Resilient India : Disaster free India

TIDINGS

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Highlights

MESSAGE

It is indeed a month of exciting developments with the institution taking up the setting up of new centers for areas of Disaster Management (DM) which were not mainstreamed in NIDM. The restructuring of NIDM into 21 new centers and 6 divisions will pave the way for the growth of the institution into world class academic Centre of Excellence. The faculty assigned with the responsibility of the centers has started their work whole-heartedly. It was also the month which heralded the entering of monsoon in the country heading to farmers starting agriculture operation. The monsoons starting on time has brought much cheer to the farming community as well as NIDM as the faculty has shed their inhibitions and started collaboration with other academic institutions.

Hope the good monsoons will bring a bountiful crop to the farmers and also NIDM will grow and flourish to be the Centre of Excellence for Disaster Management for the region.

(B.H. Anil Kumar)

National Programme on "Flood Risk Management"

11th - 15th June 2018

Five days' workshop on 'Flood Risk Management' was organized at NIDM on 11th - 15th June 2018. Senior and middle level officers/trainers from Urban development, Irrigation & Flood Control, Agriculture, Animal Husbandry, Revenue, Health, PHED, PWD, Road & Bridges, Food & Civil Supplies, Environment & Forests, Police, Civil Defence, Municipal Corporations, Panchayati Raj, Rural Development and Fire & Emergency Services, attend the programme

The participants made aware about Basic Concepts of, Disaster Risk Reduction in Flood Risk Management, Flood Forecasting and Early Warning System & Role of Strategic preparedness tools in flood management, National Guidelines on Floods, Health aspects in floods & Geo-informatics Applications in flood Disaster risk reduction etc.

The Programme was organized with aim to provide the knowledge of disaster management and an overview on flood scenario of India, participants are also give an overview on use of various structural and non-structural measures for preparedness and mitigation during floods and role of Remote Sensing, GIS, GPS and communication technology in flood management. Thirty five participants from different states participated in the training.

National Programme on "Early Warning and Communication"

18th- 22nd June 2018

National Programme on "Early Warning and Communication" was organized at NIDM from 18th to 22th June 2018. Participants from Haryana, Jharkhand, Maharashtra, Odisha, West Bengal, Andman & Nicobar, and Delhi participated in training. Lectures, Presentations, Videos, Group Exercise, Panel Discussion and Institute visit to IMD to convey the theoretical and practical knowledge of Early Warning and Communication to the participants.

Officials from State Disaster Management Authorities (SDMAs), AIR, DTRL, DDMA, NDRF GJUST, Nagar Panchayat, NABM, and HAM etc. The aim programme was to provide the knowledge of the concepts of disaster risk management and to promote understanding of the needs and gaps in early warning and communications for disaster situations.

Promote linkages among stakeholders from disaster management and nodal agencies for early warning and communication and enables the participants to explore possibilities for disaster resilient communication systems, technologies and networks for early warning.

Training of Trainers Programm on Incident Response System (IRS): Basic & Intermediate

25th – 29th June 2018

Five days training of Trainer program on Incident Response System from 25th – 29th June 2018 at New Delhi. Thirty seven participants from different states participated in the programme. Officials from Revenue, Fire Services and Police attended this ToT Level Programme.

Programme started with introduction to IRS covering its usefulness, history and evolution. In formal inaugural session, Prof. Santosh Kumar elaborated about the relevancy of IRS in managing crises situation in a planned way.

The final session of the programme Shri Sanjay Kumar DG NDRF as chief guest delivering the valedictory address, explained about NDRF and replied to the queries raised by the participants.

The aim of the course is to provide an knowledge on the IRS and to sensitize the participants on disaster risk in India and its implication on sustainable development.

Activities

Forests face many hazards, but the most common hazard is forest fire. Forest fires are as old as the forests themselves. They pose a threat not only to the forest wealth but also to the entire regime of fauna and flora seriously disturbing the bio-diversity, the ecology and environment of a region. During summer, when there is no rain for months, the forests become littered with dry senescent leaves and twigs, which would burst into flames ignited by the slightest spark.

