those areas of concern where resilient infrastructure communication can play a vital role in minimizing the impact of any hazard. In this sense, the 3-day online training programme has facilitated civil Community Radio Stations representatives in expanding their knowledge base and improving their skills in disaster risk reduction while also enhancing their understanding and abilities of resilient communication infrastructure. They will be able to:

- Understand the basic concept of community radio and its history, challenges and gaps.
- Establishing inter-linkage between community radio and Disaster Risk Reduction.
- Role of community radio in mitigating the impact of disasters and issues & challenges faced by CRA.
- Techniques of Communication infrastructure resilience
- Identify the urban risks and vulnerable communities,
- Assist the communities to identify their possible contributions and assess their unique resources,
- They will be able to create awareness in the first line of emergency responders and community volunteers
- They will be trained assets who will guarantee that local voices are heard, acknowledged, and aided.

The quality and scope of this reaction might be crucial in limiting catastrophe consequences, preserving order, boosting optimism, and optimising recovery efforts.

1.3 APPROACH AND METHODOLOGY

- Programme will be delivered in online mode with the medium of delivery being primarily English and interaction could be held in Hindi.
- Lecture & Interactive session, and Slide Presentation on basic concepts of DRR, Community radio and elements of operational CRA.
- The discussion will also be held on scope, advantages and limitations as well as issues, challenges and opportunities in managing community radio services.
- of resilient infrastructure for communication networks will get established.

1.4 ABOUT THE ORGANISATIONS:

1.4.1 National Institute of Disaster Management (<https://nidm.gov.in/>)

National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Government of India is a premium institute and a Statutory Body (under Disaster Management Act 2005) for training, research, documentation, awareness and human resources and capacity development in the field of disaster mitigation and management. The institute emphasizes a multi-stakeholder interdisciplinary cross-sectoral approach for an efficient proactive continuum of disaster risk management based on participatory, integrated and multi-risk management concepts. The Institute's vision is to create a Disaster Resilient India at all levels.

1.4.2 Community Radio Association (<https://craindia.in/>)

Community Radio Association is a platform of functional and upcoming CR stations in India. As a Ministry of Information & Broadcasting (Government of India) recognized, not-for-profit organization, the Community Radio Association of India (CRA) strengthens community broadcasting by building station capability and by creating a healthy environment for these sectors to thrive and succeed. Community Radio Stations members are actively broadcasting nationwide that play a vital role in providing a voice to communities. The CRA's work falls into three key areas

- a) **Supportive Environment** – build a healthy environment in which community broadcasting can thrive.
- b) **Capability and Sustainability of Stations** – grow the capability and sustainability of stations by mobilization.
- c) **Community Radio Viability and Growth** – strengthen the community through capacity-building programs to enhance leadership qualities and awareness drives through the audio medium.

2 FLYER OF THE TRAINING PROGRAMME

75
आज़ादी का
अमृत महोत्सव

nidm
Resilient India - Disaster Free India

भारत

CRA >>>

Online Training Programme on
**Communication Infrastructural
Resilience in Rural and Tribal Communities in India**

23rd - 25th August, 2022 | 11:00 AM - 01:10 PM

Prime Minister's 10 Point Agenda No. 1, 5 & 8 on DRR

PATRONS

- Shri Taj Hassan, IPS
Executive Director, NIDM
MHA, Govt. of India
- Dr. B. S. Parwar
President,
Community Radio
Association, India

CHIEF GUEST

- Shri Rajendra Singh
Hon'ble Member,
NDMA, MHA,
Govt. of India

GUIDANCE

- Prof. Chandan Ghosh
Head,
Resilient Infrastructure
Division, NIDM, MHA,
Govt. of India

CONVENOR

- Dr. Garima Aggarwal
Senior Consultant (RID)
NIDM, MHA,
Govt. of India

EMINENT SPEAKERS

- Shri Gauri Shankar
Kesarwani
Additional Director (CRS),
MHA, Govt. of India
- Shri Rajeev Kr. Shukla
Former ADG, AIR
- Dr. Ashish K Panda
Central Secretariat Services,
Govt. of India
- Dr. Piyush Reutela
Executive Director, USDMA,
Govt. of Uttarakhand
- Mr. Kaustav Saha
CEO & Founder, Seven3
digital Pvt. Ltd
- Dr. Tanushree Verma
Head (Research & Training)
Zee4evolution

COURSE COORDINATORS

- Mr. Shreyansh Dwivedi
Junior Consultant (RID)
NIDM, MHA, Govt. of India
- Shri Shaad Warsi
Young Professional,
NIDM, MHA, Govt. of India

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Log in yourself, then enroll for
the upcoming Programme.
Get **Confirmation** after successful
completion of the Programme.

zoom
Meeting ID: 891 1822 7595
Passcode: ZONE4

Jointly Organized by: National Institute of Disaster Management
Ministry of Home Affairs, Govt. of India and Community Radio Association, India

Stay Protected from Corona
NO CARELESSNESS
UNTIL THERE IS A CURE

- Wear your mask properly
- Frequently wash your
Hands with Soap
- Maintain safe distance
- Clean Surface Regularly

3 PROGRAMME SCHEDULE

Time	Learning Session/Theme	Key Speakers
Day 1: Introduction, Overview & Perspective (23.08.22)		
11:00 am-11:05am	Introduction and Welcome Address	Shri, Surender Thakur, Consultant &I/C (HR & Admin), with additional charge of Joint Director, NIDM
11:05am – 11:10am	Context Setting and Overview	Dr. Garima Aggarwal, Senior Consultant, NIDM
11:10am-11:20am	Keynote address	Dr O P Singh, Former DGP Uttar Pradesh & DG NDRF
11:20am- 11:30am	Special Address	Mr. Rajender Singh, Member NDMA (Chief Guest of the Programme)
11:30 am-11:35 am	Vote of thanks	Mr. Nakul Kumar Tarun, Director, Zone4solutions
Technical Sessions		
11:35 am-12:15 pm	Session1: Basic concepts of community radio and its history- Indian Context	Shri Gauri Shankar Kesarwani, Additional Director (CRS), MoIB, GoI
12:15pm-01:00 pm	Session2: Role of community radio in Early Warning communication during disasters	Shri Rajeev Kr Shukla, Former ADG AIR
Day 2: 24.8.22		
11.00am-11:30 am	Welcome Address and Recapitulation of Day One	Dr. Tanushree Verma, Z4S Mr. Shaad Warsi YP, RI Division, NIDM, MHA, GoI
	Communication model of CRA for last mile connectivity	Video presentation
11:30 am – 12:15 pm	Session 3: Linkage between DRR and community radio	Mr. Nakul Kumar Tarun, Director, Zone4solutions
12:15pm- 01:00 pm	Session 4: Role of community radio in spreading awareness towards resilience building – Case study-based discussion	Dr. B.S. Panwar, President, Community Radio Association, India
01:00 pm-01:10 pm	Discussion/Question & Answers	To be moderated by Mr. Shreyash Dwivedi/Mr. Shaad Warsi, YP, NIDM
Day 3 :25.8.22		
11.00 am-11:10 am	Recapitulation of Day 2	Mr. Shaad Warsi, YP, RI Division, NIDM, MHA, GoI
11:10 am -12:00 noon	Session 5: Communication infrastructure Resilience Session5.1: Role of Modern Technologies in Establishing Robust Communications	Prof. Chandan Ghosh, Head, Resilient Infrastructure Division NIDM Mr. Gautam Banarjee,
	Session 6: Resilient Communication: Role of HAM Radio	Mr. Kaustav Saha, CEO & Founder, Seven3 digital Pvt. Ltd
12.50pm- 13.00pm	Discussion/Question & Answers	To be moderated by Mr. Shreyash Dwivedi, JC, RI Division, NIDM, MHA, GoI

4 TRAINING SUMMARY

4.1 DAY 1 (24.08.22): INTRODUCTION, OVERVIEW & PERSPECTIVE

4.1.1 Welcome Address by Mr Surender Thakur, NIDM

The event commenced with a welcome address by Mr. Surender Thakur Consultant &I/C (HR & Admin), with the additional charge of Joint Director, NIDM by warmly welcoming the prominent speakers, honourable guests of the day, and the participants and laid the foundation of the program by explaining crisply and briefly the essence of the three-day training programme. He talked about the role of CR during the COVID 19 pandemic and the vital



Figure 1: Mr Thakur giving welcome address

role it played in helping the country cope with the uncertain situation. He stressed how connectivity is a very important aspect of disaster management and the need for integration of connectivity and communication through robust infrastructure. He stressed that a smooth flow of information is only possible when there is a proper channel of communication for information exchange between all the stakeholders. He highlighted that good communication is the backbone behind any successful relief and rescue operation giving the example of various past disasters. He discussed that when communication infrastructure has been destroyed in a disaster, community radio stations play a major role in providing detailed disaster information. Early Warning System including accurate forecasting, warning and alert dissemination in a densely populated and disaster-prone country like India is always an important tool for mobilizing timely resources during emergencies. It is a well-known fact that broadcasting information about available resources, aid supply along warnings helps the community to prepare better according to the severity of the disaster. With the availability of technology, in the recent few decades, disaster management methods have shifted from the post-disaster (response and recovery) approach to the pre-disaster (preparedness and mitigation) approach. This bottom-top pre-disaster approach emphasizes localized understanding and community preparedness to reduce the damages and losses with reduced costs and recovery. He appreciated the role of CRS played to tackle these emergencies. . He then emphasized the importance of radio communication in rural areas which are not generally well connected and where CR is an essential means of communication. He stressed that technology-driven response and infrastructure are the need of the hour for the upliftment of CR in the country.

While discussing the importance of CRS for disaster management, he highlighted the paradigm shift in the perception of disaster management and the role of CRS pre, during and post-disaster.

