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COMMUNITY-BASED DISASTER MANAGEMENT STRATEGY IN INDIA: AN EXPERIENCE SHARING

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ABSTRACT: Community participation is the most effective element to achieving sustainability in dealing with natural and man-made disaster risks. Sustainable development and disaster reduction are essential preconditions for each other. Natural disasters severely hamper the progress and achievements of sustainable development while, at the same time, physical infrastructure that we are constructing may itself constitute a source of risk in the event of future disasters. This is particularly true in the case of earthquakes, where the majority of victims are killed by their own collapsing houses. From the perspectives of environmental degradation, human intervention, and security aspects, disaster management is a pressing issue for all of us and should be undertaken on a comprehensive basis. The approach seeks communities at risk to get engaged in all of its phases: prevention, mitigation, preparedness, response, and recovery. In order to build disaster-resilient communities, they need to be empowered first so that community members can cope with the adverse effects of natural hazards. This is the most effective approach to achieving sustainability in dealing with natural disaster risks. Gujarat State Disaster Management Authority is carrying out various community-based programmes to establish disaster prevention as an essential component of sustainable development. Its activities include improvement of the safety levels of core community facilities such as schools; dissemination of best practices in disaster risk management at the community level; and formulation of integrated programmes for sustainable development through disaster risk management programme initiatives. The paper presents analysis and some findings of those programs which engage communities to deal with disaster risks.

KEYWORDS

Disaster Management, Community-Based, Risk Management

1. INTRODUCTION

The government alone cannot and will not be able to manage and handle all types of disasters with its machinery without active participation by the people of any country, according to a common theory given by policy makers, experts, and professionals. Failures of top-down effective disaster management approach to reduce risks from disasters lend evidence to this notion. As a consequence, numerous scholars and stakeholders feel that it is high time to adopt a new strategy that will involve vulnerable people directly in planning and implementation of mitigation, preparedness, response, and recovery measures. This is because communities are the best judges of their own vulnerability and are capable of making the best decisions regarding their well-being. This philosophy involves local level people, leaders and community to provide necessary services and logistics to the victims during and after the disaster. Such a strategy has been encouraged both in the developed and the developing countries and launched on Community-Based Disaster Management (CBDM) strategy.

1.1 OVERVIEW OF COMMUNITY BASED DISASTER MANAGEMENT

Community-Based Disaster Management (CBDM) initiates a process involving sequential stages that can be operationalized to reduce disaster risk. Processes of CBDM are guided by principles of subsidiarity, economies of scale, equity, heterogeneity, and public accountability. The different stages in CBDM are disaster/vulnerability risk assessment, risk reduction planning, early warning systems, post-disaster relief, and participatory monitoring and evaluation.

CBDM by its very nature demands a decentralized bottom-up approach with intensive, micro interventions at the local Panchayats, ward or village level with the intention of generating confidence, awareness, knowledge, partnership, and ownership for planning and rolling out local disaster management plans

encompassing all levels of disaster management continuum.

Equity and inclusion of marginalized segments of the society and bringing the vulnerable groups to the center stage of planning and implementation of the CBDM have to be prioritized to make the programme participatory and inclusive. Disasters affect the entire community. However, persons with disability, women and children, underprivileged, older persons, and pregnant women need special attention at the programme implementation level. Such rights and human dignity based inclusive ethos created by such programmes will empower communities and display resilience in times of crisis.

Capacity building and training of community volunteers is the mainstay of community-based disaster management since they are the first responders. Considering a large number of stakeholders and community representatives that need to be sensitized and trained, it is important that capacity building and training interventions be meticulously planned for the purpose of CBDM. CBDM should converge with existing mainstream, institutional mechanisms, and social welfare delivery programmes to make it holistic, cost-effective, multi-dimensional and community-centric.

The 73rd and 74th constitutional amendments recognize Panchayati Raj institutions as “institutions of self and government”. They were put in place to decentralize and devolve financial and administrative powers through a tiered structure from the district downwards right up to the Gram Sabha level. In the case of urban self-government, devolution has to be brought up to the ward level. The paradigm of CBDM is entirely in keeping with this constitutional recognition of the importance of decentralization and devolution of powers and extends it to the arena of disaster management.

