

GLOBAL BLUEPRINTS FOR CHANGE

First Edition--Prepared in conjunction with the International Workshop on Disaster Reduction convened on August 19-22, 2001

The Global Blueprints for Change contain guidance for working together to improve the capability to identify indicators of physical, social, enterprise, and environmental vulnerabilities throughout the world and to select and implement realistic solutions to reduce them towards acceptable levels.

Theme A: LIVING WITH NATURAL AND TECHNOLOGICAL HAZARDS

Topic A.6: Improving Emergency Management

“Relief and Development: Need for a Holistic Approach for Disaster Management in Andhra Pradesh, India”

This contribution was created by Dr. A. V. S. Reddy, Principal Secretary, Revenue & Relief Department, Government of Andhra Pradesh, India, and Dr. K. R. Sastry, Deputy Director, NIRD (Retired) & Consultant, Disaster Management, Hyderabad.

DISCLAIMER: This manuscript was prepared as a contribution to the first edition of the Global Blueprints for Change and for use in conjunction with the International Workshop on Disaster Reduction convened on 19-22 August 2001 in Reston, VA. The manuscript is a "work in progress" and has not been edited for policy and for conformity with the other Blueprints.

RELIEF AND DEVELOPMENT: NEED FOR A HOLISTIC APPROACH FOR DISASTER MANAGEMENT IN ANDHRA PRADESH, INDIA

Dr. A. V. S. Reddy ¹
Dr .K. R Sastry²

I Introduction

Incidence of natural disasters has become a frequent phenomenon in several parts of the globe causing a setback to the development initiatives¹. The increased frequency and intensity of disasters in certain regions call for an innovative approach in disaster management and also to evolve long-term development plans addressing squarely the different aspects of disaster management. Such a holistic approach involves the use of Research and Development (R&D) knowledge of scientific community to counter the consequences of disasters, preparedness of the community in organising the relief and rehabilitation, adoption of a mission mode approach by the delivery system etc., to minimize the losses and suffering, and also to put the economy back on the rails of an eco-centred development trajectory. A multi-disciplinary approach with total participation of the stakeholders in this endeavour is the sine-qua-non. The credit for highlighting the need for adoption of a multi-disciplinary approach for solving human as well as environmental problems should go to Herald Lasswell, a pioneer in policy science research.

Considering these factors, it is desirable to make a conscious effort to integrate relief planning with long-term development. Peter Drucker's statement: 'Long-term planning does not deal with future decisions, but with the future of present decisions', is relevant here. Most of the developing as well as under-developed countries are prone to multiple-disasters although they differ in their approaches in responding to pre-, during-, and post-disaster situations.

Although the contents of this paper are by no means exhaustive on this topic, they provide a bird's eye view of the principal concerns in disaster management. The task of providing suitable material for policy people in general and more specifically to "disaster-prone people" or "disaster-vulnerable populations" is calling indeed for good practices that have shown appreciable results. In the absence of it, the tendency is to fall on precedents in 'revenue administration' in order to determine and disburse relief either in cash or in kind. In other words, the effort is to produce an innovative model on how the available systemic arrangements should be made use of in the wake of a disaster.

II. Experience of Andhra Pradesh

Disaster Management is still viewed as a firefighting exercise since integration of relief-administration with a long-term perspective, especially in rural development, has not

¹ Principal Secretary, Revenue & Relief Department, Government of Andhra Pradesh, India.

² Deputy Director, NIRD (Retired) & Consultant, Disaster Management, Hyderabad

been seriously attempted anywhere in the country. The experience of Andhra Pradesh (A.P), where relief is under Revenue Department while the disaster management unit (DMU) is being located in the planning department of the State Government, is a case in point. The authors of this paper are of the opinion that disaster reduction should be associated with the Rural Development (RD) department², which has been amalgamated in the recent past with the Panchayat Raj (PR) Department under the overall supervision of the Principal Secretary, PR&RD department, since there is more allocation of funds under various poverty alleviation programmes (PAPs) formulated both by the Central and State Governments. Such resources can be put into more productive use for modernization of irrigation and drainage systems alongside land reclamation and development besides creation of infrastructure. Various PAP's with the earmarking of huge funds for their execution will be more systematically channelised by the state, since it is prone to multiple – disasters such as cyclones, floods and earthquake. Whenever cyclones or floods, hit an area, greater attention is bestowed by the State Government invariably on the immediate relief operations, in the form of cash or in kind or both. Once the critical period was over, the general tendency is to relax. The same response is more or less noticed even in the case of slow on-set disasters like drought.