Vulnerability- The most vulnerable stretches of the world are the youngest mountain ranges of Himalayas. The forests of Western Himalayas are more frequent vulnerable to forest fires as compared to those in Eastern Himalayas as the latter grow in high rain density. With large scale expansion of Chir (Pine) forests in many areas of Himalayas, the frequency and intensity of forest fires has been increased since 1990.

The causes of Forest fires can broadly be classified into three categories:

1. Natural causes such as lightning or controlled forest fires.
2. Forest fires caused by heat generated in the litter and other biomes in summer through carelessness of people (human

neglect i.e. throwing away of a smoldering bidi, cigarette butt or a spark from a picnicker's open-hearth in a desiccated forest) and

3. Forest fires purposely caused by local inhabitants.

Forest fires differ depending upon its nature, size, spreading speed, behavior etc. Basically, this can be sub grouped into four types depending upon their nature and size as follows:

Underground Fire- Underground fire is the fire of low intensity consuming the organic matter beneath and the surface litter of forest floor is sub-grouped as underground fire. In most of the dense forests occurring in the wetter parts of Himalayas, a thick mantle of organic matter is finding on top of the mineral soil. This fire spreads in by consuming such materials. These fires usually spread entirely underground and burn for some meters below the surface

Surface Fires- Surface fire is "A fire that burns surface litter, other loose debris of the forest floor and small vegetation. This is the most common type of fire in timber stand of all species.

Ground Fires- Ground Fire consumes the organic material beneath the surface litter of the forest floor. In many forest types, particularly in northern latitudes, at higher elevations, and in bog areas in all locations, a mantle of organic material accumulates on top of the mineral soil. These fires are often hard to detect and are the least spectacular & slowest moving. Fighting such fires is very difficult and tedious job.

Crown Fires- Crown Fire is a fire that advances from top to top of trees or shrubs independently of the surface fire. In dense conifer stands on steep slopes or on level ground, with a brisk wind, the crown fire may race ahead of the supporting surface fire. This is most spectacular kind of forest fire. Since it is over the heads of ground force it is uncontrollable until it again drops to the ground, and since it is usually fast moving it poses grave danger to the fire fighters becoming trapped and burned.

IMPACTS ON BIOLOGICAL ENVIRONMENT

The burning of vegetation gives off not only carbon dioxide but also a host of other, noxious gases (Greenhouse gases) such as carbon monoxide, methane hydrocarbons, nitric oxide and nitrous oxide, that lead to global warming and ozone layer depletion. So, the people suffered from serious respiratory problems due to these toxic gases. Burning forests and grasslands also add to already serious threat of global warning. Forests play a vital role in keeping the level of carbon dioxide in the atmosphere in check. Recent measurements suggest that biomass burning may be a significant global source of methyl bromide, which is an ozone depleting substance. The recent forest fires in the hills including Uttarakhand forest fire 2016 may be only a small part of the overall global problem. But if looked from the point of view of the fragile Himalayan ecology, they portend a dark future and making them more vulnerable towards the secondary effects of soil erosion and landslide.

PREPAREDNESS AND MITIGATION MEASURES

Forest fires are usually seasonal. They usually start in the dry season and can be prevented by adequate precautions. Different State Governments are aware of the severe damage caused by fires to forests and ecology of the area. Successive Five-Year Plans have provided funds for forest fire fighting. Traditional methods of fire control are inadequate and limited in India. The modern methods of fire control are yet to be placed on the ground in the required measure. During the British period, the fire was prevented in the summer through removal of forest litter all along the forest basis. This was called "Forest Fire line ". This line used to prevent fire breaking into the forest from one compartment to another. It proved effectively, and the collected litter was burnt in isolation. Generally, the fire spreads only if there is continuous supply of fuel (Dry vegetation) along its path.

