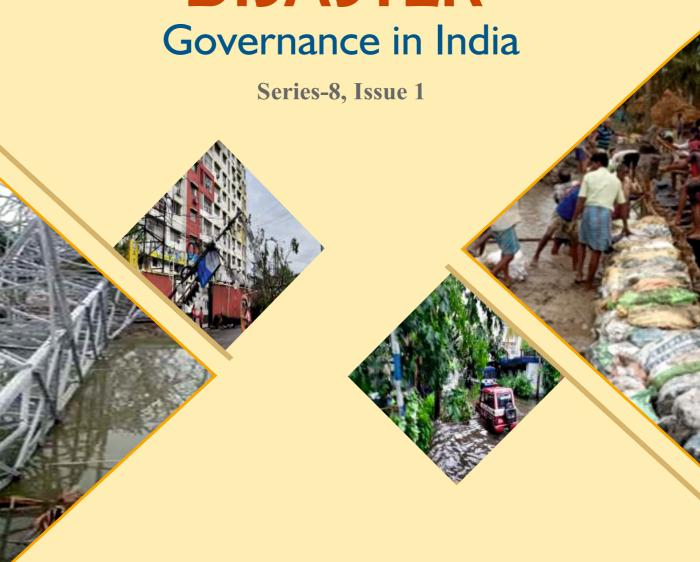
# DISASTER





# **CENTRE FOR DISASTER MANAGEMENT**

Lal Bahadur Shastri National Academy of Administration, Mussoorie

ISBN: 978-81-928670-8-3

# **Disaster**Governance in India

Series-8, Issue 1 March, 2024



# **Centre for Disaster Management (CDM)**

Lal Bahadur Shastri National Academy of Administration (LBSNAA),
Mussoorie - 248179, Uttarakhand
Telefax: 0135-2632655; 0135-2222000 (Extn-2385)
EPABX: 0135-2632489, Fax: 0135-2632350, 2632720
Email: cdm.lbsnaa@nic.in

ISBN: 978-81-928670-8-3

Copyright@2024, CDM, LBSNAA

#### **Editorial Advisors**

#### Joint Secretary (Capacity Building)

National Disaster Management Authority (NDMA), Government of India, NDMA Bhawan, A-1, Safdarjung Enclave, New Delhi

#### Ms. Sowjanya, IAS

Joint Director

Lal Bahadur Shastri National Academy of Administration,

Mussoorie, Uttarakhand, India

#### **Editorial Board**

#### Shri Sanjeev Kumar Jindal, CSS

Joint Secretary (DM),

Ministry of Home Affairs (MHA), New Delhi

#### Dr. Akhilesh Gupta

Secretary, SERB

Department of Science & Technology, New Delhi

#### Shri Sarbjit Singh Sahota

Emergency Specialist, Disaster Risk Reduction Section, United Nations Children's Fund (UNICEF), UNICEF India Country Office, New Delhi

#### Col V N Supanekar (Retd)

Former Director & Professor,

Center for Disaster Management, YASHADA, Pune

#### Prof. Mahua Mukherjee

Professor, Department of Architecture & Planning & Joint Faculty and Ex-Head, Centre of Excellence in Disaster Mitigation and Management, IIT Roorkee

#### Shri Abhiram G. Sankar

Deputy Director & Director, CDM

Lal Bahadur Shastri National Academy of Administration. Mussoorie, Uttarakhand

#### **Managing Editor**

#### Dr. Pankaj Kumar Singh

Associate Professor & Nodal Officer Centre for Disaster Management,

Lal Bahadur Shastri National Academy of Administration, Mussoorie, Uttarakhand

#### **Associate Managing Editor**

#### Dr.Pasala Eswara Rao

Research Officer

Centre for Disaster Management,

Lal Bahadur Shastri National Academy of Administration, Mussoorie, Uttarakhand

Designed & Processed by

Chandu Press, D-97, Shakarpur, Delhi-110092

Ph.: 011-22526936, 09810519841 E-mail: chandupress@gmail.com

ii 🔳

**Sriram Taranikanti, IAS**Director,
Lal Bahadur Shastri National Academy of Administration,
Mussoorie-248179



# Director's Message

India, due to its specific geographical and geological conditions, is vulnerable to various natural disasters. In India, the incidents of flood, drought and other natural disasters are on the rise and pose a major challenge to the society in general and administration in particular. Each disaster heightens the sense of urgency to equip ourselves better in coping and managing them. In this context, the training of Civil servants in Disaster Management assumes critical significance.