The situation as obtaining today in Andhra Pradesh may be due to the psychology of exaggeration, when we look at the reports received from areas devastated by Cyclones / Floods, especially on the affected properties listed like houses collapsed or damaged, during cyclones and floods. Because of various sociological, political, and operational factors, damages listed are blown out of proportion to the actual number of physical and social infrastructure available in the pre-disaster set-up. For instance in Andhra Pradesh, several cyclones / floods had hit the villages and towns in the coastal areas frequently during the years 1977, 1980, 1990 and 1996, it was noticed that there have always been variations in the number of people perished against the officially declared figures: the cattle lost; the houses collapsed; the crops damaged, etc., listed or categorized as damaged during calamities.

In the above situations, the pressure on relief management machinery is three-fold:

- a) Evolving a methodology for accurate assessment of the damages;
- b) Estimating the same in monetary terms and approaching the appropriate authorities / agencies for raising funds required; and
- c) Evolving a management strategy to restore essential services like drinking water, fodder, etc. The current practices of distribution of relief packages need a thorough review, as there is no attempt on the part of the regulatory machinery to evolve suitable methodologies for effectivising the clientele satisfaction. The continuing pressures on the relief management machinery, the declining efficiency of the system leakages in the existing set-up, demands adaption and adoption of a different perspective based on scientific tools and methodologies.

According to public policy makers, people adopt frequently themselves to public policies in ways that render policies useless. We may solve the problem of rehabilitation after a disaster by governmental interventions. But by doing so, the government may kill the initiative in people and such frequent dependence on government is beyond its financial capabilities. There exists a possibility that adaptive behavior may frustrate a policy. The need of the hour is to pursue a holistic policy on disaster management. It is endeavored in this paper to raise the issue of elevating the status of disaster management from just a journalistic topic to that of a full-fledged academic discipline; and thereby linking disaster reduction to sustainable development, with all its paraphernalia. In the literature, theoretical

deliberations on the definition of disasters are in abundance. Such theoretical underpinnings have currently reached a stage that specialists and serious analysts argue that there is no such thing as a natural disaster and further opine that there ought not to be any such distinction. Rather they adumbrate the view that natural phenomena, if it were not for the neglect, insatiable greed and dalliance of mankind, would not result in various kinds of disasters.

III. Issues

Disaster management should be seen in a broad spectrum or in a holistic approach and the problem should be dealt with in its entirety. In order to evolve a broad based policy and operational model for management of disasters and their mitigation, the issues that need the attention of policy makers, administrators, planners and professionals associated in this activity must be identified for further consolidation. The major issues related to disaster management with specific reference to India and many of the countries facing disasters of one type or the other can be briefly listed.

1. Disaster management should be a part of the total development perspective of an area. To achieve this, the development needs for different disaster-prone areas should be assessed and specific planning approaches should be evolved keeping in view the physical characteristics like resource endowments, population pressure and the types of disasters in the area.
2. Within the disaster-prone areas, vulnerability analysis and risk and hazard mapping should be carried out on a large scale so that area specific plans could be prepared and the disaster reduction activities and socio-economic development of the area could be integrated appropriately.
3. There should be a specific settlement and housing policy for the disaster prone areas so that concentration of population in high risk areas could be checked and disaster proof housing designs and technologies be enforced to ensure reduction in the loss of lives, cattle and housing.
4. There should be a well organized and scientific data base system, networking and information sharing which not only helps in improving preparedness and providing decision options in crisis management, but also helps in the assessment of losses and damages. Detailed guidelines and appropriate techniques should be evolved, besides improving administrative and organizational network for this purpose.
5. To curb this situation, a specific policy for financing relief and rehabilitation should be evolved in such a way that the states need not depend on central pool for funds every time. Introduction of Calamity Relief Fund within the state budget augurs a good beginning in this direction³. However, arrangements should be made to tap other sources of finance for funding disaster reduction activities⁴.
6. A 'Socio-Economic Security System' involving the major Insurance agencies should be evolved for all disaster-prone areas so that individual losses could be compensated through insurance and the financial burden on the Government is reduced to a great extent.
7. All the construction departments should evolve special equity control systems and specifications for the construction of physical infrastructure so that these could withstand cyclones and floods. Appropriate technology with cost consideration should be used to safeguard the physical infrastructure and public utility facilities from recurring disasters and thus costs on repair and reconstruction could be minimized.
8. People should not only be made aware of but also involved in disaster reduction measures and environmental conservation. Besides participating in relief and rehabilitation activities, they should also be made to share costs of reconstruction and