The best way to control a forest fire is, therefore, to prevent it from spreading, which can be done by creating Fire Breaks in the shape of small clearings of ditches in the forest. Use of water is usually the last resort, as delivering water on to the fire in dense forests on hill slopes, is usually a tricky job. In many developed countries, special aircrafts equipped with water tanks are used to drop tones of water on the burning trees. Unfortunately, in India, there is as yet no proper action plan to control forest fires.

POLICY ON FOREST FIRE (Rehabilitation and Response)

Every year one-third of all forests are damaged or affected by fire, and so an effective policy of forest fire on preparedness

& mitigation is extremely important. It was in this context that the modern forest fire control project was taken up in some districts of Uttarakhand in 1985. The area proposed to be covered was 3, 72,693 hectares. The following parameters can be understood through these preventive measures:

- Operational Guidelines for the Centrally Sponsored Scheme 2017 of Forest Fire Prevention and Management (FPM) Development and demonstration of modern fire control techniques.
- Preparation of division wise fire management plans.
- Estimation of forest fires & Full fire protection of timber depots
- Estimation of forest fires & Full fire protection of timber depots.
- Development and application of a forest fire danger rating system/
- Training of personnel
- Manufacture of fire finders and hand tools within the country and standardization of fire control equipment.

Dos and Don'ts

- Try to maintain FOREST BLOCKS to prevent dry litter from forests during summer season.
- Try to put the fire out by digging or circle around it by water, if not possible to call a Fire brigade.
- Move farm animals & movable goods to safer places.
- During fire listen regularly to Radio for advance information & obey the instructions cum advice.
- Forests Officials, Local peoples and Tribal living in Forests should play a constructive role before, during &

after the fire of the Forest.

- Follow the effective monitoring & warning systems
- Teach the causes and harm of fire to your family and others.
- Do not be scared when a sudden fire occurred in the Forest, be calm & encourage to others & community to overcome the problem patiently.
- Do apply seasonal mitigation measures i.e. Fuel reduction

What one should not do

- One should not throw smoldering cigarette butt or bidi in the forests.
- Picnickers should not leave the burning wood sticks.
- Don't enter the forest during the fire.
- Don't left the dry litter during summer season.
- Tribal should not use Slash & Burn method indiscriminately on large scale.

CONCLUSION

Among disasters, the forest fire has been emerging as the most common disaster since last decade, disturbing the bio-diversity, the ecology and environment of a region. The forests of Western Himalayas are more frequent vulnerable to forest fire as compared to those in Eastern Himalayas. Today, the most forest fires are the result of human neglect. The only way to save the fragile Himalayan ecosystem from recurring forest fires is to put in place viable disaster management action plans. The best way to control a forest fire is fires are the result of human neglect. The only way to save the fragile Himalayan ecosystem from recurring forest fires is to put in place viable disaster management action plans. The best way to control a forest fire is to prevent it from spreading by creating Fire Breaks in the shape of small clearings of ditches in the forests. In India there is as yet no proper action plan to control forest fires.

Other Activities

Session on Disaster Management for NCC Boy Cadets during Annual Training Conference (ATC)-2018

A Lecture session was held by Dr. Sushma Guleria for 100 NCC junior and Senior boy cadet group on the basics of Disaster Management on 29th June 2018 at NCC GP HQ Delhi 'C' Camp site, Safdarjung between 9.30 a.m. to 11.00 a.m.

Dr. Guleria interacted with the students regarding various aspects of disaster management including clarifying the various terminologies used in the subject. she explained the relevance and importance of the subject in the current scenario by quoting various major disasters that had affected the country in recent past. She explained to the boys the need for better preparedness and efficient response. She also discussed with the boys about the relevance of technological sound early warning systems for timely evacuation of vulnerable population during emergencies. The holistic Disaster Management cycle was also explained to the cadets. Detailed discussion on the Dos' and Don'ts' to be remembered and practiced for protection against various hazards.

Dr. Guleria discussed with the cadets the specific roles NCC can play in in pre, during and post disaster risk reduction and management initiatives.