4.1.2 Keynote Address by Former DGP Uttar Pradesh & DG NDRF



Figure 2: Dr. Singh addressing the participants

Dr Singh emphasised that disaster management and disaster risk reduction are not just about crafting soft skills and providing emergency relief services but constructing more resilient buildings post – disasters and communication is the backbone of any disaster management process. It is an umbrella of a set of actions to inability the physical, social, environmental and economic capacities of the community. He stated that disaster resilient infrastructure is not a personal

choice but a collective imperative for disaster risk reduction and needs to synergize coordinated response and we need to push this cause of resilient communication infrastructure. He highlighted that the training is important as it considers several challenges our country has been battered with for the last couple of years and natural disasters that are worsening problems all over the world. He further added that resilient disaster responses are needed which need to be flexible scalable as well as adaptable. He then discussed the various community radio facilities in Assam, WB, Bihar, UP, Noida, Gurugram and the roles they have played in Disaster Management. He emphasized the importance of communication and connectivity in humanitarian response and shared his experience with the Chennai flood (2016), Nepal Earthquake (2015), and J&K flood(2014) . Communication connectivity support not only in early warning but also relief management and ensuring relief supplies to the victims. He discussed the various challenges being faced by communication infrastructure during disasters based on his experience on Nepal Earthquake (2015). He also discussed the failure of communication systems during disasters and its impact on decision-making process. He further discussed the societal changes that have taken place as a result of urban and rural hazards. He stated that in a rapidly changing and inherently unpredictable world with no past for personal templates to fall back upon, as was seen in the case of the pandemic in recent years, crisis managers are always required continuously watch out for evolving risks for learning and also for resources. He laid emphasis on infrastructure in the process of disaster management circle in a more robust manner and within the chains are opportunities to the collective community and the convergence framework to add value which is why the three-day program is significantly relevant. He discusses that the appropriate allocation of resources during any disaster is important for the response process. He further discussed that reliable and serious communication is important and talked about VSAT satellite-based communication network and its effectiveness in Urban areas during Chennai flooding but in the rural area, CRS play important role in technology-driven infrastructure and responses. Thus, resilience is ensuring that communities are aware of various hazards and solutions thereof.

In this order, he highlighted the reasons behind the weak disaster management at the community level such as low morale, absence of recognition, lack of regular capacity development activities, lack of awareness, inadequate infrastructure, etc. Thus, the first responder must get skilled to respond effectively. He emphasised that such training and awareness workshops are essential to enhance the functional and territorial responsibilities of CRS realistically and cost-effectively so that after the training, they would become the key resource persons for awareness generation.

4.1.3 Inaugural Address: Mr. Rajender Singh, NDMA, Ministry of Home Affairs, Govt. of India

Ms Singh emphasized that role of community radio is tremendous in natural calamities. A public radio station with a reach of 15-20 km becomes highly powerful with the integration of mobile telephony in real-time. The Government of India released a policy that allowed well-established educational institutions to set up community radios in 2002. In order to promote development and social change, the government of India in November 2006, implemented new Community Radio Guidelines permitting Non-Profit organizations to own and operate community radio



Figure 3: Mr. Singh sharing his thoughts

stations. Today 322 stations are functional under Community Radio Association. Community radios have always considered simple solutions to major issues concerning the local community. Community radios are not just used during emergencies. As highlighted before, they are the agent of social behaviour change in the midst of COVID-19. He appreciated the timely initiative taken by the National Institute of Disaster Management in association with the

Community Radio Association and Zone4solutions to train representatives of community Radio through this Online Training Programme on Communication Infrastructure Resilience in Rural and Tribal Communities in India. However, despite their significance, community radio stations are not well recognized as a medium of disaster communication in India. They face a lot of issues in their respective regions regarding institutional, infrastructural and financial support. He further emphasised that:

- Hon'ble Prime Minister of India outlined 10 points agenda for renewing efforts towards DRR during AMCDRR 2016. It emphasizes imbibing the principles of disaster risk management in all development work, leverage technology to enhance the efficiency of disaster risk management efforts and building on local capacity and initiative to enhance disaster risk reduction.
- A proactive approach and established public awareness programs are needed where they introduced daily weather forecasting, disaster-resilient building techniques, and resource mobilization.
- During an emergency for the community radio station, it is essential to have an emergency wavelength with technically equipped people to operate such equipment/software. It helps to reach to all and work smoothly during disaster and post-disaster. There might be persistent demand to relocate the transmitters during a calamity.

COMMUNITY RADIO STATIONS IN INDIA

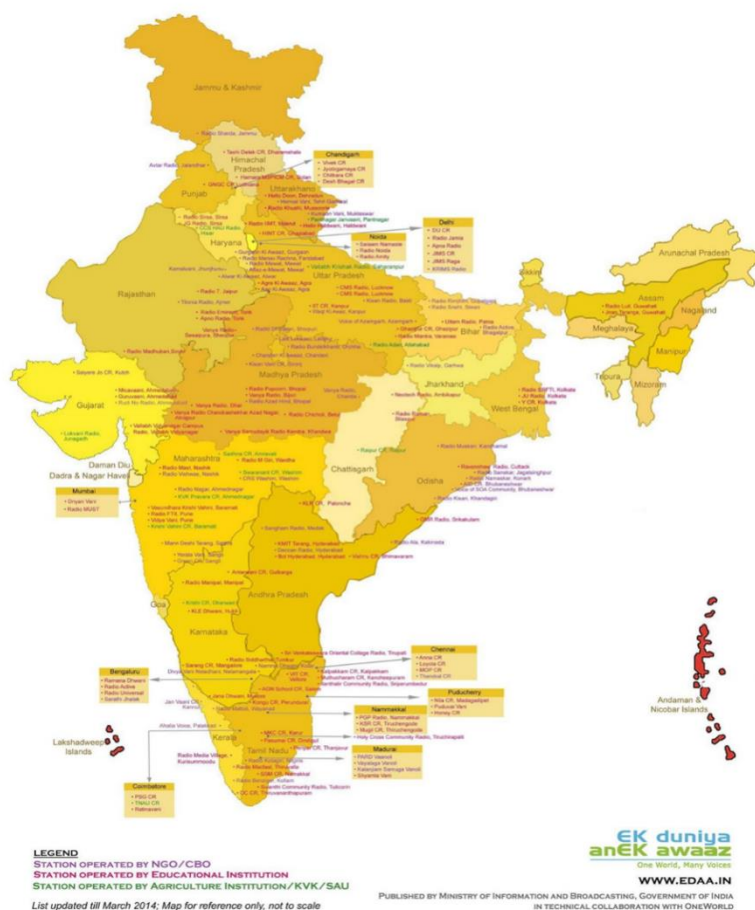


Figure 4: Locations of CRS

(Source: https://twitter.com/MIB_India/status/444004241254801408/photo/1)

- Organising State level training or skill-building workshops for state-level volunteers, NCC, academic institutions, etc on operating HAM Radios or establishing CRS.

- Multi-host broadcasting can help not only the campus but the community, especially to make them technically sound content during normal times and have more hands-on desks during emergencies. Additionally, building an online platform to interlink community radio is also essential so that they can share their knowledge and expertise. The program should be creative, interesting (such as folklore) and in their own language. This is how the DRR programs can become part of their cycle.

- Mainstreaming CRS in development planning via

PRI, SHGs etc can pave the way for the integration of CRs in DM as disaster management and development are recognized as two sides of the same coin.

- Connecting youth with community radios as an employment opportunity or a revenue model that can be developed in a way as youth are the face and future of India. So, DDMA can provide skill development training to utilize youth knowledge and a futuristic approach for DRR. DDMA can also attach a trained emergency team with each CR Station for disaster response in golden hours.
- Provisions for dialogue with the people; seeking support for CRs in designing seasonal emergency plans/programmes, disseminating programs, implementing and updating the program for risk reduction at the local level and making CR part of the District Disaster Management Authority.
- HAM radios to be provided space in the State/ District Emergency Operation Centre to get connected with the affected population and region administration.
- The community radios thus help the organization, institutions, volunteers and community itself to become a game-changer as agents of social change which will ultimately help in building a disaster-resilient community. Therefore, collaborative and cooperative efforts of all the stakeholders are needed for DRR.

4.1.4 Context Setting and Overview of the programme: Dr Garima Agarwal, Sr Consultant, RI Division, NIDM

Dr. Garima Aggarwal discussed the role of a reliable communication system during a disaster



event. She stressed how timely and accurate information during a disaster can save a lot of lives and help ease the process of relief and recovery. She gave the example of role of community radios during the COVID 10 pandemic and the vital role they played when the entire nation was in lockdown. She stressed that the delivery of information in the local language should not be overlooked. Further, the strengthening of rural and local populations must be carried out for local capacity building. She also

Figure 5: Dr. Agarwal addressing the participants:

highlighted how CR connects to the people, family and communities with the first responders supports the systems and their relatives and that reliable and accessible communication and information systems are key to the community residents. She also told that the training program has been designed to acquaint the participants with the importance of communication procedures and the role of community radio during disasters. She remarked that disaster and emergency management require preparedness and that to have successful response strategies and actions, the CRS capability must be reinforced. Therefore, through participation in the training programme, she encouraged the participants to expand their knowledge and share it with the community. She urged that training should serve as a milestone in developing the capacity of CRS to fight disasters at the proper time and place. It is designed as a comprehensive, proactive, multi-hazard, technology-driven training programme as an initiative to foster a community-based culture of preparedness for the future through a resilient communication infrastructure for rural and tribal communities.

4.1.5 Vote of Thanks: Mr. Nakul Kumar Tarun, Director, Zone4Solutions

Mr Tarun extended his gratitude to all the honourable guests, key speakers, and participants to organize such a training programme. He highlighted that training key stakeholders of DRR like CRA are a never-ending process. He also appreciated the CR for their exemplary role in providing services in their local dialect throughout India during the COVID crisis. He also emphasised that the training programmes of the community-based communication infrastructure need hours as the intensity and frequency of the disasters are increasing. Therefore, it is essential to prepare the community through CRS.



Figure 6: Mr Tarun: Vote of thanks

He also advocated for the organising a regional training programme for CRA looking at the local hazards of various zones of India.

4.1.6 Session1: Basic concepts of community radio and its history- Indian Context

Presenter: Shri Gauri Shankar Kesarwani, Additional Director (CRS), MoIB, GoI

Key Takeaways

- He highlighted some overlooked points during his discussion. He stated that CR in particular is good for rural and tribal people who don't have access to all the technology, unlike the urban areas, highlighting how the presence of CR is maximum in the cyclone-prone state of Odisha.
- He mentioned that it is imperative to identify organizations that can work with the locals, so that CR can reach even the most remote places. He also stressed how the process of obtaining the license for CR has decreased from 18 months to almost 3-4 months making it easier for people to obtain licenses.
- A centralised database for content related to disaster management should also be present, which will be accessible to all CR stations. Also, the CR should maintain a database of contacts of local administration, fire stations, police stations, hospitals and District Disaster Management Authority so that timely and proper conveyance of information can take place during the event of an emergency.
- Similarly, sponsor programs can be initiated as private CR needs long-term financial sustainability. He also highlighted how the Indian Institute of Mass Communication organizes training every year to train people in CR.
- He added that the role of district administration in including CR in the fabric of disaster management needs to be looked into. He also highlighted that NDMA was going to send an advisory to all the CRs while NIDM will help in capacity building. It was also mentioned how to focus one should also focus on mental health post disaster.
- He also introduced the concepts underlined in the training programme such as hazard risk vulnerability and resilient communication infrastructure, issues that will enhance the skills and knowledge base of CR.