disaster reduction activities. Total dependence on government for relief rehabilitation and economic compensation will not only reduce their capability of facing calamities but it makes them more vulnerable too to the politicization of disasters, that leads to more confusion among the officials and elected leaders in under taking immediate relief measures⁵.

9. Rural development and poverty alleviation programmes for disaster-prone areas should be specifically designed. Programmes like drinking water supply, construction of roads and school buildings, housing should be planned and implemented keeping in view their vulnerability to disaster. Employment generation programmes could be fully focused on disaster-reduction activities⁶.
10. Flood control, soil conservation and afforestation in flood-prone areas and in the river catchments should be integrated and brought under a single administrative authority so that all activities implemented in a more coordinated manner and thus a visible impact could be created.

IV. Suggestive Framework

Following the example of the neighboring Bangladesh, which is often ravaged by cyclones and floods, it would be in the fitness of things to establish a permanent body like a Disaster Management Bureau (DMB), under the chairmanship of the Chief Minister and some relevant Ministers heading various departments for bringing the much needed coordination between and among them.

On the other hand, social scientists highlighted the need for a comprehensive database for taking effective steps for policy making. Disaster management cuts across several disciplines. Natural disasters are generally location-specific. We all know, where the drought occurs frequently as also the floods and cyclones. Earthquake does not affect the non-seismic zones. Furthermore, barring a few countries like Japan, disaster-prone developing countries have vast rural populations with a predominantly agriculture-based economy.

What is needed now is a well-coordinated effort on the part of planners, policy makers, scientists, and implementers to come to grips with the multi-disciplinary nature of the field. For instance, it was reported that varieties of paddy that survive floods are going to be a reality soon, thanks to the research at the University of California in the USA, where a group of specialists reported to have found that a genetic marker close to a gene by examining flood tolerant plants⁷.

These findings together with several others, underscore the need for evolving a methodology by which knowledge generated in several different fields is put to the best use to solve the problems faced by humankind like cyclones, floods, drought, earthquakes and other natural disasters.

In retrospect, it may be emphasized that there is an urgent need to evolve a National Policy for disaster reduction in all the disaster-prone areas that not only takes care of disaster reduction but also provides security by mitigating the impact and leads to speedy development of such areas. In this task, the role of scientists, technologists, researchers and professionals would be of great importance to the policy makers and the administrators, who have the onerous responsibility to implement the disaster mitigation and preparedness plans. There is also considerable scope for scientific and technological research and development to

evolve suitable, sustainable and cost-effective technologies applicable both to the construction of physical infrastructure, which can withstand disasters and also to carry preventive measures wherever possible.

The overall situation suggests a set response pattern, i.e., the environment degradation accentuates disaster threat which could be tackled to a large extent by establishing relationships and interactions between and among various Government Departments and other community based organisations (CBOs) that are engaged in disaster reduction. The famous adage “Prevention is better than cure” is more applicable to disaster management in various countries of the region. Steps to tackle Disasters should be planned well in advance keeping in view the specific calamities that may strike at a particular area/region/Zone. It is a truism that Disasters are caused by man’s undesirable acts by disturbing the ecological balance⁸. Due emphasis should therefore, be given to preparedness to meet a crisis rather than ‘ planning for the post – destruction phase’. In the ringing words of Muhammad Ali, the world famous Heavy-weight Boxing Champion: “It is no time to start planning the fight, when you come out of your corner and start taking punches”. From this, the main lesson to be learnt is that there should be adequate preparedness in advance. The fact remains that coordination and channeling of resources with all promptness sometimes becomes unassailable due to the meager resources like personnel and finances at the disposal of the administration whenever a massive disaster strikes with all fury. In such situations, prompt action by all the concerned is possible if a ‘Mission Mode’ strategy is adopted for disaster mitigation and sustainable development.

