

Comparative Analysis of Public and Private Sector Disaster Management Approaches in India

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Abstract

Disasters such as floods, earthquakes, cyclones, heat waves, pandemics, and industrial accidents create serious challenges for society and the economy. India is one of the most disaster-prone countries in the world because of its large population, geographical conditions, and climate change impacts. Disaster management has therefore become an important area for both the public and private sectors.

The public sector mainly includes government agencies like the National Disaster Management Authority (NDMA), State Disaster Management Authorities (SDMAs), and National Disaster Response Force (NDRF). The private sector includes companies, industries, NGOs, hospitals, telecom firms, and logistics companies that support relief and recovery operations.

This research paper compares the disaster management approaches of the public and private sectors in India. The study focuses on preparedness, response, recovery, technology use, funding, and effectiveness. The paper is based on secondary data collected from government reports, RBI reports, NDMA documents, journals, and websites. The findings show that public sector agencies have stronger legal authority and wider coverage, while private organizations are more flexible, innovative, and technology-driven. The study suggests stronger public-private partnerships for better disaster management in India.

Keywords: Disaster Management, NDMA, Public Sector, Private Sector, Climate Change, Disaster Preparedness, NDRF.

Introduction

Disaster management refers to the planning, organizing, and implementation of measures to reduce the impact of disasters on people, property, and the environment. India faces many natural and man-made disasters every year, including floods, cyclones, droughts, earthquakes, landslides, industrial accidents, and pandemics.

The Government of India enacted the Disaster Management Act, 2005, which established the National Disaster Management Authority and other disaster management institutions. ([Drishti IAS](#))

The public sector plays a major role in disaster preparedness, rescue operations, rehabilitation, and relief distribution. However, due to increasing disaster frequency and climate change, the role of the private sector has also become important. Private companies contribute through technology, logistics, healthcare, financial support, communication systems, and Corporate Social Responsibility (CSR) activities.

Recent reports show that more than 2,800 people lost their lives and over 10 lakh hectares of crops were damaged due to disasters in India during 2024–25. ([MillenniumPost](#))

Therefore, there is a need to compare the disaster management approaches of both sectors and understand how they can work together more effectively.

Objectives of the Study

1. To understand the concept of disaster management in India.
2. To study the disaster management approaches of the public sector.
3. To examine the role of the private sector in disaster management.
4. To compare public and private sector disaster management approaches.
5. To provide suggestions for improving disaster management in India.

Research Methodology

The paper is based on **secondary data**.

Sources of Data:

- Government Reports
- NDMA Reports
- Ministry of Home Affairs publications
- RBI and Economic Survey Reports
- Research journals and newspapers
- Websites and online articles

Method Used:

- Comparative and descriptive analysis
- Data interpretation through tables and diagrams

Review of Literature

Mukherjee and Batta (2024)In the research paper *“Risk-Informed Health Governance in Disaster-Prone Districts of West Bengal”*, the authors studied disaster preparedness and health governance systems in West Bengal. The study concluded that better monitoring systems, technology use, and coordination are essential for effective disaster management.

Kaur and Singh (2024)In the paper *“Private Sectors’ Interventions in Disaster Risk Management”*, the researchers examined the role of private companies in disaster management. The study found that private sector participation through CSR activities, healthcare services, logistics, and technology improves disaster response and resilience.

Medha Mukherjee (2024)In the study *“Flood Risk Management in Kerala, India”*, the author analyzed flood disaster management in Kerala. The paper highlighted issues such as weak coordination and delayed decision-making and suggested stronger governance and community participation for better disaster management.

Bhardwaj and Singh (2024)In the research paper *“A Critical Analysis of India’s Disaster Management Framework”*, the authors studied gaps in India’s disaster management laws and financial systems. The study recommended stronger financial planning, better coordination, and improved preparedness mechanisms to reduce disaster risks.

Types of Disaster Management Approaches

Public Sector Approach

The public sector includes:

- NDMA
- SDMA
- NDRF
- Local administration
- Police and armed forces
- Government hospitals

Main Features:

- Legal authority
- Nationwide disaster response
- Relief funding
- Rescue operations
- Policy formulation

Private Sector Approach

The private sector includes:

- Private hospitals
- Telecom companies
- NGOs
- IT companies
- Logistics firms
- Corporate organizations

Main Features:

- Technology support
- Fast communication
- Financial assistance
- CSR activities
- Supply chain management

Public Sector Disaster Management in India

The public sector plays the primary role in disaster management.