Figure 7: Shri Kesarwani discussing about CRA

4.1.7 Session 2: Role of community radio in Early Warning communication during disasters

Presenter: Shri Rajeev Kr Shukla, Former ADG AIR

Key Takeaways

- He highlighted how the frequency and intensity of hydrometeorological and geological disasters have been rising while ecological degradation and climate change have

aggravated the already grim situation. He stressed that fact that the disasters cannot be prevented or stopped completely, only their impact can be mitigated.

- He went on to explain that radio is the medium of choice all over the world when a disaster is taking place and that radio holds a pivotal position since it has a better and larger reach, is easily affordable, and utilizes simpler technology that is constantly being improved upon.



Figure 8: Mr Shukla addressing the participants

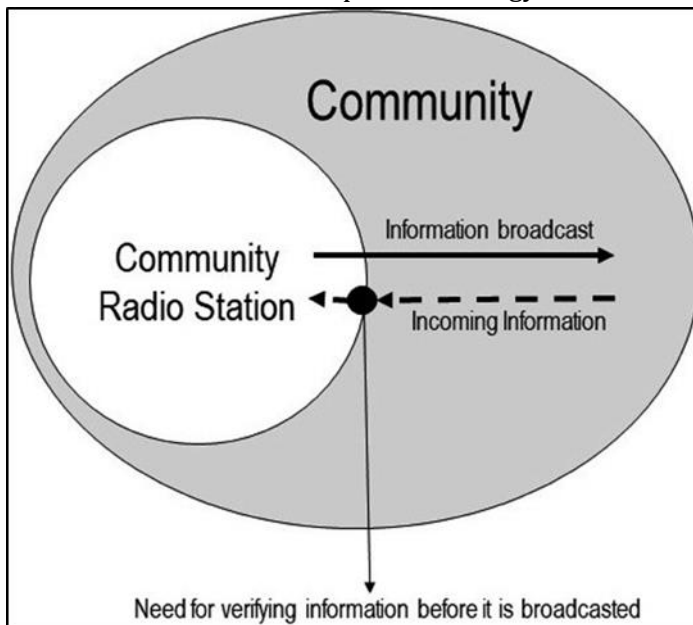


Figure 9: CRS Broadcast Process

- He then mentioned how the process of disaster management requires a sense of urgency and a focus on the dissemination of particular information when the threats of a natural disaster such as cyclones or tsunamis or floods loom large, there is both. At this point, a warning of disaster has to be issued. He mentioned that disaster warnings are given in two stages - early warnings and emergency warnings. He mentioned how the media can aid rescue and relief operations and keep affected people fully informed of the latest

developments.

- He further stated how the radio has the potential to be the most immediate, intimate, and accessible medium in the event of a disaster. He gave an example of disaster kits in the US, where apart from all the needy items, radio was also included in the kit for ensuring proper communication. He elucidated the role of AIR in the event of any disaster. All India Radio has continually



Figure 10: Presentation by Mr Shukla

rose to the occasion as the premier public service broadcaster of the country when disasters such as explosions, fires, landslides, bus & train accidents and air crashes,

cyclones, tsunami, floods, and earthquakes strike. Right now, in addition to the air, private radio channels as well as community radio stations also make a significant contribution to this industry.

- He highlighted how private radio channels, which have profit as their primary motive, are only able to devote very small-time chunks to the program. Nonetheless, he stressed how the community radio stations have the potential to offer sustained last-mile connectivity across the entirety of the disaster management communication process.
- He also stressed how the reports need to be precise and verified with the utmost care, while precise, factual, and responsible reporting is a must to dissuade rampant rumour-mongering during and after a disaster. Also, it becomes imperative to disseminate this information timely and accurately, shutting down any kind of sensationalization. He further stressed how media professionals should remain in touch with authorities from Government, meteorological departments and also those handling law and order so that credibility is maintained.
- He added that measures such as direct hot-line connectivity between agencies like NDMA, SDMA, IMD, CWC, GSI, ETC and the respective nearest radio stations particularly in the disaster vulnerable areas would facilitate faster communication and action thereon



Figure 11: Group of Day One

4.2 DAY 2 (06.04.22): COMMUNICATION,

Dr. Tanushree Verma kicked off Day 2 of the three-day online training programme by highlighting that CR is for the community, of the community, and by the community. It has emerged as a vibrant medium for strengthening our democracy and governance and it is an important instrument for community empowerment. She also laid down details forthcoming later in the day. Recapitulating Day-1 was provided by Mr. Shreyas Dwivedi. The participants also shared their experiences and what they learned from the training so far.



Figure 12: Mr Shreyash Dwivedi moderating the programme

Session 3: Linkage between DRR and community radio

Presenter: Mr. Nakul Kumar Tarun, Director, Zone4solutions

Key Takeaways

- He highlighted how CR helped spread the message of school safety and the importance of vaccination in every village and town in our country, implying the innate capability of CR in disaster management.
- He then highlighted the multi-hazards faced by our country, like floods, earthquakes, landslides etc. emphasizing how risk-prone our country is and how imperative DRR is. He stressed the fact that disasters cannot be stopped but the losses can be significantly reduced by reducing the vulnerability. Based on these eye-opening facts, he stressed the need for DRR and why it is important to mitigate the causal factors of disasters.
- He also emphasised how strengthening emergency operations and building community capacity through the use of CR can help in DRR. He gave the example of the Jammu floods and the Bhuj earthquake where disruption in communication due to widespread destruction lead to chaos in the relief and rescue efforts as many officials were cut-off and were inaccessible.



Figure 13 Mr. Tarun interacting with participants



Figure 14: Role of CR in DRR

- He then explained in detail the emergency support functionalities (ESFs) identified by the Government of India and how the first ESF identified is satellite and radio communication. He also said that around 8000 CR are required in India as per the 2008 data, while at present there are only 366, so there is a huge gap in communication. He then took the example of floods and the role of CR. He explained how about 12% of India is prone to floods (40 million hectares) and what steps can be taken to mitigate and reduce the risk. He explained how CR can spread these mitigative measures like evacuation tips for people, dos and don'ts of disasters, use of first aid etc. to local communities in local languages and build awareness. He also stressed how CR can also help spread warnings in times of disaster. He then concluded his session by stating that CR and DRR go hand in hand.

4.2.1 Session 4: Role of community radio in spreading awareness towards resilience building – Case study-based discussion

Presenter: Dr. B S Panwar, President, Community Radio Station, India

Key Takeaways

- He began by highlighting that we have some specific hazards that are based on our geographical conditions, the topography of our country, and a much-diversified bunch of culture in terms of logistics and demography. So, we have this disaster-related issues cropping up every year, year after year and the pandemic has been another hazard that has come. With all these things coupled with the kind of population which we have, it is obvious that we are going to face natural disasters.
- He highlighted how the limitation of resources in our country makes DRR a challenge for the government as well as the local bodies which face a tough time balancing and optimally utilizing the limited resources. Consequently, one should think of long-term perspective which is where the integration of CR and DRR comes into the picture as it is high time that this is incorporated into the national policy framework through the medium of this online program. This inclusion in the national policy framework as no matter who is in the position to make the change, the problem will always persist.



Figure 15: Dr Panwar Addressing the audience

- He briefed the audience about the relevance of community radios in DRR such as low-cost medium, especially suited for remote communities and reaching affected populations when other means of communications are disrupted. This was introduced on World Radio Day observed on 13th February each year.

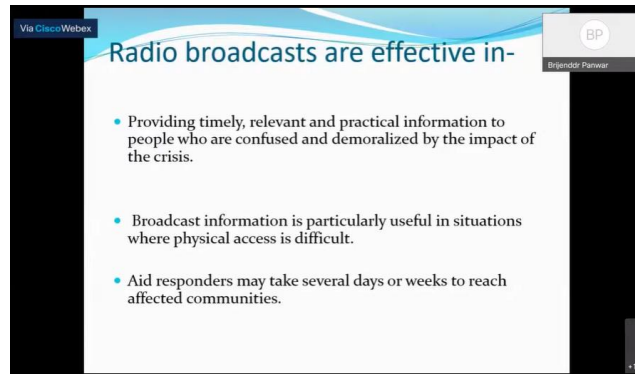


Figure 16: Presentation slide addressing the role of cr in DRR

- Disaster management and DRR is a continuous process, therefore, community radios are the perfect tools for community engagement and participation-based disaster management as a medium of interaction between policy implementors and the community. In other words, cost-effectiveness, accessibility, and inclusiveness of community radio create an ecosystem to nurture community awareness and engage with the issues, holistically and on daily basis.
- He provided insights on the pre, during, and post-disaster facilities provided by community radio:

Pre-disaster	During Disaster	Post Disaster
<ul style="list-style-type: none"> ○ Broadcast Public Awareness Campaign ○ Promote social initiatives ○ Disseminate warning and alerts ○ Reflect plan of emergency responses ○ Develop DM network of state agencies, NGOs, CSOs -national, regional and local ○ Board cast and conduct public meetings 	<ul style="list-style-type: none"> ○ Disaster Warning dissemination ○ Mobilize volunteer groups ○ Broadcast about emergency evacuation ○ Debunk rumors and hoax ○ Broadcast timely updates, safe zones and medium to reach ○ Provide platform for govt, donor agencies and NGOs to interact. 	<ul style="list-style-type: none"> ○ Coordinate with authorities for efficient rescue and relief operations ○ Provide platform to interact and share traumatized experiences ○ Broadcast awareness and messages about relief camps, management of mass death, waste disposals, WASH, etc. ○ Coordinate for Need assessments

- Mr. Panwar also shared the role of HAM Radios, the wireless communication network in disaster management and suggested the connection of HAM radio availability and the community radios. Additionally, he recommended that government and local government have to be more open to working with community radios in order to have better results in emergency response and promote DRR activities.
- He then shared how developed countries are developed because they have a process for everything, which is why the integration of CR and DRR into the national framework is

the need of the hour. He talked about how they have organized regional training programs like in the coastal belt, Himalayan range and the plain and arid regions. He remarked how there is no dearth of talent in CR and how the CR strength is going to double in the next one year with positive support from various government agencies.