The recurring incidence of such disasters necessitates learning from our own experience as well as the best practices adopted all over the world in the field of Disaster Management. Well documented best practices that can be circulated widely for creation of awareness at all levels of administration play an important role in such a context.

No Administrator can afford the luxury of waiting for any disaster to happen in his/her jurisdiction to learn from it. It is, therefore, imperative to be able to convey the experience of practitioners to each other, in an effort to educate about the variety and intensity of challenges faced in this dynamic field. The response might not have been the best in all cases but they would certainly be elucidating some aspects of disaster resilience to the discerning eye.

By virtue of the DM Act 2005, the District Magistrate/Divisional Commissioner play a pivotal role as head of the District Disaster Management Authority (DDMA) and hence, it is essential that he /she should be well versed in the various aspects of Disaster Management.

It gives me immense pleasure to note that Centre for Disaster Management, LBSNAA is bringing out an edited case studies series "Disaster Governance in India" Series-8, Issue 1 for the year 2023-24 under the project "Capacity Building on Disaster Management for IAS/ Central Civil Services Officers." This compilation of case studies, learnings and experiences of the civil servants in the field, is an effort of the Academy that is sponsored by National Disaster Management Authority (NDMA), Government of India, New Delhi.

I hope this compilation will be useful for both the Officer Trainees and the Administrators in handling disasters and emergency situations across the country. I want to congratulate the CDM team for this publication and also place on record my appreciation for the contribution made by the faculty & staff of CDM who contributed in various capacities for bringing out this.

(Sriram Taranikanti)

**Abhiram G. Sankar, IAS**Deputy Director & Director
Centre for Disaster Management



# Preface

Disasters have never ceased to adversely affect human civilization. Natural disasters and manmade disasters have increased both in frequency and fury over the years. India has suffered enormously, in terms of loss in lives and livelihoods and damage to both public and private property due to recurrence of disasters. In response, various strategies have been formulated and implemented with regard to mitigation, prevention, response, rehabilitation and reconstruction. These activities span pre-disaster and post disaster time periods. All these efforts have the same underlying goal – to reduce the impact of disasters on our society!

No administrator can afford the luxury of waiting for a disaster to happen in his or her jurisdiction to learn from it. It is therefore imperative to be able to convey the experiences of practitioners to each other, in an effort to educate about the variety and intensity of challenges faced in this dynamic field. The responses might not have been the best in all cases-but they would certainly be elucidating some aspect of disaster resilience to the discerning eye.

In continuation to the successful publication of the fourth series of the publication "Disaster Governance in India" by the Centre for Disaster Management, it is our privilege to publish the Series-8, Issue 1 for the year 2023-2024. The book will be useful to administrators, at various levels, who are handling Disaster Management. It can also serve as a good reference material for ATIs and CTIs for their in-house courses.

I would like to thank the Centre for Disaster Management, Lal Bahadur Shastri National Academy of Administration who have been able to compile the best practices adopted by District Administrations, PSUs and other Institutions in the form of a Disaster Governance of in India, Series-8.

(Abhiram G. Sankar)

