

Figure 9. Physical Environment

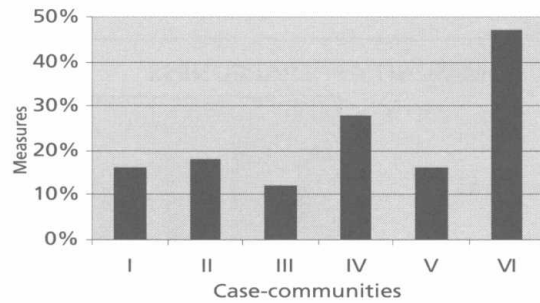


Figure 11. Cultural Capital

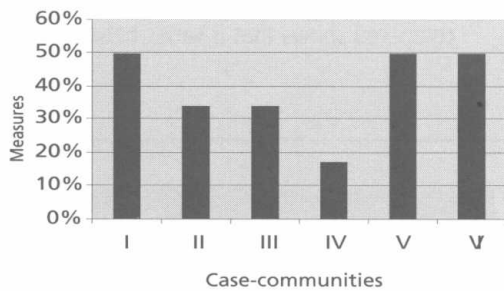


Figure 10. Psychological Preparedness

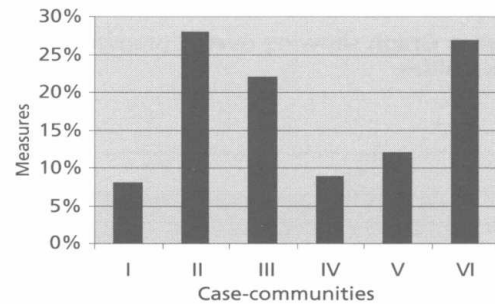


Figure 12. Household Preparedness

44%. The lowest score of 29% was for community IV (Gupti, Orissa) and the highest was recorded for community VI (Kallana, Orissa) which was also the control group or the community that was considered for being relatively better prepared. The individual scores of the parameters for the six communities when compared (Figures 3-12) show high variance in each case.

Analysis of these graphs show that overall preparedness does not follow any uniform pattern and high preparedness in one or more parameters for a community can be neutralized if it does not score well in other parameters. For example, in community-V hazard awareness is 56% which is the highest among the six but the same community scores poorly in other parameters such as physical environment (23%), cultural capital (16%) and recovery ability (23%) and as a result its overall preparedness remains low at 36%. Similarly the control group (case-VI) scores highly in four parameters i.e. recovery ability (56%), physical environment (78%), cultural capital (47%) and psychological preparedness (50%) but its overall preparedness remains limited to 44% mainly because of its poor scores in parameter such as hazard awareness, organizational preparedness and social capital. This also substan-

tiates the view that high per capita or better recovery ability by itself does not ensure better hazard awareness or organizational preparedness and therefore such parameters also need attention. One of the most important finding from this study is that the lowest value for overall community preparedness among the six communities was found to be 29% which possibly indicates that every community carries certain amount of inherent preparedness and what is important therefore is to identify the weak areas (or the relevant parameters) which need immediate attention. At the same time existing level of preparedness in other areas need to be supplemented and raise it to an acceptable level so as to ensure minimum of losses and efficient recovery from the occurrence of these hazards.

Stage-V

Dissemination of project findings: In the final stage of the project, assessment findings were tried to be disseminated among the same communities where the instrument was field-tested. Such dissemination was considered useful for the following reasons a) it provides an opportunity to get feedback from the community members about assessment made

b) it helps to create awareness among people in these communities about their own state of preparedness *c*) such assessment can facilitate action from the concerned agencies and the local administration. The strategy for dissemination focused on three major groups; *a*) senior citizens, local leaders and opinion makers *b*) school children and *c*) local administration. Interviews and discussions were conducted with the administration and local leaders for getting their opinions while disseminating the project findings. For creating awareness, posters in local languages giving essential information about probable hazards were pasted at strategic places in the community such as school, market places, community centres and other such places

Conclusions

The field testing of the instrument in six communities and in different conditions show that the instrument is highly robust and reliable for its use. The high variances seen in parameter scores (Fig. 3-12), the analysis subsequently conducted and the general opinion received from community members about the assessment further substantiates the instrument's reliability and thus needs to be considered for practical use.