- He also talked about the need for training of CR officials at district levels by a master trainer so that they are more capable, the need for content related to DRR and how integration CR is required despite the setup being present. He also highlighted the need to promote upcoming school-based radio stations and provide them with relevant support.
- He also shared the Success Story of Uttarakhand Floods and Community Radio in June 2013, the North Indian State of Uttarakhand faced multi-day cloud bursts. This triggered flash floods and landslides. This mass destructive calamity is said to be India's worst natural disaster since the 2004 tsunami. The death toll was high, people had lost their homes and all their belongings and with all modes of communication lost, there was a state of panic. This natural disaster brought to light the

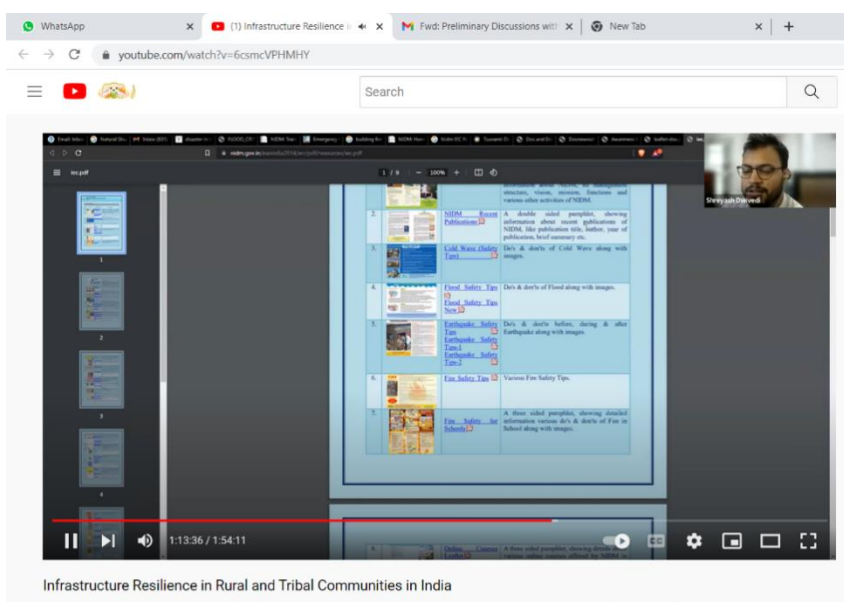
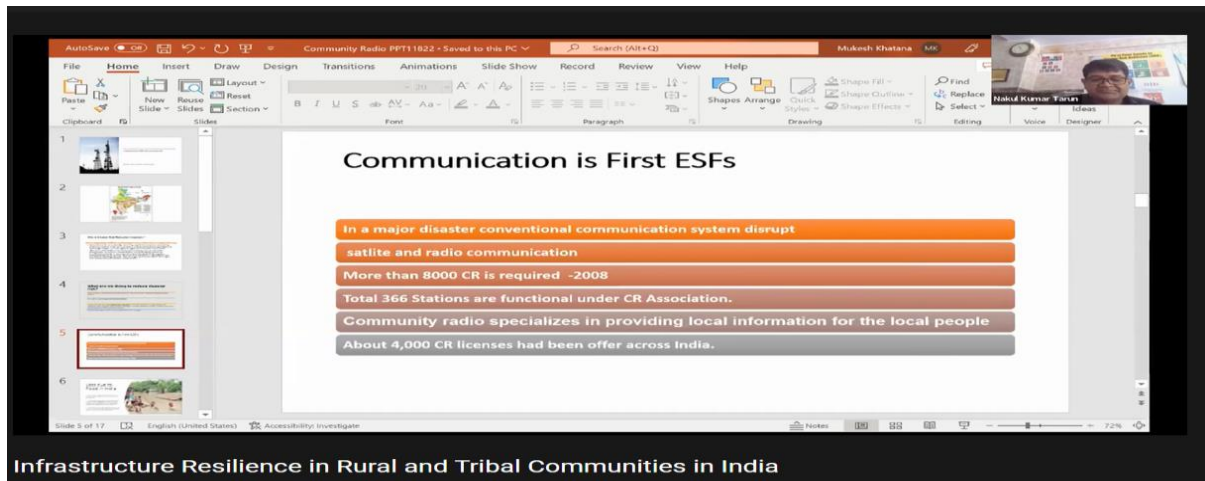


Figure 17: Role of NIDM: Mr Shreyash Dwivedi

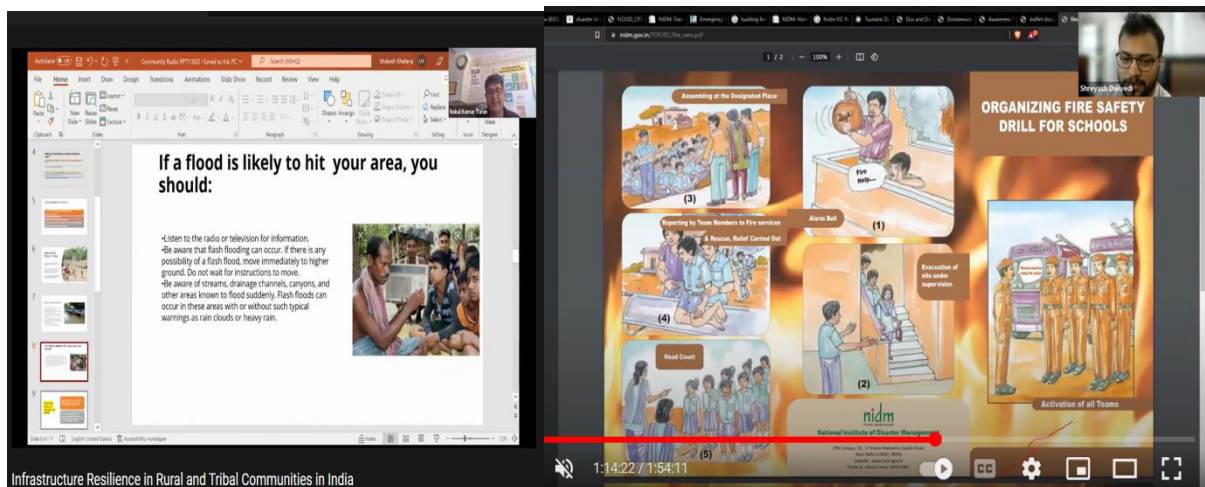
need for Community Radio as a tool for disaster management. Rudraprayag district, where the Mandakini River flows, was the worst hit. Bhanaj, which is in the Mandakini River valley region of Rudraprayag, is where Peoples Power Collective is working with the Community Radio station Mandakiniki Awaaz. The calamity led to the project being temporarily halted, but the People's Power Collective and Mandakini Ki Awaaz team decided to assist the community to their best and also took the opportunity to make a case for community radio as a tool for disaster management.

Further, Mr. Shreyash Dwivedi outlined the role of NIDM in Disaster Management through a video. The video stated that disasters are both natural and human-induced like floods, droughts, landslides, avalanches, earthquakes, tsunami, chemical nuclear emergencies, and epidemics. We suffered at the hands of these calamities and suffer heavy. Disasters also disrupt development leading to a slowdown in the economic growth rate therefore to be able to achieve the desired targets of sustainable development goals SDGs, progress should remain resilient. Hence the Prime Minister's 10-point agenda for disaster risk management is taken for sustainable development and economic and social resilience. In the backdrop of the international decade for natural disaster reduction, a National Centre for Disaster Management was established in 1995 in the Indian Institute of Public Administration by the Ministry of Agriculture. The centre gained

impetus with its redesignation as the National Institute of Disaster Management (NIDM) under the Ministry of Home Affairs which was constituted under the Disaster Management Act 2005, which was constituted as a premier institute for training and capacity building for disaster management.



Infrastructure Resilience in Rural and Tribal Communities in India



Infrastructure Resilience in Rural and Tribal Communities in India

Figure 18: Glimpse of Day 2 of the programme

4.3 DAY3 (07.04.22): RESILIENT COMMUNICATION INFRASTRUCTURE

Dr. Tanushree Verma kicked off the Day 3 of the three-day online training programme by highlighting that CR is for the community, of the community and by the community. It has emerged as a vibrant medium for strengthening our democracy and governance and it is an important instrument for community empowerment. She also laid down details forthcoming later in the day.

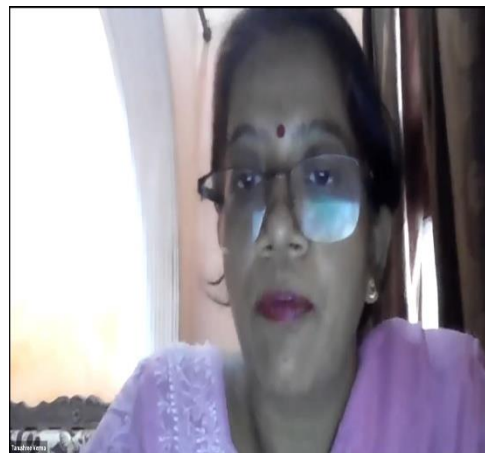


Figure 19: Dr Verma welcoming participants

Recapitulating day 2 was provided by Mr. Shaad Warsi. He stated that the presence of the community radio in every phase of the disaster, disaster mitigation, preparation, early warning, response, recovery, and revitalization is essential for the exchange and sharing of information and dialogue among residents as well as the enhancement of that community. CR is an ideal tool because it has deep roots in the community, bonds among the people and maintains a community identity. The participants also shared their experiences and what they learned from the training so far.



Figure 20: Recapitulation of day 2 by Shaad Warsi

4.3.1 Session 5: Communication Infrastructure Resilience

Presenter: Prof. Chandan Ghosh, Head, Resilient Infrastructure Division NIDM

Key Takeaways

- Prof. Chandan Ghosh, Head, Resilient Infrastructure Division, NIDM, MHA, GoI, gave a presentation on “Communication Infrastructure Resilience”. He talked about the importance of theory classes along with practical knowledge. He showed the landslide site he was at during the time of the session remarking how effectively he could communicate using battery-operated speakers, mic and smartphone.
- He told all the listeners that along with a group of 50 students from a nearby college, he was going to start mitigation measures by planting samplings along the landslide site. This was he demonstrated live the role of communication in disaster management from a remote location on the side of a national highway.
- He discussed how upcoming technologies such as the 12000 constellations of starlink satellite network by SpaceX will help reach even the most remote corners of the planet, providing breakfree communication, through the use of wireless communication using satellite-based infrastructure. He stated that India will soon join the starlink network and improve its communication infrastructure.

- He also stated usage of drones and balloon-based communication systems will overcome the shortcomings of 4G networks, which depend heavily on generators.
- He also emphasized site selection for communication systems before starting mitigation work.