# **Contents**

| S1.<br>No | Title   | Name and Address of the Authors  | Page<br>No. |
|-----------|---|--|-------------|
|           | Director's Message  |  | iii         |
|           | Preface   |  | v           |
| 1         | Technology-led Transparent<br>and Accountable Mechanism<br>for Direct Benefit Transfer to<br>Disaster Affected in Bihar   | Sanjay Kumar Agarwal, IAS* Secretary, Disaster Management Department, Government of Bihar. Amrita Dhiman Faculty and Coordinator, Centre of Excellence in Disaster Management, Development Management Institute, Bihar, Patna. | 1           |
| 2         | Super Cyclone AMPHAN<br>over West Bengal:<br>Impact Based Forecast,<br>Preparedness and Response<br>during peak Corona 2020<br>period   | Dushyant Nariala, IAS* Principal Secretary, Disaster Management & Civil Defence Department, Government of West Bengal. Ganesh Kumar Das Scientist-E and Head, Area Cyclone Warning Centre, IMD, Kolkata                        | 11          |
| 3         | Role of Field Functionaries<br>in Disaster Response: A<br>Case Study of UGHS (Upper<br>Gradation High School)<br>Wall Collapse in Gangabada<br>Village, Gajapati district<br>(Odisha) | Additional District Magistrate Gajapati district, Government of Odisha   | 21          |
| 4         | Application of Science and<br>Technology in Disaster<br>Management  | Paras Nath Rai, IPS (retd.) Hon'ble Member, Bihar State Disaster Management Authority (BSDMA), Government of Bihar.  | 25          |

| Sl.<br>No | Title  | Name and Address of the Authors  | Page<br>No. |
|-----------|--|--|-------------|
| 5         | Effective Role of<br>Administration in Disaster<br>Management: A Case Study<br>of Flood in District Udham<br>Singh Nagar       | Yugal Kishor Pant, IAS* District Magistrate Udham Singh Nagar District Government of Uttarakhand Dr. Lalit Narayan Mishra Additional District Magistrate Udham Singh Nagar District Government of Uttarakhand Umashankar Negi District disaster management officer Udham Singh Nagar District Uttarakhand Vineet Pal District GIS Analyst Udham Singh Nagar District Uttarakhand | 39          |
| 6         | A Case Study on Landslides<br>in South West Khasi Hills<br>District, Mawkyrwat,<br>Meghalaya (India) in 2022:<br>Lesson Learnt | Dr. Ebormi S. Langshiang* District Disaster Management Officer District Disaster Management Authority (DDMA), South West Khasi Hills District Government of Meghalaya Ambiangmiki S. Langshiang Research Fellow, North Eastern Space Application Centre (NESAC), Umiam, Meghalaya  | 53          |
| 7         | Case Study on Train<br>Accident at Bahanaga Bazar<br>Railway Station, Balasore<br>District (Odisha)                            | Commandant<br>3 <sup>rd</sup> Bn. NDRF Mundali<br>National Disaster Response Force<br>Cuttack, Odisha  | 65          |
| 8         | Effective Disaster Response<br>and Disaster Risk Reduction:<br>A Case Study of Flood in<br>Silchar (Assam) in 2022             | Aruni Kumar Upper Division Clerk Survey of India TMMz GDC, Silchar Ministry of Science and Technology, Govt. of India (Junior Warrant Officer (Retd.) Indian Air Force)  | 75          |

# **Centre for Disaster Management**

Centre for Disaster Management (CDM) is a research and training centre, and a unit of Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, Department of Personnel & Training (DoPT), Government of India. The CDM is a Nodal agency for training in Incident Command System (ICS). The Centre is involved in training officers belonging to the IAS and other Group-A civil services at induction as well as at Mid-Career level in various aspects of disaster management through classroom sessions, case studies, and experience sharing presentations, panel discussions, workshops, and mock drills. Apart from conducting training programmes on fire safety, search and rescue, IRS, DRR, DDMP, school safety, the centre is involved in various types of documentation and publication activities in terms of case studies, documentation of best practices, research papers, books and posters in national and international journals and developed course specific training materials in the area of Disaster and Emergency management and Science and Technology.

ISBN: 978-81-928670-8-3

Disaster Governance in India

Series-8, Issue 1, (March, 2024)

Published by

Centre for Disaster Management Lal Bahadur Shastri National Academy of Administration Mussoorie - 248179, Uttarakhand, India



### **Centre for Disaster Management (CDM)**

Lal Bahadur Shastri National Academy of Administration (LBSNAA),
Mussoorie - 248179, Uttarakhand

Telefax: 0135-2632655; 0135-2222000 (Extn-2385) EPABX: 0135-2632489, Fax: 0135-2632350, 2632720

Email: cdm.lbsnaa@nic.in