These local bodies can be effective instruments in tackling disasters through a variety of mechanisms such as: hazard, vulnerability and capacity assessments, disaster management planning, early warning system, relief distribution, providing shelter to the victims, medical assistance, etc. The elected representatives of these local bodies are the key stakeholders through whom effective participation and ownership by local communities can be achieved in CBDM.

1.2 WHAT IS COMMUNITY BASED DISASTER PREPAREDNESS?

Preparedness to face disasters is required at all levels right from the household to the State Government to minimize the impact of disasters. The Government cannot reach out immediately to each and every household/village at the time of disaster.

The community is the first responder of any disaster and develops some traditional coping mechanisms to reduce their vulnerabilities. Such communities living in a common territory comprise of women, men, elders, students, teachers and children. There can be recognized as RWAs, resettlement colonies, BPL houses, villages, wards, slums, juggle etc. where people of different social and economic background live together. These people are also responsible for their peace, prosperity, and protection. The involvement of the community is the key factor in any disaster preparedness. The participation of the community is vital to sustain the activities of rebuilding the shattered community life. Community-Based Disaster Preparedness is:

- A response mechanism to save life, livelihood, livestock, and assets with available resources within the community, which should
- Lead to multi-pronged development interventions to address the root cause of vulnerability, and to a self-reliant disaster-proof community.

In order to generate preparedness and response within the people, Community Based Disaster Preparedness Plans (CBDP) has to be developed in all the vulnerable areas of Gujarat. A CBDP is a list of activities a community decides to follow to prevent loss of life, livelihoods, and property in case of a disaster. It also identifies well in advance, actions to be taken by individuals in the community so that each one is aware of his/ her responsibilities when an emergency warning is received. The plans involve training to the community to make them aware of disaster preparedness and make them responsible to protect themselves during and post disasters

1.3 WHY IS IT NECESSARY?

In early times there were only natural disasters causing destruction to the human lives, livelihood, and property. But the fast development of physical infrastructure and technological advancement have also raised frequency and types of the disasters. Manmade (fire, chemical fire, bomb blasts, road accidents) and biological disasters (epidemics, SARS) are the unintended consequences of the present era of technology. In fact, the destruction caused by the disasters is almost unrecoverable and unmanageable until a very long time. The reasons for such severe results are unawareness and carelessness in constructing building structures, unplanned use of land, misuse of chemicals and biotechnology etc. For example, the 6.9 Richter scale earthquake in Kutch has caused a massive loss of lives, livelihood, and property that is almost unrecoverable. It has been realized that the community as an institution is the most powerful among the entire mechanism of disaster administration. In the event of actual disasters, the community if well aware of the preventive actions and preparedness measures to be undertaken, can substantially reduce the damage caused by disasters. The efforts of the people in taking initiatives in protecting their lives and properties can be seen in areas where the CBDP process has been established.

The purpose of the manual is to aid facilitators from various governmental, nongovernmental and community-based organizations (CBOs) to facilitate and provide support to the community members in preparing their own community/neighborhood/village disaster management plans (CDMPs) For bringing about ownership for sustainability of the process, efforts have to be made to ensure maximum participation of all sections of the community irrespective of class, caste, sex, and occupation.

A brief meeting should be held to sensitize the prominent members of that community to the DRM Program. Gaining support and confidence of respected members of the community is important for community mobilization. Thereafter, meetings can be held in the Community/Neighborhood/Village depending on the convenience and availability of community for preparing CBDP Plan.

1.4 COMPONENTS OF CBDP.

The Components of any CBDP Plan necessarily include:

I. Community Profile: This includes the community characteristics including its physical, administrative, geographic, demographic, socio economic, and infrastructure profile. Its development position and the context upon which disaster will impact the area, should also be included in the profile

II. Resource Inventory: Involves analyzing the local resources available within the community, which can be harnessed and enhanced for disaster preparedness and response. It shall include a listing of trained manpower, livelihood activities, health, education, water, sanitation, electricity, communications, and transport facilities. It shall also include information a local committee task forces and emergency directory.

