

Webinar
on

Biodiversity for Resilience: Reducing the Risk(s) in Changing Climate

Dates: Thursday, 17-March-2022

Time: 1500 to 1700 hrs

Registration link <https://bit.ly/18March22>

Zoom meeting

<https://us02web.zoom.us/j/87556986977?pwd=OS9Id1FkNGQwZGxYRSt3RDFieE9Odz09>

GIDM Official YouTube live <https://youtu.be/DsyoS66JKwk>

Organized by



Gujarat Institute of Disaster Management

A. Background

Biodiversity and climate change are interconnected. Natural terrestrial, wetlands and marine ecosystems play a key role in global carbon and water cycles and in adapting to climate change. The degradation of ecosystems in turn reduces carbon storage and sequestration capacity, leading to increases in emissions of greenhouse gases and accelerated climate change. At the same time changes in temperature and atmospheric CO₂ levels have adverse and often irreversible impacts on ecosystems and species which can already be observed today. Human activities for climate change mitigation or adaptation can have positive or negative effects on biodiversity and ecosystem services.

Biodiversity is the variety of life on earth. The Convention on Biological Diversity (CBD) defines biological diversity as the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part. This includes diversity within species (genetic diversity), between species and of ecosystems.

Source: Convention on Biological Diversity (CBD)

The emergence of COVID-19 has underscored the fact that when we destroy biodiversity, we destroy the system that supports human life. The more biodiverse an ecosystem is, the more difficult it is for one pathogen to spread rapidly or dominate; whereas, biodiversity loss provides opportunity for pathogens to pass between animals and people.

The promotion and uptake of so called ‘**Nature-based Solutions**’ (NbS) for DRR and CCA has grown and gained attention internationally since 2007, after the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP). The ‘**One Health**’ approach espouse ecosystem health and integrity while also addressing issues like climate change, antimicrobial resistance, and pandemic preparedness. It advocated for global stakeholders to take such actions as developing institutions that integrate understanding of human, animal, and environmental health; devising holistic approaches toward combatting disease that account for interconnections among species, ecosystems, and humans; increasing investment in human, livestock, wildlife, plant, and health infrastructure; and enhancing the capacity of health surveillance and information sharing to coordinate international responses.

To prevent the next pandemic, and to address today's many other health challenges, we must ensure the biological integrity of our planet for current and future generations. This training acknowledges and highlights the facts/importance of Ecosystem based Disaster Risk Reduction (Eco-DRR) approaches and innovations required at all levels.

This program intends to develop the capacity of all the concerned stakeholders viz. L2 level of officials working with Forest Department, Agriculture Department, Researchers/Scholars, Faculty members/Scientists from academic/research institutions in taking stock of the preparedness measures' initiatives on DRM through 'Nature-based Solution'.

B. Aim and Objectives

The participants will develop a better understanding of what constitutes vulnerability to ecosystem(s) and gain a broader perspective on the enhancing adaptive capacity of forestry and biodiversity sectors. Under this, the following specific objectives will be pursued -

1. Understand impact of Climate Change on Forests and Biodiversity;
2. Understand the concept of Risk Management and associated Terminologies;
3. Understand the concept of Eco-DRM;
4. Strengthen adaptation options for Forests and Biodiversity sectors in the wake of new diseases;
5. Discuss various DRM measures that can be undertaken by the communities, for the communities: Case studies and lessons learned.

C. Need for Capacity Development

Humans exist within a web of life. This web is a complex, interconnected system in which each part plays an important role. When one component is changed—or removed—the entire system is affected, and this can produce positive—or negative—consequences. Nature prevents and responds to some of the most pressing challenges faced by humans today. It purifies the air we breathe, cleans the water we drink, and produces the variety of foods we require to stay healthy and resist disease. It enables medical researchers to understand human physiology; and provides substance for developing medicines. It even helps mitigate the impact of climate change by absorbing carbon, reducing air pollution and helping to cool cities.

Human action has reduced biodiversity and modified wildlife population structures and at an unprecedented rate. In the last 50 years, the human population has doubled; the global economy

has almost quadrupled and global trade has increased by approximately ten times. Today, it would take 1.6 Earths (i.e. *carrying capacity*) to meet the demands that humans make on nature each year; and more species are at risk of extinction than ever before.

