

Community Participation in Contingency Plan Preparation towards Disaster Mitigation

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Abstract

Natural disaster is one of the major developmental challenges that the world is facing in recent years due to various reasons. Society for National Integration through Rural Development (SNIRD), an NGO working with the fisherfolk communities in the state of Andhra Pradesh, India, has long been working with community based disaster management. As there were no proper mitigation plans, the livelihoods of the fisherfolk was worst affected. Hence SNIRD initiated a project and worked out community-based strategy, making use of Participatory Rural Appraisal (PRA) techniques. This paper deals with the participation of community in preparing a holistic disaster mitigation plan to cope up natural disasters and to sustain their livelihoods.

Keywords: Community Based Disaster Mitigation; Contingency Planning; Livelihood Support Mechanisms; Natural Disasters; Participatory Rural Appraisal

Introduction

The occurrence of natural disasters is currently one of the major developmental challenges that the world is facing. As there were no preparedness measures among the communities, the impact of the disaster was worsened, often destroying their livelihood support mechanisms. Hence Society for National Integration through Rural Development (SNIRD) has implemented participatory approach towards addressing community vulnerability to natural disasters. This was taken up as part of its mandate to support development of impoverished and marginalized fisherfolk community within the Prakasam District of Andhra Pradesh.

The socio-cultural framework in the Chandrasekharapuram fisherfolk village of Vidavalur Mandal in the Nellore District of Andhra Pradesh, India represents a unique set of problems and challenges (Figure 1). This village has faced multiple disasters over the past years ranging from storm surges, cyclones and the tsunami.



Figure 1: Chandrasekharapuram Village.

The increasing incidence of disasters has made the community believe that disaster preparedness is critical in protecting their lives and property thereby reducing their vulnerability. The keynote of the Alternate Livelihood Income Plan [1] in this village is the preparedness measures to reduce risks and vulnerability,

thereby sustaining their livelihoods and in establishing a community level emergency response mechanism

Materials and Methods

Process Initiated in Preparation of Alternate Livelihood Income Plan

The participatory Contingency Plan Development process incorporated a number of fundamental building blocks, in which the community actively participated in preparing the Village level Contingency Plan a reality. The processes included are,

Community mobilization

The project supported the engagement of community members to orient themselves to the project objectives and approach and bring them to a point of readiness for full operation of the disaster preparedness project.

Participatory Planning

The project used the techniques of community based Participatory Planning such as Participatory Rural Appraisal (PRA) to involve the community in the formulation of their own village level disaster preparedness plan [2].

Task Force Formation

The project developed the capability and the capacity of the community members to form their village level taskforce teams to plan for the implementation of its operations during disasters.

Village Level Contingency Plan

Response Plan of the community is the present document that puts forth the response mechanism of the village members.

Build Capacities for implementation of Contingency Plan

The project will follow up the Plan Process and emergency response mechanism through Mock drills as an integral part of the emergency preparedness project) [3].

Alternate Livelihood Income Plan

Based on participatory planning, considering the seasonality of the village the Alternate Livelihood Income Plan is being prepared and implemented by involving the Community Based Organisations (CBOs)/Mutually Aided Credit Societies (MACS) for vulnerability reduction through enhancement of livelihood options [4].

Results and Discussions

Social Conditions

People of Chandrasekharapuram belong to the Pattapu community. This community migrated to Andhra Pradesh from Tamil

Nadu many centuries ago. Parents take their sons for fishing along with them from the age of 12 years. Nowadays, men wear dhotis and shirts but some of the elders still wear the Gochi (a strip of cloth that passes between their legs and is tucked into a string tied around their waist). The head is covered with a piece of cloth that is tied around the ears leaving the middle of the scalp bare. The women wear saris. Pattapu people speak the Pattapu language that is a mixture of Tamil and Telugu. This language has no script. Most of the men, not only the elders but also the youth, are addicted to alcohol. The villagers are basically Hindus who worship Lord Rama and so far there is no temple for worship.

There are a total of 22 families in this village and 13 houses are reinforced concrete roof houses and the remaining 9 houses are huts. All 22 houses have electricity supply connections. There are total of 12 electric poles, which are in good condition. Although this village has a Panchayat peline for the water supply but there is no water supply because of the failure of the bore well. The villagers are using water from small hand bores for their cooking and cleaning. This village does not have drainage system because of the sandy soil, which does not allow stagnation of water. There are no household toilets and open defecation is the prevailing practice leading to unsanitary condition of the village.

In this village there is no school, the children goes to the school at Ramatheertham an adjoining town for their education. They go by auto rickshaw for which they pay monthly rental to the auto. The literacy level of this community is around 25% and not even 15% of the women are educated. Previously the Government Public Health Centre Nurse used to visit this village thrice a month but she is not visiting the villages nowadays. In any emergency situation, the villagers have to go to Ramatheertham or Vidavalur which is 4 kilometres from this village. Diarrhoea/Malaria are observed in April to June and cold and fever in the months of September to December.