III. Risk map through Community Maps: This shall include the Open spaces, Medical Facilities, Communication Facilities, Transportation Facilities, Water Facilities, Temporary Shelters, Sanitation Facilities, and Search and Rescue Operation facilities.

IV. Future Mock drill: this is a list of dates when the periodic mock drill in the community will be conducted.

V. Final community plan: a one-page pamphlet detailing out the main CBDP components.

2. PREPARATION AND PROCESS OF COMMUNITY-BASED DISASTER MANAGEMENT PLANS FOR COMMUNITY RESILIENCE.

The logic behind the Community based Disaster Preparedness plans is to involve communities in identifying and mapping their own hazards, vulnerable sections, resources available, and safe evacuation routes. Therefore, the planning process has been divided into three major sections.

- Identification of Community unit and preparation of Community Profile
- Preparation of Community map showing vulnerable areas, resources, and evacuation routes
- Preparation of Taskforces, Committees, and Emergency Response Team

The plan should have made by members of the community irrespective of class, creed, sex and occupational status, supported and facilitated by Community representatives, Local NGOs, Volunteers, and Government officials. The facilitators should have the skills to motivate the community, conduct the meetings and encourage as participatory an approach as possible.

STEP 1: COLLECTION OF BASIC INFORMATION AND IDENTIFICATION OF A LOGICAL UNIT

Before starting with the planning process the facilitator should get prior idea about few logistics related to population, economic conditions, and area of the target community. This information would be helpful to decide the number of a logical unit for that area. For example, if the community is comprised of a high density of population or large area, then preparing a single plan for the entire community may not be a desirable solution. In such cases, the community can be divided into two or more parts depending upon convenience for implementation. Similarly, if the case is opposite and the community identified is very small, a single plan may be good enough.

STEP 2: ORGANIZING COMMUNITY MEETING BY INFORMING MOST OF THE COMMUNITY PEOPLE

A meeting should be organized with the community representatives on a convenient date and venue so that most of the community members could be involved in the planning process. Community representatives and plan facilitators should make sure that the target community has prior information about the meeting.

The information can be sent through notice circulation, display of notice on notice boards, distributing pamphlets, and announcing in a general body meeting. Gram Sabhas could be convenient vehicles for information dissemination. It would also be preferable to conduct the meetings after 6:00 pm after the work hours, for maximum participation of the villagers.

Points to remember during a presentation to the community:

I. The preliminary presentation to the community should contain the following:

- Disaster (types and occurrence).
- Disasters in Gujarat.
- Comparisons with some examples, e.g. Delhi Vs. Ahmedabad.
- Dos and don'ts for all types of disaster.
- Family preparedness plan.
- Why CBDP is important.
- BDP Processes.

II. Any presentation for the community should keep the following points into account:

- The presentation should be prepared considering the profile of the community.
- List out the major issues concerning the community and highlight the solutions to those issues in your presentation.
- Highlight the results of the household questionnaire in your presentation. If no questionnaire is answered highlight that too.
- Present the issues in an organized manner,
- On the last day of the CBDP, the points presented on the first day should be revised.
- At all times it should be emphasized to the community that it is their plan and they should update it regularly.
- Need for mock drills should be emphasized.

III. Some basic material should be distributed in the community before the CBDP facilitator goes to the community, to build the environment conducive to CBDP Planning, some of which are given in the annexure.

IV. First mock drill within the community should be held with the help of the CBDP facilitator.

V. The CBDP facilitator should also be able to point out the drawbacks and help to remove those drawbacks.

STEP 3:**PREPARATION OF COMMUNITY PROFILE**

In any planning process first and foremost step is to collect the baseline information about the community. Population characteristics, Socio-economic characteristics, and Physical characteristics are the important aspects of about the selected area. Such information helps in analyzing socio-economic conditions of the area and enables to figure out the level of vulnerability.

Population characteristics include approximate information about a total number of families. The total population should be divided into, male population, female population, children, and disabled cases further.