4.3.2 Session5.1: Role of Modern Technologies in Establishing Robust Communications

Presenter: Mr. Gautam Banarjee, Alertus Technologies



Figure 21: Presentation BY Mr. Banerjee

your mobile phone which is the first way of communicating through mobile short message service (SMS). However, it has its own limitations of handshaking when we want to send SMS to millions of people at once. Handshaking refers to the fact that when we send a message from one mobile to another mobile, the telecom operator of the center always checks with the receiver whether the number exists or not. This leads to lag time between the receiver and the senders and creates a bottleneck. He then gave a brief introduction of C-DOT technology in Location-based services, Cell broad technology, FM radios from regional places.

- He explained how L-bus technology or location-based technology can help send messages to people by simply selecting an affected area over Google maps. He also highlighted how cell broadcast technology can transmit over 10 million messages in less than a minute. This has the disadvantage that we do not know who received the messages unlike in SMS. He then discussed the TV override including DTH services and the importance of community radio with High power speakers array in NCRMP.
- He further discussed the advantages of VSAT over fiber optics. He also discussed the High-Power speaker array that this kind of smart speaker can be used in case of any predictable incidents like cyclones, flash floods, lightning, gas leakage, road accident, etc. He explained how the range can be upto 2-3 kilometers for live announcements depending on the tone used.
- He also explained the lightning warning systems which activate when severe weather threatens human lives and safety, facilities and businesses, which are almost 95% accurate. This leads to faster lead times helping people reach safety. He also highlighted the role of the Incident Management System – based on NIDM in connecting local people for project implementations. The system takes care of every decision and will guide the

- **Mr. Gautam Banerjee**, began the session by stating that any agency or any authority can connect with the masses during the disaster or even after the disasters using very advanced communication systems and technology available nowadays throughout the world like with over TV, and with mobile.

- He explained how one can send emergency messages using

next steps to be taken based on the severity of the disaster. He further explained how these platforms are data hungry, and work best with the bulk of data.

4.3.3 Session 6: Resilient Communication: Role of HAM Radio

Presenter: Mr. Kaustav Saha, CEO & Founder, Seven3 digital Pvt. Ltd.

- He talked about HAM radios, how it works, and its functions. He said that the HAM radio is a two-way communication and can act as the last mile of communication when mobile communication has gone down or the mobile towers have lost power. In instances like these where there is no electricity to charge phones or provide power, community radio comes up to the forefront for the rescue which works even without a power supply. He highlighted how these resilient communications can absorb or mitigate the effects of a disruptive challenge or circumstances that disrupt normal life.

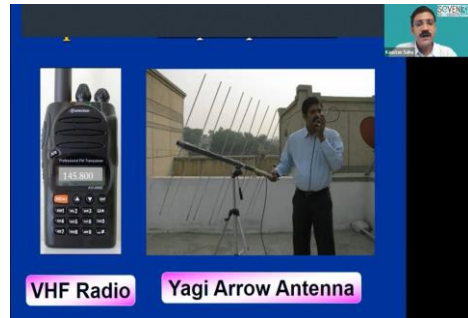


Figure 22: Mr Saha addressing the participants

- He showed communication satellites that are launched into space and how communication happens. He explained how an image is transferred from one station to another using a radio signal via a HAM radio satellite and then decoded using SSTV decoding software like MMSSTV or with Robot360 on the receiving end.

- He further explained how this process works in real-time and that it is used by people not affected by the disaster (the receivers of the message) to propagate the message further. He introduced the International Space Station orbiting the earth 400 kilometers above the surface and how constant radio communication is maintained with it using VHF radio.

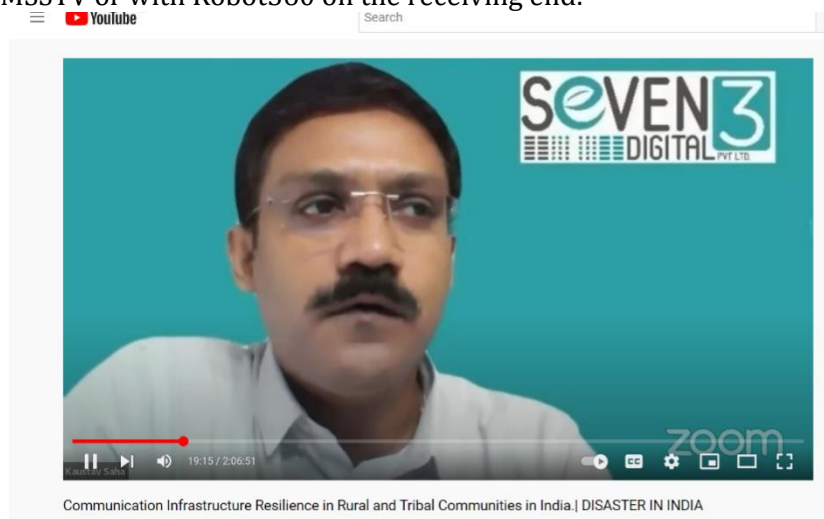


Figure 23: Presentation by Mr. Saha

- He in brief explained the working and design of the VHF radio and Yagi Arrow Antenna. He also highlighted the role of HAM radio in past Nepal earthquakes and HUD cyclones. He further explained the guidelines and regulations for operating a radio communication system.

Dr. Garima Aggarwal, Senior Consultant, NIDM gave a way forward and concluding remarks towards the end. She discussed the importance of various technologies in spreading awareness and conveying information to local communities. She reiterated the role of HAM satellites in



resilient communication in coastal areas and during the lack of power supply and the application of SSTV decoding software as it is free, innovative, unique, and easy to use. She thus concluded the highly successful and informative three-day session on “Online National Consultation on Communication Infrastructure resilience in rural and tribal communities in India”.

