Strengthening Disaster Resilience through Community Participation (CBDRM) : Lessons for India

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BACKGROUND

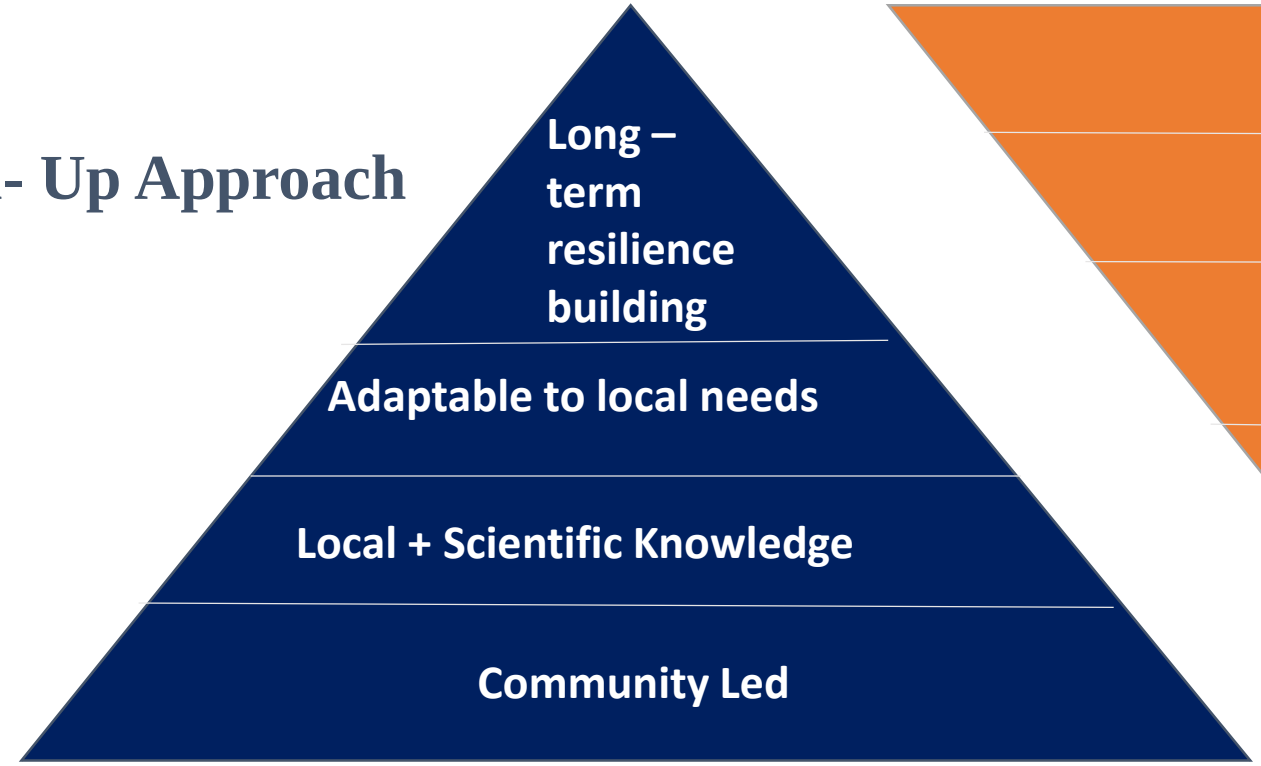
- India, with its diverse geography, faces a wide range of natural disasters, including cyclones, floods, earthquakes, and droughts. In recent years, the frequency and intensity of these events have increased due to climate change.
- Traditional top-down disaster management approaches, while important, often fall short in addressing local needs. Community participation has been identified as a crucial element for effective disaster resilience.