COVID-19 provides us an opportunity to both revisit our relationship with nature and rebuild a more environmentally responsible world. Addressing zoonotic disease emergence requires addressing its root cause—primarily, the impact of human activities. As the global population approaches 10 billion, we need to better understand the web of life in which we live and appreciate that it functions as a whole system. It is time to reimagine our relationship with nature and put nature at the heart of our decision-making.

D. Targeted Participants

The target group for this program is (L2 level) ACF/RFO/Foresters working with Forest Department, Agriculture Officers/Scientists/Agriculture Assistant, Horticulture Assistant, Agri. & Horti. Supervisors, Block Technology Manager, Assistant Technology Manager and Farmer's Friend from Agriculture & ATMA Directorate working with Agriculture Department, Researchers/Scholars, Faculty members/Scientists from academic/research institutions and selected NGOs.

E. Expected Outcome:

This training reviews various best practices/initiatives taken-up for DRM using 'Nature based Solutions' including mitigation measures for COVID-19. It also focuses on lessons and practical guidelines developed for Eco-DRM. At the end of the program, participants will be able to,

- Identify potential Disaster Risks associated with Forests and Biodiversity sector;
- Understand Disaster Risk Management, Biodiversity Conservation and COVID-19;
- Prepare Communities and Practices to implement Prevention, Mitigation, Preparedness, Response and Recovery actions;
- Disaster Resilient Sustainable Development and Planning activities.

F. Role of the Resource Persons and Moderator(s):

The resource persons are supported to:

- Get acquainted with the training objectives, methodology and expected outcomes etc;
- Encourage interaction by the participants in each session;
- Illustrate various concepts with suitable examples;
- Formulate strategic plan, identify and highlight inter-departments/inter-agency coordination taking inputs and feedback from the participants.

References

1. Sendai Framework for Disaster Risk Reduction 2015-30
2. PM's 10 Point Agenda: India's Disaster Risk Management Roadmap to Climate Resilient and Sustainable Development
3. State Action Plans on Climate Change (SAPCC) (<http://envfor.nic.in/ccd-sapcc>)
4. Gujarat State Biological Diversity Act 2002
5. Scholarly articles on 'Nature-based Solution'
6. GIDM Training Module on Basics of DRM (English/Gujarati version)
7. All presentations
<https://gidm.gujarat.gov.in/>

Program Schedule

Thursday, 17 March 2022

- 14:30 – 14:45 ---Reporting at respective locations and Pre-Test---
- 14:45 – 15:00 **Welcome, About GIDM, GIDM portal, Audio-Visual Film, 5 hrs e-CCDRM course, Details about Study Material Provided**
Dr. Chintan Pathak, APPM, GIDM
- 15:00 – 15:15 **Opening Remarks**
Shri Nisarg Dave, Director (DM), GIDM
- 15:15 – 16:00 **Basics of COVID-19, DRM perspective and Biodiversity**
Dr. Sanju Sharma, State Project Coordinator and Expert Agronomist, Gujarat Biodiversity Board
At the end of this session participants will be able to:
 - Basic of COVID-19: Terminology, Origin, Transmission and Impacts
 - Biodiversity and Emergence of New Diseases
 - Do's and Don'ts: COVID appropriate behaviour
 - COVID-19 Vaccination: Myths and Clarity
- 16:00 – 17:00 **Vulnerability and Adaptation for Forests and Biodiversity Sector**
Ms Shweta Rajpurohit, Manager and Project Coordinator, GEER Foundation
At the end of this session participants will be able to:
 - Similarities and differences between Eco-DRR and Eco-Adaptation
 - Benefits of Integrating Ecosystems-based DRR and Ecosystem-based Adaptation
 - Vulnerability for Forests and Biodiversity sector
 - Protecting Biodiversity and Forest Ecosystems
 - COVID-19 and Biodiversity
- 17:00 – 17:45 **Ecosystem-based DRM: Building a Culture of Resilience**
Mr. Bharat Pathak, IFS (Retd.), Gujarat Forest Department
At the end of the session, Participants will be able to
 - Ecosystem Services and Nature-based Solutions for DRM
 - Prioritize Biological Diversity and Eco-DRR approaches
 - Ecological Engineering for DRR and CCA
 - Scientific Management of Natural Resources: Tools and Techniques
 - Building a Culture of Resilience
- 17:45 – 18:00 **Question-Answer, Post-Test, Feedback, Conclusion**
Mr. Bharat Pathak, IFS (Retd.), Gujarat Forest Dept.
Dr. Sandeep Pandey, APSPM, GIDM
Dr. Chintan Pathak, APPM, GIDM