Figure 24: Dr. Garima summarising the training programme

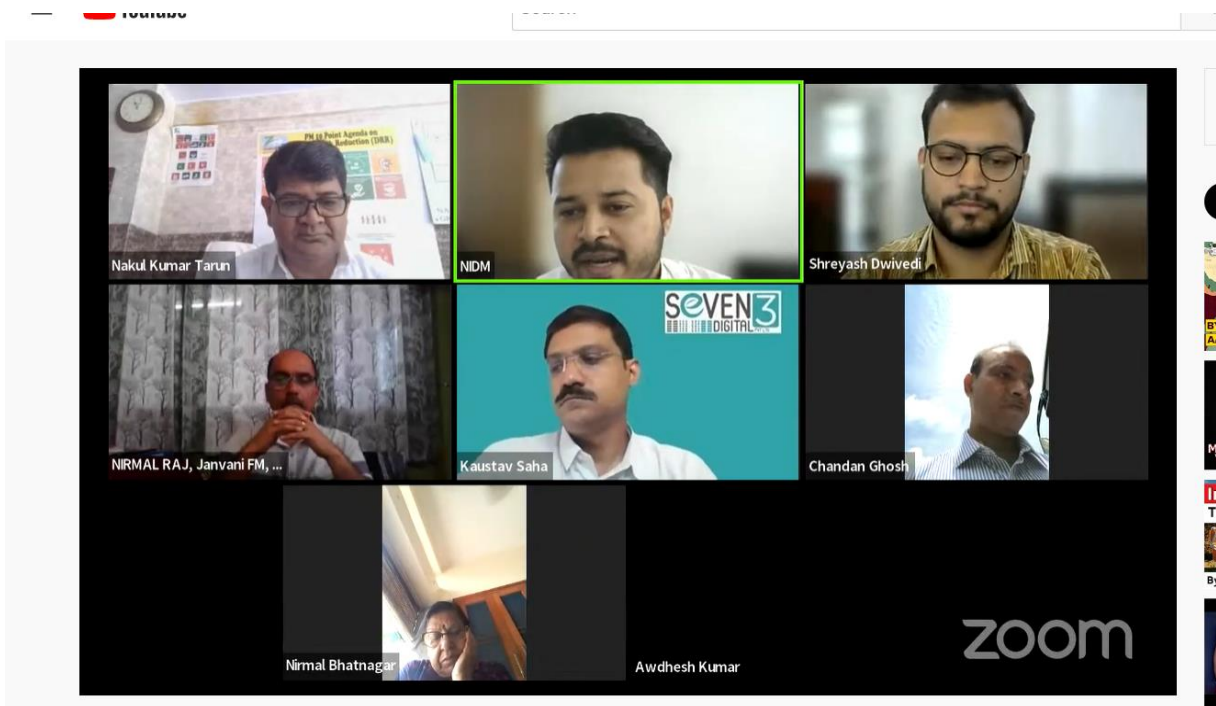


Figure 25: Glimpse of interactive session at the end

5 RECOMMENDATIONS AND WAY FORWARD

Thoughts on Future Steps



Figure 26: Future steps for strengthening CRA

6 KEY TAKEAWAYS

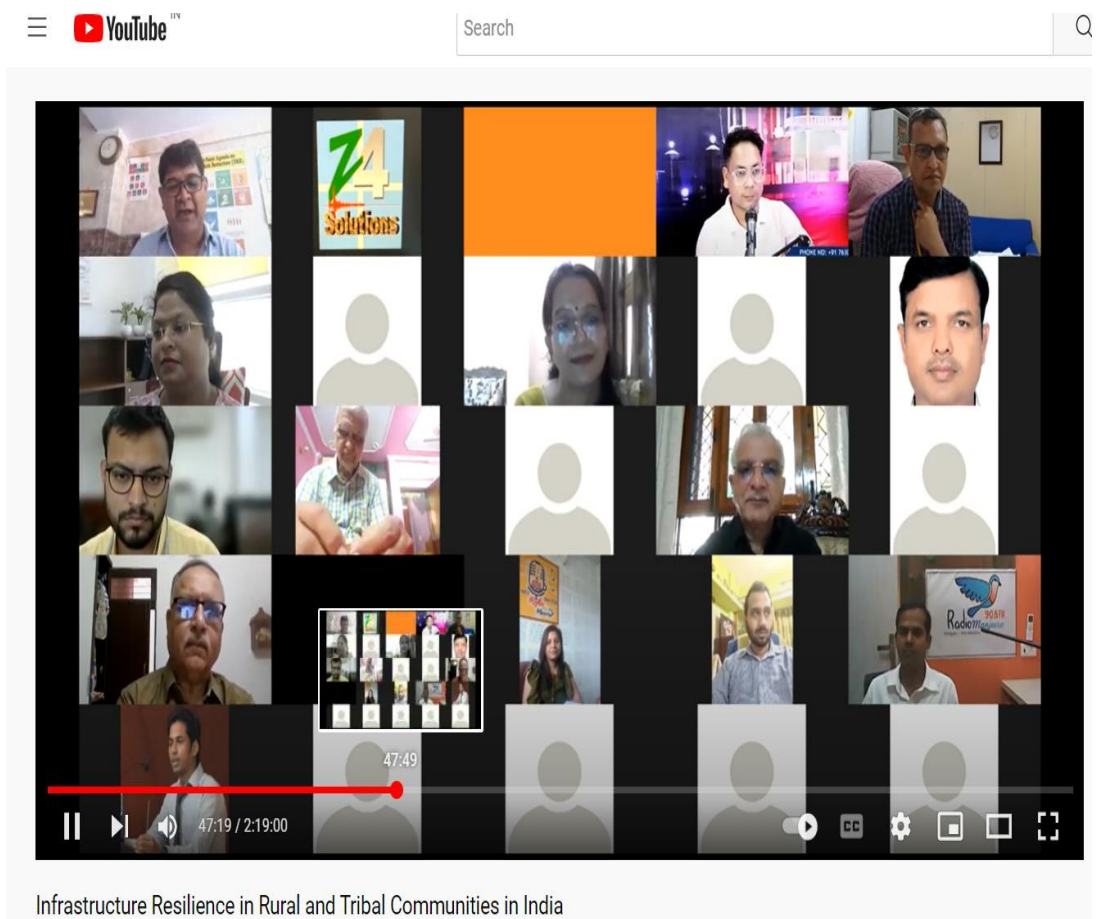
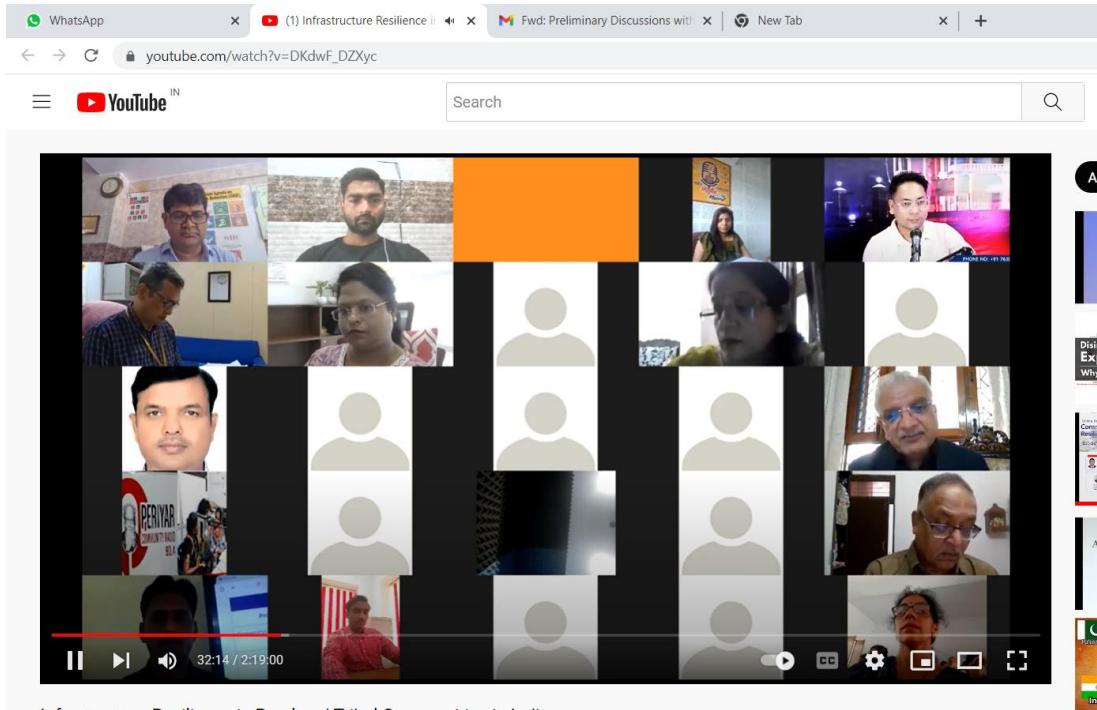
Based on above three days online webinar some of the recommendations are as follow:

- Disaster resilient infrastructure is not a personal choice but a collective imperative for disaster risk reduction.
- Radio has the potential to be the most immediate, intimate, and accessible medium in the event of a disaster.
- Integration of connectivity and communication for seamless exchange of information between different stakeholders.
- Need and importance of last mile connectivity through CR and synergy between media and DM by ensuring credibility.
- Strengthening rural and tribal populations through reliable CR. A set of more comprehensive and effective guidelines, policy (technical advisory) to run a community radio station.
- Technical, managerial support and training for establishing and smooth running of the community radio station in the vulnerable regions and to optimize the existing ones
- Budgets and procedural support for skill training and CR community development.
- Establishment of an Emergency Response Team of CR community to provide support to CRs in the disaster-affected region.
- Establish emergency frequency/ wavelength and provision to provide support to community radios like student radios on campus to operate at the multi-host level.
- Training students, red cross and state volunteers to operate amateur radios and community radios to build youth capacity.
- Strengthening emergency operations and building community capacity through the use of CR.

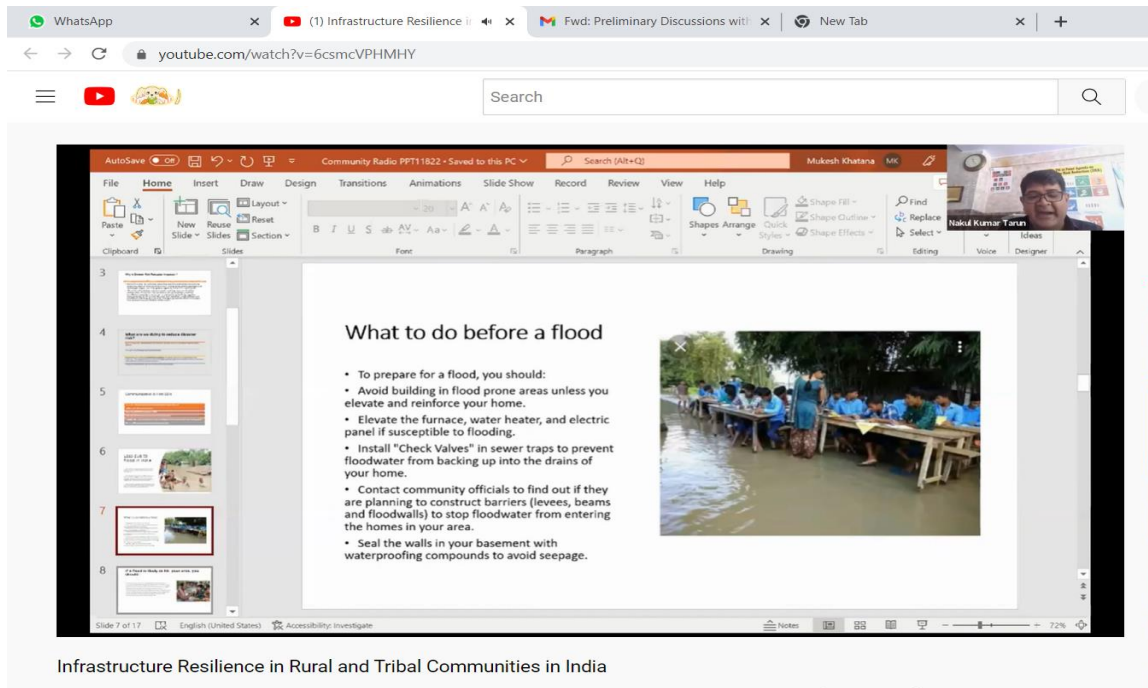
7 ANNEXURE

7.1 PHOTOGRAPHS DAY 1





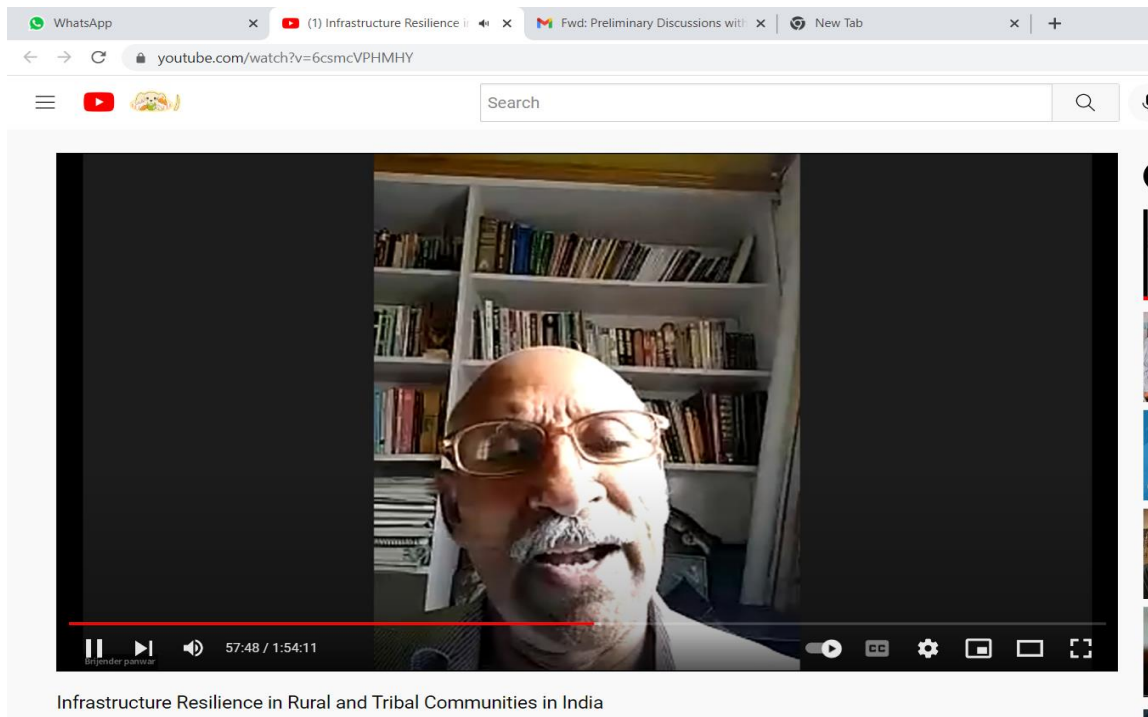
7.2 PHOTOGRAPHS DAY 2



The screenshot shows a web browser window with a YouTube video player. The video content is a PowerPoint presentation slide titled "What to do before a flood". The slide lists several preparation steps:

- To prepare for a flood, you should:
- Avoid building in flood prone areas unless you elevate and reinforce your home.
- Elevate the furnace, water heater, and electric panel if susceptible to flooding.
- Install "Check Valves" in sewer traps to prevent floodwater from backing up into the drains of your home.
- Contact community officials to find out if they are planning to construct barriers (levees, beams and floodwalls) to stop floodwater from entering the homes in your area.
- Seal the walls in your basement with waterproofing compounds to avoid seepage.