Livelihood Situation

90% of the villagers are engaged in marine fishing. The women are often engaged in agricultural labour during the off seasons of fishing. There are 6 women who are head load fish vendors. Majority of families belong to below poverty line, as they are dependant solely on fishing. As marine resources are getting depleted at an alarming rate due to over fishing and destruction of fish habitats. Middlemen exploit the fisher-folk because they are unable to avail credit facilities from formal banking institutions. Further the Government is giving pension to 4 members only with 4.5\$ (1\$ = Rs.66) per month.

Trade In and Trade Out

The approximate details of income and yearly expenditure of one family is given in (Table 1).

Expenditure	Amount (\$)	Income Amount (\$)
Rice & Grocery	400	Sale of Prawns & Fish 750
Medicines	200	Agriculture labour work 250
Clothing	90	Millet Cultivation 150
Alcohol, cigar, etc	70	Groundnut cultivation 175
Gear & Boat maintenance	200	
Kerosene & Electricity	135	
Diesel for Fishing	200	
Miscellaneous	25	
Total	1320	1325

Table 1: Income and Expense of a family.

Participatory Rural Appraisal Tools

Social Mapping

The population of Chandrasekharapuram is 65 living in 22 houses of which, 13 are reinforced concrete houses and the remaining 9 houses are thatched huts. The whole community belongs to the Pattapu community, which has been classified as a Backward Community. There is no “Cyclone Shelter” in this village. Hence the villagers will be shifted to the nearby village called Busagadipalem, which is situated at a distance of 100 meters from this village. The details are given in the Social Map (Figure2).

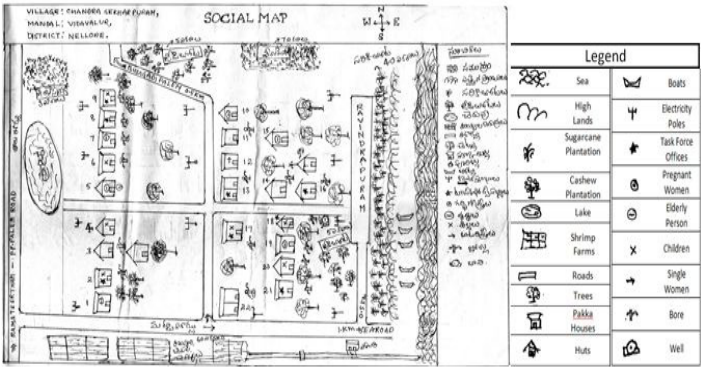


Figure 2: Social Map of Chandrasekharapuram Village.

Hazard Mapping

The villagers were involved in hazard mapping and the details are given below. The sea is 1 km to this village and after tsunami the sand dunes are washed away and during high tides, the water will come closer to this village. The details are given in Hazard Map (Figure 3).

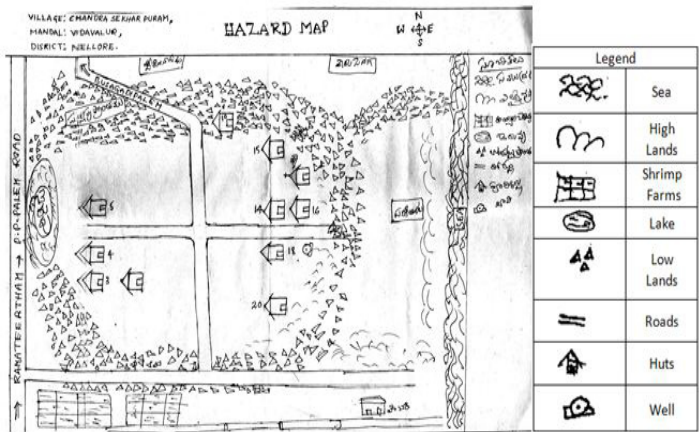


Figure 3: Hazard Map of Chandrasekharapuram Village.

Resource Mapping

The details of livelihood assets in this village are in (Table 2). The fish varieties and the fishing seasons are given in (Table 2). There are 3 Fiber Reinforced Boats, in which 4 people can go for fishing in each boat. 2 large theppa (boats) in which 6 people can go for fishing in each one and 5 small theppa in which 2 people can go for fishing in each one. The details are given in (Figure 4).

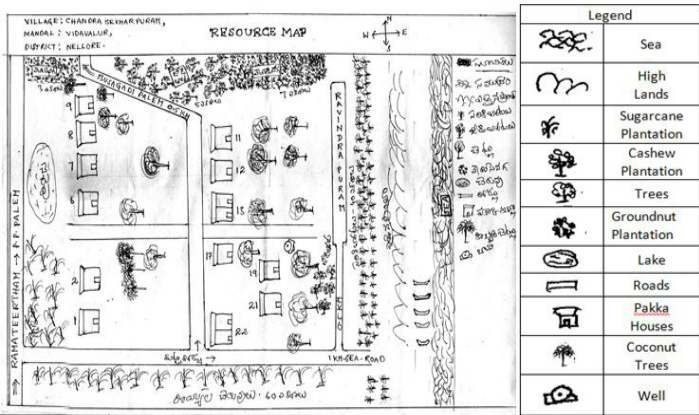


Figure 4: Resource Map of Chandrasekharapuram Village.