Important Government Initiatives:

1. Disaster Management Act, 2005
2. National Disaster Management Plan
3. National Disaster Response Force (NDRF)
4. State Disaster Response Fund (SDRF)
5. National Disaster Response Fund (NDRF)

The government has also introduced digital monitoring systems like the National Disaster Management Information System (NDMIS). ([NDM India](#))

Role of Private Sector in Disaster Management

Private organizations support disaster management through:

- Mobile communication services
- Healthcare facilities
- Food and supply distribution
- Transportation support
- Disaster insurance
- Financial donations
- Technology and satellite mapping

Large IT companies also help in:

- Early warning systems
- Data analytics
- GPS tracking
- Artificial Intelligence monitoring

Data analysis

Table 1: Impact of Disasters in India (2024–25)

Particulars	Data
Total Human Deaths	2,803
Damaged Houses	3.47 lakh
Crop Area Affected	10.23 lakh hectares
Cattle Loss	58,835
SDRF Funds Released	₹10,728 crore
NDRF Funds Released	₹4,043 crore

Source: Ministry of Home Affairs Report 2024–25, Government of India.

Interpretation: The table shows that disasters caused major human, agricultural, and economic losses in India during 2024–25. The Government released large amounts from SDRF and NDRF for relief and rehabilitation activities.

Table 2: Comparison between Public and Private Sector Disaster Management

Basis	Public Sector	Private Sector
Objective	Public welfare and safety	Business support and social responsibility
Main Agencies	NDMA, SDMA, NDRF	NGOs, Companies, Hospitals
Funding Source	Government budget	CSR and private investment
Decision Making	Slow but systematic	Fast and flexible
Technology Use	Moderate	High

Source: NDMA Reports 2024, CSR India Reports 2024

Interpretation: The public sector has larger coverage and legal authority, while the private sector performs better in innovation and quick response.

Table 3: Major Disaster Types and Their Impact in India (2024)

Disaster Type	Major Impact
Floods	Loss of life and crop damage
Heat Waves	Human deaths and health problems
Landslides	Infrastructure damage
Cyclones	Coastal destruction
Droughts	Water shortage and agricultural losses

Source: India Meteorological Department (IMD) Annual Climate Report 2024.

Interpretation: Floods and extreme rainfall remained the most damaging disasters in India during 2024.

Table 4: Role of Public and Private Sectors during Disasters

Activity	Public Sector Role	Private Sector Role
Rescue Operations	NDRF, Police, Army	Volunteer support
Medical Services	Government hospitals	Private hospitals
Relief Distribution	Food, shelter, compensation	Donations and supplies
Communication	Government alerts	Telecom and internet services

Source: NDMA Guidelines 2024, Ministry of Corporate Affairs CSR Report 2024.

Interpretation: The public sector mainly handles rescue and administration, while the private sector provides technology and financial support.

Findings of the Study

1. India remains highly vulnerable to natural disasters and climate-related risks.
2. Public sector agencies are the backbone of disaster management in India.
3. Private sector participation has increased significantly after COVID-19 and climate disasters.
4. Government institutions provide large-scale rescue and financial support.
5. Private companies contribute more in technology, communication, healthcare, and logistics.
6. Lack of coordination between sectors sometimes reduces efficiency.
7. Public-private partnerships can improve disaster preparedness and response systems.

Suggestions

1. Strengthen coordination between public and private sectors.
2. Increase investment in disaster preparedness and climate resilience.
3. Use Artificial Intelligence and data analytics for early warning systems.
4. Encourage CSR participation in disaster management.
5. Improve local-level disaster training and awareness.
6. Develop faster communication systems during emergencies.
7. Increase funding for disaster-resistant infrastructure.
8. Promote community participation in disaster preparedness.

Conclusion

Disaster management has become extremely important for India because of rising climate risks and freq-

uent natural disasters. Both the public and private sectors play important roles in reducing disaster losses and protecting people.

The public sector provides legal authority, funding, and nationwide disaster response mechanisms, while the private sector contributes technology, innovation, healthcare, and logistics support. Both sectors have strengths and weaknesses, but effective coordination between them can improve disaster preparedness and response.

India needs stronger public-private partnerships, modern technology, better planning, and community awareness to build a disaster-resilient nation in the future.

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