The slide also features a photograph of a group of people sitting at long tables outdoors, possibly in a community meeting or classroom setting. The video player interface includes a search bar, navigation icons, and a video title: "Infrastructure Resilience in Rural and Tribal Communities in India".



The screenshot shows a web browser window with a YouTube video player. The video content is a close-up shot of a man with glasses and a mustache, speaking. He is positioned in front of a white bookshelf filled with books. The video player interface includes a search bar, navigation icons, and a video title: "Infrastructure Resilience in Rural and Tribal Communities in India". The video progress bar shows the video is at 57:48 out of 1:54:11.

WhatsApp (1) Infrastructure Resilience Fwd: Preliminary Discussions with New Tab

youtube.com/watch?v=6csmcVPHMHY

Search

1:38:27

1:39:44 / 1:54:11

Infrastructure Resilience in Rural and Tribal Communities in India

AutoSave On Community Radio PPT11822 - Saved to this PC Search (Alt+Q) Mukesh Khatana MK

File Home Insert Draw Design Transitions Animations Slide Show Record Review View Help

Clipboard Paste New Slide Reuse Slides Layout Reset Section Slides

Font Paragraph Drawing Editing Voice Designer

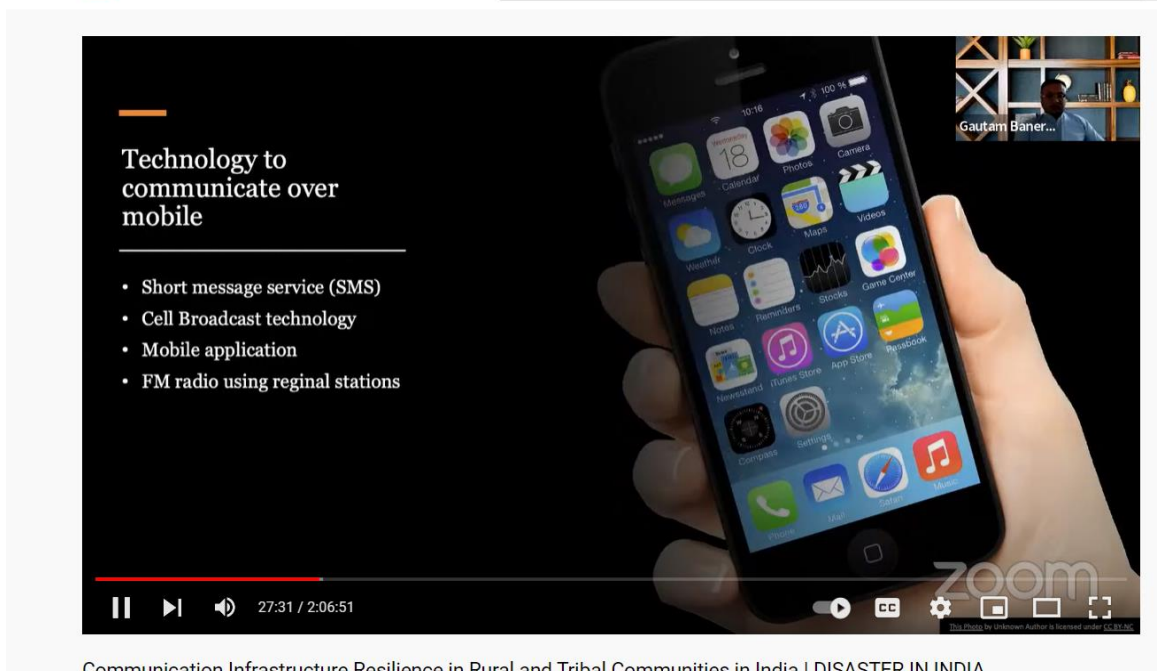
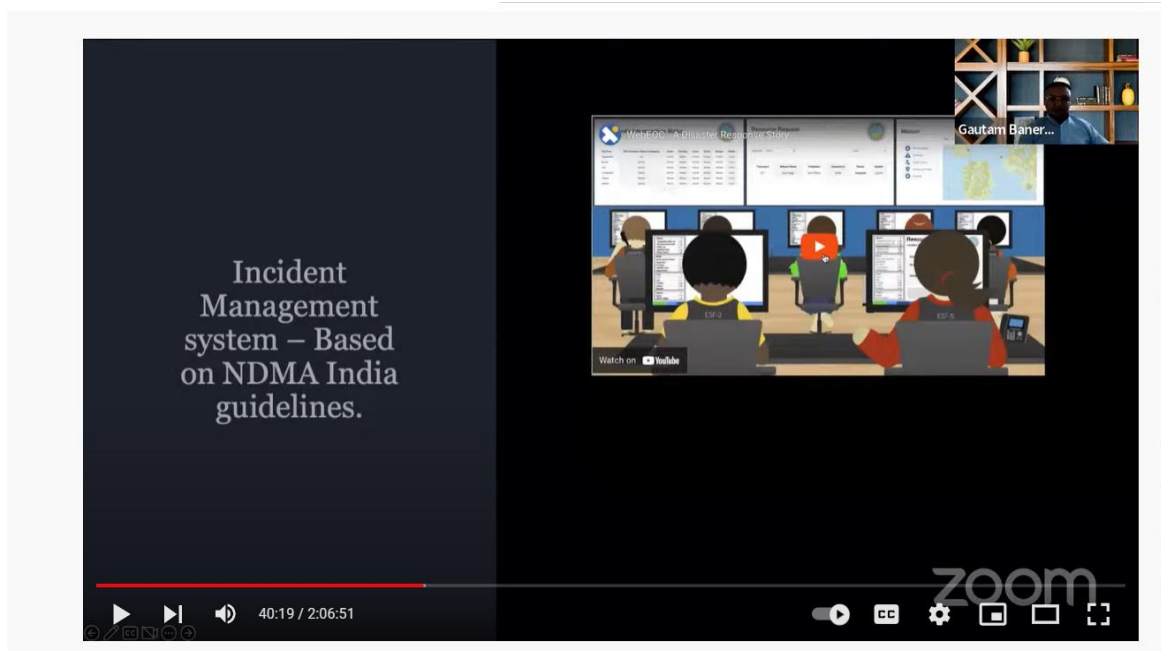
Why is Disaster Risk Reduction important ?

- Natural hazards are naturally-occurring physical phenomena caused by either the rapid or slow onset of events having atmospheric, geologic and hydrologic origins on solar, global, regional, national or local scales.
- Disasters often follow natural hazards and they are a result of the combination of hazards, the conditions of vulnerability and of the insufficient capacity or measures to reduce the potentially negative consequences of the hazard. Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyse and reduce the causal factors of disasters.

13:56 / 1:54:11

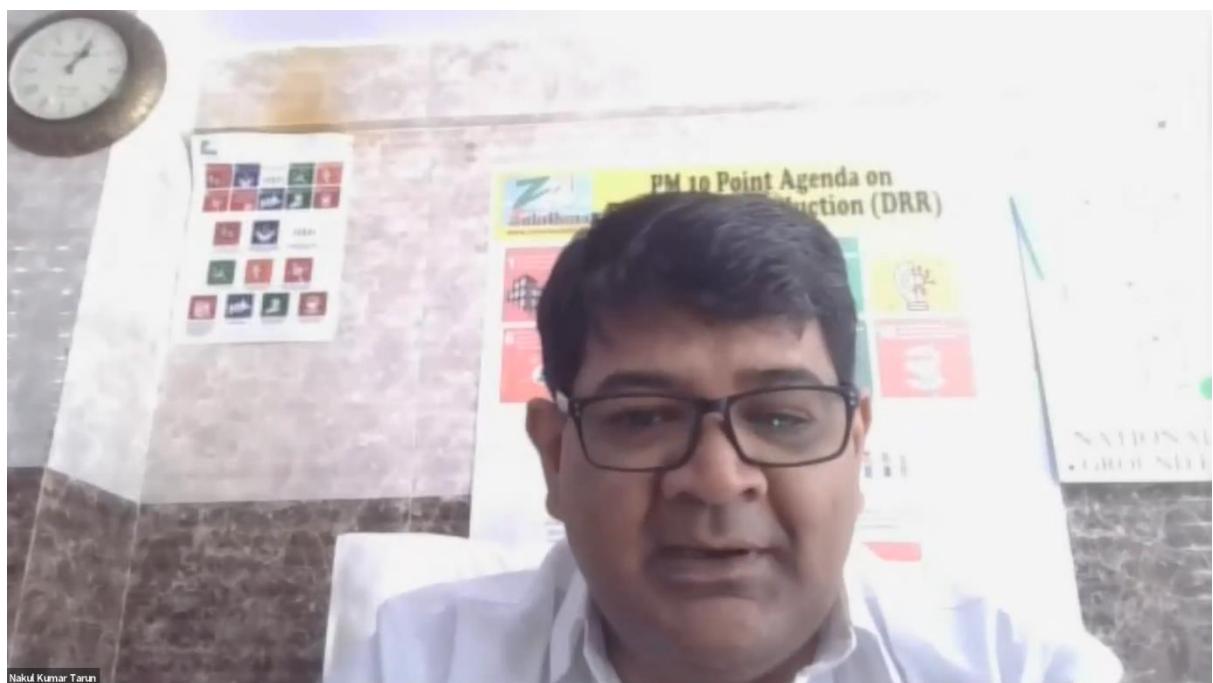
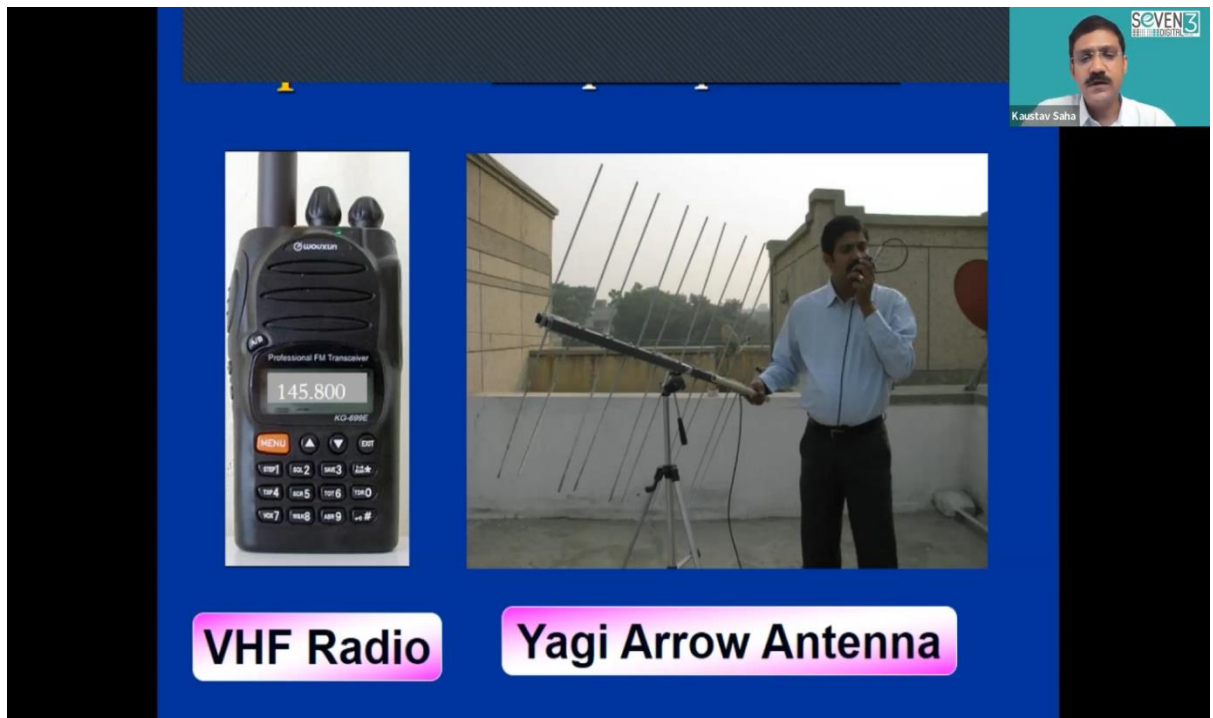
Infrastructure Resilience in Rural and Tribal Communities in India