Occupation	Asset	Total Nos.	Value in \$
Fishing	Fibre Boats	3	8525
	Nets	5000 Kgs	
	Theppa Large	2	3200
	Theppa Small	5	2275
Agriculture	Wet Land	2 acres	2275
	Dry Land	6.6 acres	690

Table 2: Fishing Assets in Chandrasekharapuram village.

Task force members

The villagers selected 7 men and 3 women between the age group of 24 to 38 as the task force committee members for this village. Each task force committee member was assigned with specific responsibilities during pre and post disaster management. The Task Force members are grouped and trained under Early Warning, First Aid/Water and Sanitation, Shelter, Rescue and Evacuation, Relief and Rehabilitation Committees.

With Oxfam Support

It was identified to provide seed capital support of assets worth 45\$ for a fish pickle unit to 3 women beneficiaries by the community and willingness/interest shown by the beneficiaries. As Nellore town is 40 kilometres from this village there is a potential demand for fish pickle in Nellore and nearby towns like Kavali and Ongole. Hence a total quantity of 3600 kilograms will be procured locally at the rate of 4\$ per kilogram and sold at the rate of 4.5\$ per kilogram. The quality of the product (pickle) will be monitored by Society for National Integration through Rural Development (SNIRD), a local NGO who will be responsible for implementing the livelihood interventions. Further it has been identified to provide asset worth 35\$ for cold storage (ice box) for 3 beneficiaries having fibre boats. Actually, the total cost is 70\$ for each box, whereas the Government will provide a subsidy of 35\$. The ice box will be procured from Nellore with Fisheries Department. The cold chain process is used to preserve fish products, thereby fetching better price for their catch.

As per the Alternate Livelihood Income Plan, there is an additional income of 1160 USD annually by these 6 beneficiaries through fish pickle business also cold storage as an alternate livelihood income generation activity.

Community Investment

There are 2 Self Help Groups (SHGs) (a group of 15 or more women involved in thrift & credit activities), having a capital of 2590\$. Additional loan for funding will be mobilized from banks for \$2275 by these SHGs and a seed capital of 115\$ will be provided for 5 borehole wells to irrigate the 7 acres of land. The 23 members will be sub-grouped into five common interest groups, as they will be responsible in maintenance of borehole wells and

in repayment of the seed capital for the borehole construction. Further, each SHG member will be provided additional credit depending on the need for crop support. There is a demand for water melon during summer months. Hence the SHG members will be motivated to cultivate water melon in February to March. Middlemen from Nellore will come to village point to collect the fruit in lorry loads and they will sell it in Nellore, Kavali, and Ongole and also in Chennai markets. Also, the SHG members will be motivated to cultivate ground nut during July to September. The produce will be sold to middlemen and they will sell it for oil production. Ground nut will be collected from the village point by the middlemen. Cultivation of water melon and ground nut will generate an additional income of 258 \$ per annum for each family.

Role of CBOs/MACTS and SNIRD

Mutually Aided Cooperative Thrift Societies comprises of women members will be registered at the District level comprising of an Executive body. NGO staff will monitor the day to day activities of MACTS. Regular meetings and trainings will be organized to MACTS members for financial management, proper loan utilization and in book keeping. MACTS will provide credit for economic interventions at village level.

The MACTS members from this village have elected 10 members for the Community Based Organisations (CBO). These CBO members will be provided intensive training on risk reduction and community based disaster preparedness.

Conclusion

Based on the practical experiences and knowledge of our intervention as diversified practices on fish related activities and agriculture will be replicable model in the disaster prone areas. By adapting the above method will provide value addition on fishing and agriculture products and can potentially generate additional income and also agriculture intervention is eco friendly. This in turn will contribute towards reduction to disaster vulnerability. The alternate income will pave way for better socio-economic development and hence there will be reduction in vulnerability. Further community preparedness and vulnerability reduction will cope up for the better psychosocial development of the villagers. Hence participatory Alternate Livelihood Income Plan preparation for reducing vulnerability, thereby sustaining the livelihoods of marginal and fisherfolk communities is very important for disaster prone areas.

References

1. Leichenko RM, O'Brien KL (2008) Environmental Change and Globalization: Double Exposures. Oxford University Press, New York.
2. M Dille et al. (2005) Natural disaster hotspots: a global risk analysis. Disaster Risk Management Working Paper Series No. 5. The World Bank, Hazard Management Unit, Washington DC.

Citation: Newport JK, Moller JJ, Newport KJ, Aroshaliny G, Jawahar GGP (2017) Community Participation in Contingency Plan Preparation towards Disaster Mitigation. J Earth Environ Sci: JEES-122.

3. Newport JK, Godfrey JGP(1996) India-Training for Safer Future, Stop Disasters, 8 and 9, Geneva, Switzerland.
4. Newport JK, Godfrey JGP(1998) Crisis Management by Community Participation, International Journal of Mass Emergencies and Disasters 363-370.