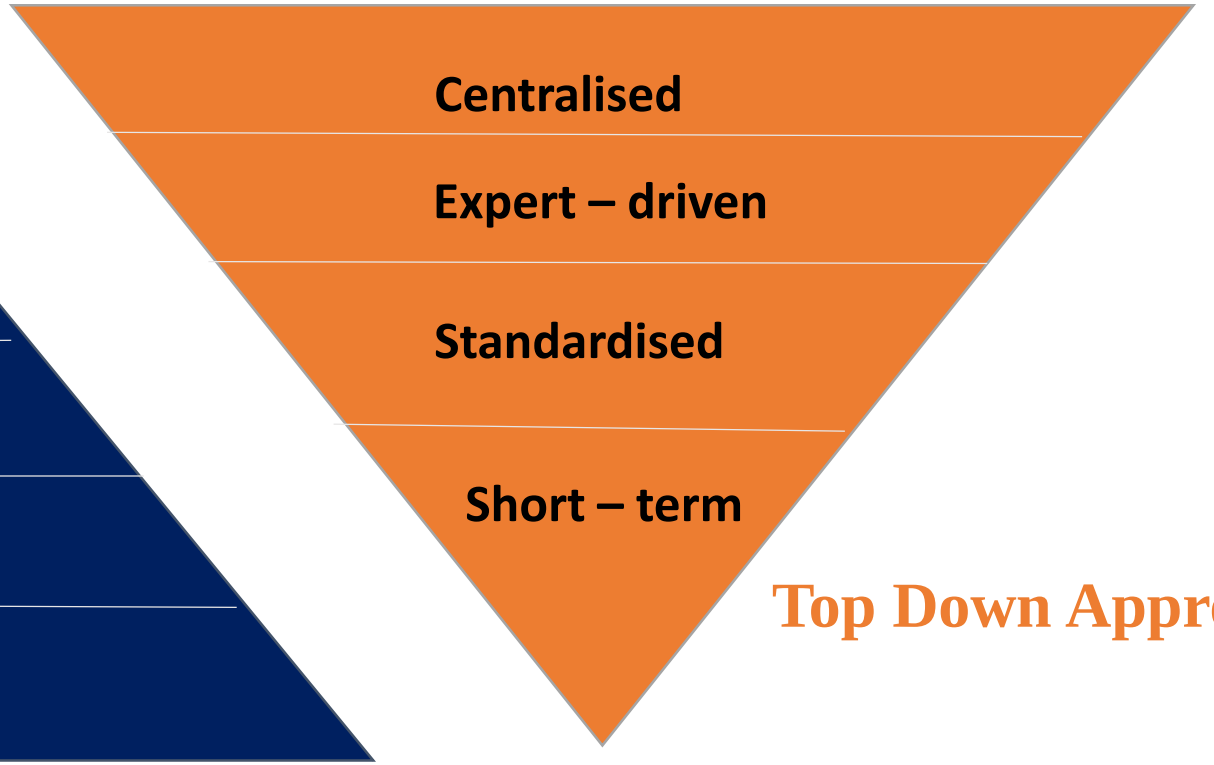
What is CBDRM?:

- **Community-Based Disaster Risk Management (CBDRM)** is a participatory, bottom-up approach that emphasizes the role of local communities in disaster preparedness, mitigation, and response.
- It aims to increase local capacity, awareness, and ownership over disaster management, ensuring more sustainable and effective disaster risk reduction.

Comparison: Bottom- Up Approach Vs. Top Down Approach

Bottom- Up Approach





Top Down Approach

Research Objectives

1.Adapt Japan’s Participatory Approaches: Develop community-based resilience frameworks by adapting Japan's successful participatory disaster risk reduction strategies to fit India's socio-cultural diversity.

2. Engage Local Communities: Involve local communities in the development of disaster resilience strategies, ensuring their knowledge and needs are integrated into the framework.

Why is CBDRM Important for India?

India’s diverse population, particularly in rural and remote areas, lacks access to centralized disaster management systems.

In a country where vulnerability to disasters is high, community-based strategies can offer timely, localized solutions.

Disaster Resilience in Japan: A Global Leader

Japan has faced several devastating natural disasters, such as the 1995 Kobe earthquake and the 2011 Tohoku earthquake and tsunami. After these events, Japan transformed its disaster management, focusing on community involvement and recovery efforts.

Key Strategies for Disaster Resilience:

1.Community Empowerment: Local communities actively participate in disaster preparedness, with drills and citizen-led emergency planning.

2.Education and Awareness: Regular disaster drills and educational programs are mandatory in schools, workplaces, and local governments to ensure preparedness.

3.Technology Integration: Japan's advanced early warning systems, like J-Alert, send real-time alerts via TV, radio, and mobile phones, giving people critical time to evacuate.

4.Collaborative Disaster Response: Government, NGOs, and local volunteers work together to provide a coordinated response, with citizens often acting as first responders.

CBDRM in India: Current Landscape

Government Initiatives:

- **NDMA 2024 Guidelines** – The National Disaster Management Authority (NDMA) introduced updated Community-Based Disaster Risk Reduction (CBDRR) guidelines emphasizing local preparedness, risk assessment, and community participation as first responders. These guidelines align with the Disaster Management Act (2005) and the National Policy on Disaster Management (2009) to strengthen grassroots resilience.