7.3 PHOTOGRAPHS DAY 3



Communication Infrastructure Resilience in Rural and Tribal Communities in India. | DISASTER IN INDIA





7.4 YOUTUBE LINK

Day 1: <https://youtu.be/-VGunmBpKnA>

Day 2: <https://youtu.be/R2l e7h7ToE>

Day 3: <https://youtu.be/K-D8bzS4YEQ>

Print media news coverage [CRS: Bridging the communication gap](#)
(dailypioneer.com)

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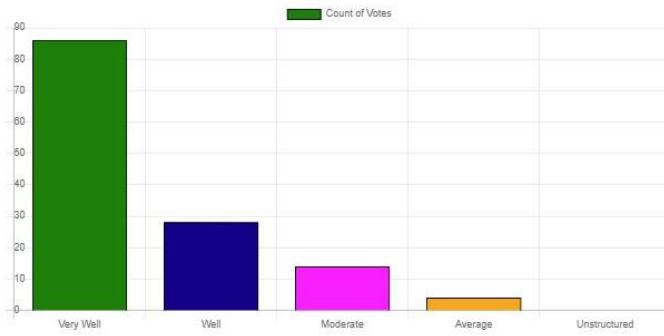
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217	Vigneswaran Vicky	vignesh18586@gmail.com
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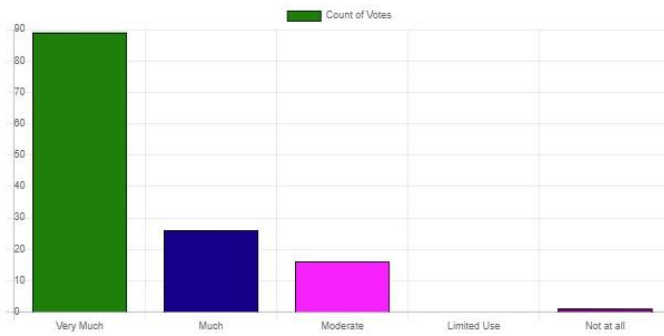
7.6 FEEDBACK

Feedback Result

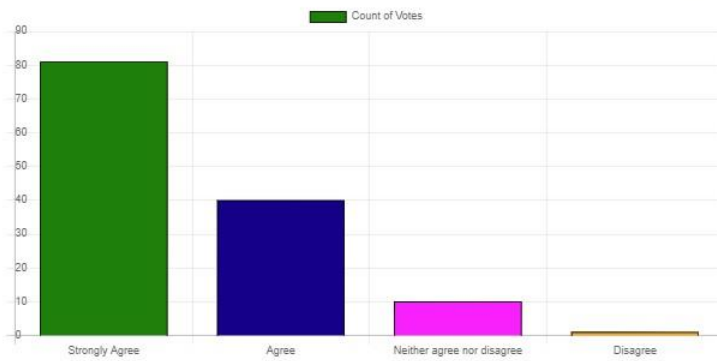
I think the structure and organization of the course fulfilled the objectives of the Training programme.



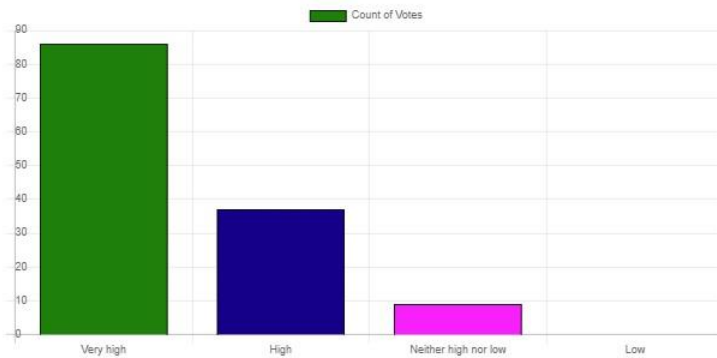
I feel this programme would be useful to me immediately in my job.



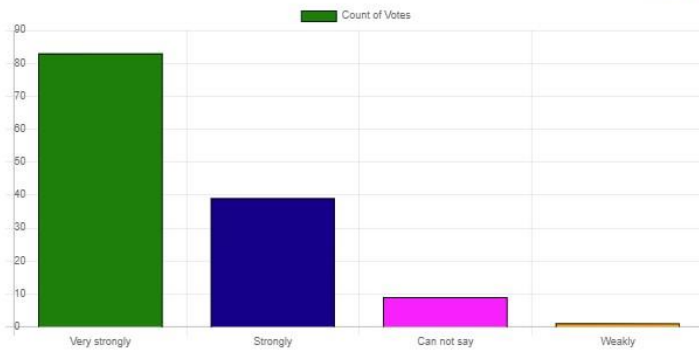
I believe this will help me in my future job related to Disaster management.



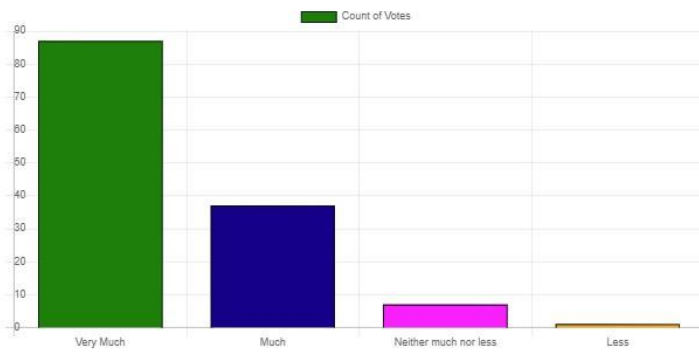
Practical orientation of the Training programme.



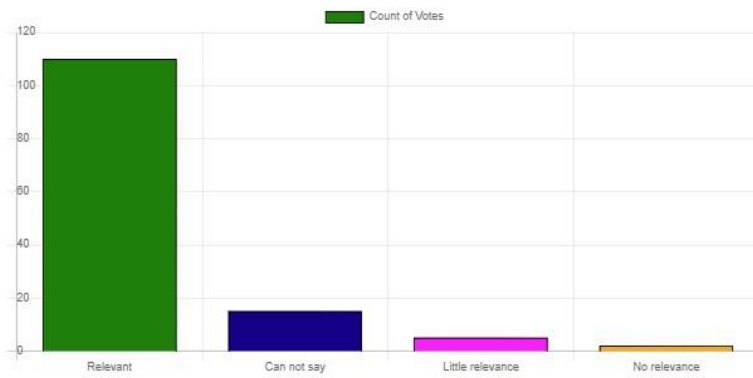
I feel this inspires me to take up assignments related to Disaster Management.



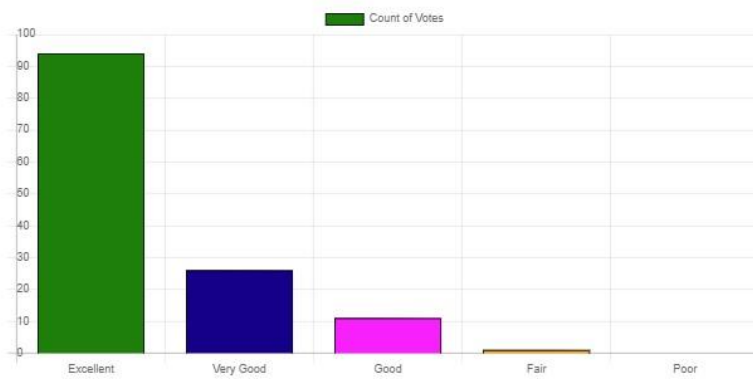
I have benefited from interaction with fellow participants in the course.



I found the course materials supplied to us to be



Your overall impression of the training programme.



7.7 SAMPLE OF CERTIFICATE

		Sl. No.: /  Resilient India - Disaster Free India
NATIONAL INSTITUTE OF DISASTER MANAGEMENT (Ministry of Home Affairs, Govt. of India) New Delhi		
CERTIFICATE		
This is to certify that		
Participant Name		
has participated in the online training on " Communication Infrastructure Resilience in Rural and Tribal Communities in India " from 23 Aug 2022 to 25 Aug 2022 organized by National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India in collaboration with Community Radio Association		
 Dr. Garima Aggarwal Senior Consultant NIDM	 Dr. B.S. Panwar President Community Radio Association India	 Taj Hassan, IPS Executive Director NIDM