Physical Characteristics involves collection of information of the area, land use, soil type, and land holding pattern.

Housing typology includes the type of housing, mode of construction, flatted or single houses etc.

Economic characteristics include major income groups and type of prominent economic activity in which the community is engaged.

STEP 4:**PREPARATION OF COMMUNITY-BASED DISASTER PREPAREDNESS MAP**

Steps to be followed for the community-based preparedness mapping, including risk analysis and hazard mapping, resource inventory and resource mapping, and finally identification of safe routes.

In the Risk Analysis and Hazard Mapping, normally The community identifies various hazards on the basis of previous experiences related to earthquakes, cyclones, chemical explosions, fire and any other accidents. Facilitators also collect information about the type disasters, date of occurrence, a frequency of occurrence and destruction caused. Based on the previous experiences of disasters, The community would identify groups of people who are most vulnerable, such as the elders, disabled persons, pregnant women, widows and small children, families living in juggiles, slums and low lying areas. In a few cases cattle and livestock, weak structures, standing crops and livelihood assets should also have to be listed down.

The community also identifies vulnerable locations within their specific area such as juggiles, explosive factories, go-downs, accident-prone areas, and other vulnerable locations. The community should locate and mark all the vulnerable and hazard-prone areas on the

community base map.

Next step would be a preparation of resource inventory and resource mapping which will evolve. While identifying resources available. The inventory of resonance would include:

- Open spaces: Parks, sports complexes for temporary shelters, helicopter landing and safe routes;
- Medical Facilities: Number of hospitals, clinics, dispensaries, medicos, equipments and trained manpower for medical assistance in the area and in the neighborhood.
- Communication Facilities: Radios, televisions, telephone exchange, mobiles, public telephone services etc.
- Transportation Facilities: Buses, tempos, cars, trucks, taxies, three wheelers and two wheelers and pucca roads etc.
- Water Facilities: Water storage tanks, overhead tanks, bore wells, hand pump, community water posts, government or private tankers, sources of bottled water and tube wells etc.
- Temporary Shelters: Schools colleges, community halls etc.
- Sanitation Facilities: Power stations, substation, generators, torches and invertors etc. for electricity supply.
- Public toilets, Community bathrooms, solid waste disposal sites and cremation sites etc.
- Search and Rescue Operation facilities: Fair price shops, kerosene depots, CNG depots, cooking gas depot etc. for food and supply purpose and JCB, Crane, Cutters, Bulldozers, RCC Cutters, Ropes, lamps, and ladder etc.

All this information should be marked on the base map where vulnerable areas have been shown. After mapping these resources, the community would decide the shortest and closest ways / safe routes for evacuation during the situation of emergency. After doing the analysis of risk involved and resources available within a community, the facilitators can also raise important caution points and also give important recommendations.

**STEP 5:
PREPARATION OF LOCAL COMMITTEES, TASK FORCES,
AND EMERGENCY DIRECTORY**

The plan has been made for the communities. It would be advisable if the community constitutes its own Community Disaster Management Committee and nominates names of the members. These members would be further responsible to practice the plan and update the plan from time to time. These members would also prepare the task forces which would take actions at the time of disasters and also approve the plan as an implementing plan. These members can be community representatives (preferably), teachers, school or college principals, leaders, social workers or NGO members.

Around 6 to 7 task forces are proposed to be constituted in each community. These taskforces would be related to search and rescue, damage assessment, trauma counseling, first aid, early warning and communication, relief coordination and provision of water and sanitation. Around 3 to 7 people are preferred to be the part of each task force. These members are selected by the community from amongst motivated and responsible volunteers with the relevant skill sets who can implement and supervise the activities as per the plan, For example, members of Community youth clubs, female members of the Community, self-help groups, literate youth of the Community, school teachers, health workers and so on who are nominated by the local community could be the members. Adequate participation from women is an important aspect of the plan. The Standard Operating Procedure (SOP) is also amended as per the requirements.