A ‘science’ of disasters is more an aspiration than a reality for which what needs to be done besides providing an enlarged framework base include:

- | All the stakeholders have to be involved in all stages of disaster management – preparedness, mitigation reduction efforts, relief and rehabilitation, reconstruction and development;
- | Use of scientific know-how in the disaster management;
- | Establishment of an MIS for effective relief administration and monitoring; mapping of resources and dwellings (types) habitation-wise (GIS)
- | Spread of insurance network to disaster prone zones – insurance cover for assets, individuals and livestock. The State Governments, if necessary, should pay premium for the poor;
- | Active involvement of PRIs, NGOs and CBOs to enable the community to participate in disaster management and development initiatives;
- | Convergence of actions for effective control and to make delivery system more responsive – greater facilities for communication or convergence between researchers, policy people, decision-makers and advisers – and adoption of a mission mode approach.
- | Pooling of resources for disaster mitigation oriented development – Integration of poverty alleviation programmes in disaster mitigation efforts (pre-, during and post-disaster phases).
- | Capacity building measures - Imparting training to those with responsibilities in development planning, environmental management and disaster reduction.
- | Role of external agencies – International agencies, should go beyond their structured agenda. These agencies besides acting as disseminators of innovations should help evolve

holistic approaches towards disaster managements since uni-discipline based solutions proved unsatisfactory.

V. CONCLUSION

Generally speaking, after the occurrence of each disaster, a high profile is accorded to it and a crisis management group will look into the post-disaster relief efforts. Once these efforts are over and normality is restored, people who matter tend to underplay the sufferings of the disaster victims as well as the damages caused. In order to overcome the debilitating effects of disaster reduction, efforts to achieve sustainable holistic development could be pursued through a 'mission mode'. This process includes the following elements that should be accorded top priority while formulating a viable plan of action.

- (a) A clear vision, related to measurable results within a time-frame;
- (b) Dependence on self-help and self-reliance;
- (c) Motivated community participation;
- (d) Improved communication system;
- (e) A process of Information empowerment, i.e., sharing of relevant information with elected and official development functionaries;
- (f) A reliable data base including the remote sensing information and GIS for proper use and subsequent monitoring;
- (g) Effective coordination of all departments and functionaries and convergence of all services at local level; and
- (h) Delivery of quality services to the community.

By adopting the 'mission mode', significant results in the arena of disaster mitigation can be achieved. In fine, it would be relevant to add that the 'mission mode' is not only relevant but also has a greater relevance for linking development with disaster reduction. While concluding, it must be emphasized that unless people participate in the pre-, during-, and post-disaster situations, it would be difficult to realize the desired results⁹. Thus, the participation of target groups, i.e., the people affected by natural disasters will go a long way by making themselves as partners in the mitigation efforts rather than recipients of the Government sponsored measures.

Put differently, the "voices and choices" of the people and communities will have a greater salience in disaster management. In addition, the present day "culture of relief" should give way to "culture of prevention and preparedness" to have any impact on the long-range planning aiming at disaster reduction and mitigation. Increased community involvement can be stimulated by delegating responsibility as also executive and financial authority to the lower rungs of administration, with a view to developing self-reliance and self-help in the communities through enhanced participation of people. This process should also subsume the participation of NGOs and Community Based Organizations (CBOs) in relation to disaster relief and rehabilitation, which would promote increased awareness among the people inhabiting the disaster-prone areas not only in India but also elsewhere in the world. In the final analysis, protecting the planet earth from extreme exploitation of already depleting natural resources should be attempted with all seriousness it deserves.