- **Aapda Mitra Scheme** – Launched by the NDMA, this initiative trains 1,00,000 community volunteers (Aapda Mitras & Aapda Sakhis) in 350 multi-hazard-prone districts. Volunteers receive two-week training, emergency responder kits, and five-year insurance to assist in flood, earthquake, and cyclone response at the local level.

- **Odisha Model of CBDRM** – Odisha is recognized for its successful community-led disaster preparedness approach, particularly in handling cyclones and floods. The state has strengthened local institutions, developed early warning systems, and conducted regular community drills, making it a model for other states to replicate

Comparative Analysis: India vs Japan

Key Differences:

- **Infrastructure**: Japan’s advanced infrastructure (e.g., earthquake-resistant buildings, high-tech warning systems) stands in stark contrast to India's need for improved infrastructure in disaster-prone areas.
- **Community Involvement**: community involvement is much stronger in Japan, where disaster education and nationwide drills are a routine part of life, whereas India’s community-based disaster risk reduction (CBDRR) efforts are growing but remain inconsistent.

Key Similarities:

- Both countries are prone to similar types of natural hazards, such as earthquakes, floods, and cyclones.
- Both require community-based solutions, particularly in rural and less-accessible areas, where centralized disaster response systems may be inefficient.

Challenges in Implementing CBDRM in India

- **Limited Community Awareness & Participation** - Many communities, especially in rural and remote areas, lack awareness about disaster risks and preparedness measures.
- **Weak Implementation & Policy Gaps** - While policies like the Disaster Management Act (2005) support community involvement, implementation at the local level is often inconsistent.
- **Resource Constraints** - Many local governments and communities lack funding, skilled personnel, and technical resources for effective disaster preparedness and response and Emergency response infrastructure, such as shelters and medical aid, is inadequate in several high-risk areas.
- **Social & Economic Vulnerabilities** - Marginalized groups, including women, children, the elderly, and low-income populations, often face higher disaster risks but have limited access to preparedness resources.

LESSONS LEARNED

- **Enhancing Early Warning Systems**: Japan's early warning systems during the 2011 Tohoku disaster minimized casualties. India should strengthen its Early Warning Dissemination System (EWDS), focusing on coastal and flood-prone areas, and **develop localized evacuation plans and safe shelters.**
- **Leveraging Local Knowledge**: Japan used traditional tools like Tsunami Stones/ Flood stones for disaster preparedness. India should incorporate indigenous knowledge, such as flood-resistant housing in Assam and cyclone shelters in Odisha, into modern planning and construction.
- **Developing Business Continuity Plans (BCPs)**: Japan mandates businesses to develop BCPs for disaster resilience. India should encourage businesses, especially in vulnerable sectors, to create BCPs, with government incentives and resilience training.

Flood Stone

LESSONS LEARNED

- **Inclusive Public Awareness and Drills**: Japan's inclusive drills ensure vulnerable populations are prepared. India should organize similar drills for the elderly, persons with disabilities, and caregivers to ensure safe evacuations and proper support.

- **Community-Based Hazard Mapping**: Japan involves communities in creating hazard maps for better preparedness. India can adopt this approach, particularly in high-risk areas, to identify local risks and enhance disaster resilience.

- **Disaster-resilient infrastructure :-** India should prioritize disaster-resilient infrastructure, following Japan's example of investing in advanced seismic engineering for buildings and bridges, and flood barriers in vulnerable areas. This includes strengthening structures in earthquake-prone, coastal, and flood-prone regions, implementing flood management systems, adopting earthquake-resistant construction, retrofitting older structures, and promoting resilient urban planning for faster recovery.

Community leaders making disaster management plan

Recommendations:

- **Engage Women and Vulnerable Groups**: Focusing on the participation of women, children, elderly, and differently-abled individuals in disaster planning and response is crucial. Tailoring training programs to these groups ensures that disaster preparedness is inclusive and equitable.
- **Develop Community-Based Resilience Plans**: Encourage communities to develop their own disaster risk reduction plans tailored to local risks. This could include building safe shelters, creating escape routes, and identifying safe zones. Involving local leaders and stakeholders ensures these plans are well-integrated into local governance and are more effective during crises.
- **Sustainable Livelihoods and Climate Resilience**: Promoting climate-resilient agriculture and sustainable livelihoods can reduce vulnerability. Communities can be educated on eco-friendly practices, water management, and reforestation efforts, which improve both disaster resilience and long-term sustainability.
- India can enhance its CBDRM by adopting Japan's practice of preserving tsunami stones along its coastlines. These **historical markers**, which highlight past disasters, can educate communities and promote preparedness.

皆様には多大なるご支援を賜り、心より感謝申し上げます。これからも皆様のご健康とご成功をお祈りいたします