I. Search and Rescue Team: The objective of the team is to trace and locate people who are physically trapped in the collapsed buildings, houses and on river banks. This team helps these people to move out and transfer them to the safe locations. These people should be 3 to 7 physically and mentally strong men and women, preferably from drivers, swimmers, cutters, and climbers. All members should have basic knowledge of first-aid and should be residents of the target community.

II. Relief Co-ordination Team: The team would be responsible to establish contact with district collector's office control room, civil society organizations, and NGOs for obtaining and in case of distributing relief material such as food, water, medicines, temporary shelters, blankets, household kits, candles and so on. They are also responsible for fair distribution of the relief within the community. This team should comprise of

community representatives, social workers, women members and leaders of the community.

III. Early Warning and Communication Team: To ensure that the warning of the impending disaster reaches every single household on time, accurate information is to be provided regularly of any disaster taking place in other areas, Information should flow quickly and reliably upwards to district level and downwards from district to Community Level These team members should be literate, energetic and should communicate confidently and accurately. These people should also have telephone or mobile phone, radio or television and they should read the newspapers regularly and/or trained in the use of HAM radio.

IV. Water and Sanitation: This team is important to make available safe drinking water to the community and livestock. The team should also ensure availability and cleaning of temporary toilets, bathrooms, and temporary shelters. The task force members should be individuals preferably with some knowledge of water-specific public health and sanitation. Women candidates are also preferred in this team.

V. First Aid and Health: The team would be responsible to provide primary health care to injured people until medical assistance is provided to the patient. This group would be comprised of persons who are literate, having health-related knowledge or working in the field of medicine and are respected members of the community. Women members presence in this team, would be highly advantageous.

VI. Trauma Counseling: This team would be responsible to take care of the affected people through counseling so that they could come out from mental pressure arising from the disaster. Social workers, psychologists, psychiatrists, students, and priests can be good councilors for the victims.

VII. Training sessions for the Task Forces: Training plays an important role in disaster mitigation and should be organized for each sector. Duration of training will vary from a few hours in the evening spread over to a week. This depends however on the convenience and availability of task force members and the nature training module. The venue should be accessible for a maximum number of people. A conscious effort would be made to integrate training for peace time activities into the training program.

VIII. Emergency Directory: This is the least but not last important component of the process. The directory would include phone numbers and contact details of district-level administration including District collector/

Deputy Commissioner, Additional District Magistrate, Chief District Medical Officer, Chief Fire Officer, Deputy Commissioner of Police, Deputy Commissioner of Municipal Cooperation, Food and Supply Officer, Transport Authority Officers and District Liaison Officer etc. The details of local NGOs would also be listed down. Besides that, contact details and names of all the committee members, trained manpower, and resource persons would be included in the directory.

All this information would be helpful in preparing a comprehensive approach to hazard specific pre-disaster preparation, during and post-disaster response. The questionnaire would also support in posing questions to the community groups to obtain information on the specific situation.

STEP 6. CONDUCTING MOCK DRILLS

Mock drill is another important aspect of this plan. Without practice, one would not be able to use these safe routes at the time of emergency. Such kind of mock drills should be organized frequently by the committee members with the help of nearest fire service Station and Civil Defence. During the mock drills, people should practice to come out from their buildings and houses within 3-4 minutes to the open spaces identified in the community maps. Taskforces should also practice conducting their primary activities of conducting Search and Rescue, Damage Assessment and Early Warning System, First Aid and Trauma Counselling etc. After collecting all these information, a community plan would be written by the experts. Copy of the detailed plan should be made available to the community representatives, NGOs and all these connected in the district level administration.

3. CONCLUSION

Past experiences in the Gujarat (India) affirm the effectiveness of involving communities in disaster preparedness and mitigation. However, local communities cannot reduce all vulnerabilities on their own. While communities have built on local coping strategies and capacities to reduce some vulnerabilities, many necessary structural mitigation measures involve big capital outlay. More important, vulnerability is also a complex web of conditions, factors, and processes, which can only be reduced through complementary and concerted action among multiple-stakeholders from various disciplines and levels of the disaster management and development planning system.

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