Training Programmes Organized (June, 2018)

S.No.	Title of Course	Venue	Date (s)	Course Coordinator	No of Participants
1.	Disaster Emergency Plan & LiDAR Mapping Survey	NIDM, New Delhi	4-8 June	Chandan Ghosh	28
2.	Flood Risk Management	NIDM, New Delhi	11-15 June	A D Kaushik	35
3.	Early Warning & Communication	NIDM, New Delhi	18-22 June	Surya Parkash	15
4.	Prefabricated & Light weight construction technology	NIDM, New Delhi	25-29 June	Chandan Ghosh	21
5.	Incident Response System (IRS)	NIDM, New Delhi	25-29 June	Santosh Kumar	37

Training Programmes (July 2018)				
Sl. No.	Title of Course	Venue	Date	Course Coordinator
1.	Incident Response System (IRS): Basic & Intermediate	NIDM Southern Campus	9-13 July	Santosh Kumar, Shekher Chaturvedi
2.	Village Disaster Management Plan	NIDM, New Delhi	9-13 July	Sushma Guleria
3.	Earthquake Resistant construction practices &recent building codes	NIDM, New Delhi	16-20 July	Amir Ali Khan
4.	Incident Response System (IRS): Basic & Intermediate	YASHADA, Pune	16-20 July	Shekher Chaturvedi
5.	Communication During emergency/disaster situations	NIDM Southern Campus (Vishakhapatnam)	16-20 July	Surya Parkash
6.	PM Agenda 10: Disaster Management Plan of Sectors & Central Ministries /Departments	NIDM, New Delhi	17-18 July	Anil Kumar Gupta
7.	TOT on Urban Risk Mitigation: Making Cities Resilient	NIDM, New Delhi	23-27 July	Chandrani Bandyopadhyay
8.	Post Disaster Needs Assessment (PDNA)	SDMA, Bihar	30-31 July	Santosh Kumar

NIDM's Internship Programme			
No.	**Name**	**Project**	**Area of specialization**
1.	Atisha Sood	Public Health & Disaster Risk Management - Integration Opportunities and Scoping: Indian Context.	Zoology, Public Health
2.	Khushboo Dungdung	Application of Geoinformatics for Landslide Studies and Risk Management	Geoinformatics
3.	Gowhar Farooq Wani	University of Kashmir Disaster Management Plan	Disaster Management, Zoology
4.	Arun Verma	Hazard and Vulnerability Assessment of Rajiv Chowk Metro Station, New Delhi	Geography, Disaster Management
5.	Janya Kapahi	Impacts of Natural Hazards on Tourism and Development- A Case Study of Uttarakhand 2013 Disaster	Environmental Science
6.	Sudhanshu Kumar Sharma	Human Elephant Conflict in Jharkhand; Tracking the Route Cause	Political Science

7.	Jyoti Mishra	Cross-Cultural Vulnerability of Women: A Comparison Between Tribal and Non-Tribal Societies.	Zoology, Botany, Anthropology
8.	Kanak Dhaka	Waste to Flood; Increased Solid Waste A Leading Factor in Urban Flooding	Environment science
9.	Saibal Sarkar	Study of Climatic Variability Induced by Urbanization in Delhi	Environment Science, Disaster Management
10.	Athul A	Vulnerability of Arabian Sea Towards Cyclonic Storms and Its Impact on Coastal Communities in South Kerala – Trivandrum	Disaster Management, Physics
11.	Yuirin Khamrang	Assessment of Floods and It's Changing Scenario of Vulnerability Using Remote Sensing in Haridwar District with Reference to Flood Disaster 2013	Geography, Geoinformatics
12.	Ojasvi Goyal	Towards Building Economic Resilience	Economics
13.	Nitish Barole	Leave No One Behind: Inclusion of Disability in Disaster Management with Reference to India	Mass communication, Disaster Management

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We welcome comments / responses / articles from readers of our Newsletter
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