Limitations and scope for further research In spite of the instrument's demonstrated robustness, there are however several limitations in this work e.g. the selected parameters are not the only ones possible. These parameters have also not been weighted for overall preparedness and future work must consider the weighting aspects of it. Similarly the panel of experts in the Delphi Analysis if changed, it may also bring in change in the selected set of indicators. There may be biases introduced during data collection and translation. The instrument also needs to be further tested for other hazards before generalizing to all hazards and for all developing countries. However, it is expected that with progressive use of it, the instrument gets further refined and more reliable for its use.

Reference

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End Notes

- 1 Gillespie, D.F. and Streeter, C.L. (1987) "Conceptualizing and Measuring Disaster Preparedness" *International Journal of Mass Emergencies and Disasters*, Vol. 5(2). 155-76
- 2 Kirschenbaum, A. (2002) "Disaster Preparedness: A Conceptual and Empirical Re-evaluation" *International Journal of Mass Emergency and Disasters*, Vol. 20(1) 5-28
- 3 e.g. see Dynes, R.L. (1994) "Community Emergency Planning: False Assumptions and Inappropriate Analogies" *International Journal of Mass Emergencies and Disasters*, Vol. 12 141-58
also see Possekel, A.K. (1999) "Living with the Unexpected" Springer Verlag, Berlin. 187
- 4 see Enders, J. (2000) "Measuring community Awareness and Preparedness for Emergencies" *Australian Journal of Emergency Management*, Vol. 16 (3): 52-58
Asgary, A. and Willis, K.G. (1997) "Household behaviour in response to earthquake risk: an assessment alternatives" *Disasters*, 21: 354-65
- 5 Mileti, D. (1999) "Disasters by Design" Joseph Henry Press, Washington, D.C. 215
- 6 For measuring household preparedness see Kirshenbaum (2002): End note-5,
For assessment of organizational preparedness see Gillespie and Streeter (1987): End note-4,
For assessment at country level see CDERA (2001) 'Status of Disaster Preparedness of CDERA Participating States' ID number MIPR#0HCHS60120, Caribbean Disaster Emergency Response Agency
Also see FEMA (1997) "Capability Assessment for Readiness" CAR Report, <http://www.fema.gov/rrrr/carnew.shtm>
- 7 e.g. see Tierney, K.J., Lindell, M.K. and Perry, R.W. (2001) "Facing the Unexpected" Joseph Henry Press, Washington, D.C. 27, see also Mileti (1999) End note-5
- 8 see Das, K. (2002) "Social Mobilization for Rehabilitation, Relief work in Cyclone affected Orissa" *Economic and Political Weekly*, Nov. 30, also see Narasimhan, S. (2003) "Lessons from Latur: A Decade after the Earthquake" *Economic and Political Weekly*, Vol. XXXVIII (48): 8-14
- 9 see Banerjee, M.M. and Gillespie, D.F. (1994) "Linking Disaster Preparedness and Organizational Response Effectiveness" *Journal of Community Practice*, Vol. 1(3) 129-142 also see,
Lewis, J. (1999) "Development in Disaster Prone Places" Intermediate Technology Publications, London
- 10 Russell, L.A., Goltz, J.D. and Bourque, L.B. (1995) "Preparedness and hazard mitigation action before and after two earthquakes" *Environment and Behaviour*, Vol. 27 (6): 744-70
- 11 Rhodes, A. (2003) "Understanding Community Preparedness and Response to Wildfire Risk" paper presented at Australian Disaster Conference, Canberra, <http://www.ema.gov.au/>

¹² Manning, FJ and Goldfrank, L (2002) "Preparing for Terrorism: Tools for Evaluating the Medical Response System Programs" National Academy Press, Washington, D C

¹³ Twelve of these twenty experts are academicians, two are from government agencies one is from UN and the remaining five are from international and national level non-government agencies.

¹⁴ The scales were designed in consultation with experts in the field. Twenty-one out of the total twenty-eight quantitative indicators have been rated using only one scale and the remaining using specific scales

¹⁵ Panchayat is considered as a community. It is the lowest administrative unit in India and may consist of one or several villages