Notes

1. Whatever development has been accomplished over a period of time could in all probability be swept away by a one-time major natural calamity like the cyclones in 1977, 1990 and 1996 in A.P and the Latur (in Maharastra-1993), Bhuj (in Gujarat-2001) earthquakes, etc. It, therefore, follows that a multi-pronged approach has to be adopted to tackle the problems arising due to frequent occurrence of disasters.
2. Logically the Urban Development Department should also be associated since disasters do not subscribe to the rural-urban dichotomy concept. However, in the Indian context, over 70 per cent of population reside in rural sector, justifying a key role for PR & RD Department.
- 3 Demands for funding relief and rehabilitation following various calamities across the states in India, have been on the increase over the years. To discourage such a tendency, suitable guidelines need to be evolved in such a manner that various State Governments should not depend on the central largesse. In point of fact, the Calamity Relief Fund (CRF), created in 1990, was a step in the right direction. Of late, there has been criticism that CRF has not been properly utilised by the states. As said earlier, some Disaster management experts suggest that it should be known as ‘Calamity Prevention Fund’ rather than Calamity Relief Fund. Over the years, demand for relief and rehabilitation funds in the aftermath of each calamity has become more political than the actual requirement. Although creation of a Calamity Relief Fund is welcome, it is not enough given the enormity of situation in a big country like India. The Calamity Relief Fund gives an impression that it is only for relief and rehabilitation. It should be treated as Development of Disaster Prone Area Fund and should be used as such for both long term and short-term disaster reduction activities besides financing relief and rehabilitation.
- 4 The Eleventh Finance Commission (EFC), has suggested a surcharge on the central taxes in order to raise resources to assist the states affected by ‘national calamities’. The EFC also recommended to dispense with the National Fund for Calamity Relief (NFCR), because a disaster of a very high order, intensity and magnitude, which can be called a National Disaster cannot be anticipated and funds could be provided for in advance through the NFCR or a regular budgetary mechanism. Also, the centre’s responsibility does not get restricted to the availability of the amount in the fund. According to the EFC’s suggestion, which has been accepted by the Government of India, the central aid to states following natural calamities should be financed by the levy of a special surcharge on central taxes for a limited period of time. Amounts accrued from the surcharge should be pooled under a separate head of account and the centre should contribute to states an amount of Rs.5,000 million for meeting the immediate needs. But withdrawals from the separate fund should be accompanied by the imposition of a special surcharge, so that it would be replenished immediately. Having said that, the EFC has recommended that the present CRF in states, with an aggregate quantum of Rs.110,076 million, should continue to meet the expenditure on account of disasters. The CRF would consist of the center’s share of Rs.82,257 million and the states’ share of Rs.27,519 million, basing on the ratio of 75:25. The EFC report also spelled out in detail the state-wise distribution as well as the criterion adopted for such an arrangement.
- 5 For a detailed account on this aspect, please see an article by AVS.Reddy and K.R.Sastry: “The Politics of Disaster: Public Pressure and State Response to Cyclone Relief in Andhra Pradesh,” **Disaster Management** (UK), Vol.4:No.3, 1992, pp.123-30
- 6 All types of Integrated Rural Development Programmes (IRDPA), which is now called Swarajgar Gram Samuruddhi Yojana (SGSY), could be covered under an Insurance Scheme to safeguard the interests of the poor people.

- 7 Again research work in Japan has brought to the light about an enzyme that could allow plants to grow in certain climates that would otherwise be too dry to support them may soon turn deserts into more hospitable environs.
- 8 It can be inferred that affects of disasters can be aggravated by man's selfish acts since human fallibilities have been established with regular tenacity; and the latest instance of this trend, was witnessed recently in the building collapses that occurred in Gujarat on Jan'26, 2001. This tragedy on India's national day turned out to be a national calamity of the highest magnitude. So much for the pervasive ways of builders who thrive in real estate business, which throws building regulations to winds, not only in Gujarat but also elsewhere in the country.
- 9 During the floods occurred in various parts of India in 2000, including the city of Hyderabad, more than three-and-a-half million people were badly affected. Currently (July 2001), Orissa which is known for suffering of people due to drought and famine, is facing a grim situation arising out of unprecedented floods occurred due to heavy rains. It was pointed out that a large number of rivers have breached the embankments due to silting, besides the inadequate measures taken up by the Irrigation Department in Orissa have aggravated the problem. Kerala in South-West India, is another State where lot of damage to infrastructure and life supporting systems has taken place in the June-July 2001 floods, following heavy rains; and it is an annually recurring phenomenon which needs urgent attention of both the Governments of India and Kerala on asustainable basis. Of the 560 – Km – long Kerala coastline, 'sea walls' had been built along 350 Kms., with financial assistance from the Government of India. However, funding was discontinued in the early 1990s. The Government of Kerala has been constantly requesting the Central Government to recommence funding for reconstructing sea walls, which is considered as the only long-term solution to the serious problem of erosion of land by the seawaters. In the mitigation of such calamities, the role of community participation and people's awareness programmes should be attempted to address issues concerning how to balance out the long-term needs in the arena of environmental conservation. It is hoped that in cyclone/flood-prone areas, development of mangrove forests and shelterbelts through community participation would provide an answer in the long run.