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**The Chief Minister
Government of Gujarat
Sachivalaya
Gandhinagar**

Sub: Earthquake Rehabilitation: A 24 Point Strategy for Shelter and Settlements Development

Dear Sir,

While you are engaged in the overwhelming task of leading the state government and people of Gujarat in organizing relief operations and planning for the long term rehabilitation of villages and towns devastated by the earthquake on 26 January, 2001, I write this, on behalf of **Ahmedabad Study Action Group (ASAG)**, **India Habitat Forum (INHAF)**, and **Habitat International Coalition (HIC)**, to share with you -- and through you with the state machinery and a number of institutions, agencies and individuals playing multiple roles in post-disaster rehabilitation --- some ideas and experiences on orientation and plans for rehabilitation.

What I write here is based on 30 years of experience, both urban and rural, in disaster rehabilitation – flood, industrial and earthquake --- by ASAG, a non-profit group run by concerned professionals with expertise in design, planning, community organization, construction management, poverty alleviation, micro-credit, policy advocacy and NGO networking. Over the years, ASAG has played a lead role in rehabilitation of over 30 disaster-hit villages (*over 10,000 houses*) in Gujarat. Its major urban involvement project was the Integrated Urban Development Project designed to rehabilitate 2250 families at Vasna, Ahmedabad following heavy floods in the river Sabarmati in 1974. The most relevant experience, in context of the recent disaster, is ASAG's work following earthquake in Latur in Maharashtra in 1993. Whereas I assisted the World Bank in design and implementation of the Maharashtra Emergency Earthquake Rehabilitation Project (*MEERP*) under which 52 villages were relocated and 40,000 new houses were constructed, ASAG colleagues, under guidance of Rajendra and Rupal Desai, worked on damage assessment, community education, technical assistance for repair and retrofitting, training and disaster preparedness. This letter is a modest attempt to share our learning from these experiences.

This letter also reflects views and orientation of India Habitat Forum, with over 50 NGO, professional and academic members, working in different parts of the country. In writing this I have also drawn from experiences of Habitat International Coalition (*HIC*), with over 350 members active in related fields in the 80 countries of the world. This also reflects preliminary unstructured discussions with a few victims besides agencies and individuals engaged in relief work.

Kindly excuse me for this long introduction. The intention is to emphasize that this is not an armchair expertise or office table experience. It is also neither ASAG nor me

alone. This reflects local, national and international experience in rural and urban disaster reconstruction and rehabilitation.

1.0. Orientation: A 24 Point Strategy

Based on the above experience, a preliminary understanding of Kutch and Saurashtra region's economy, settlements and people, and some feedback on the post earthquake scenario in Gujarat, a 24-point strategy for the rehabilitation work is outlined. It is suggested that in designing policy, programme and assistance packages the following may be emphasized.

1. People centered, participatory, context sensitive, cost effective, time conscious and sustainable rehabilitation.
2. Varying responses for the rehabilitation of villages, towns and cities. Three distinct policy, programme and assistance packages for (a) Ahmedabad city (b) Bhuj, Bachau, Anjar and Rapar towns, and (c) destroyed/damaged villages
3. Minimum relocation
4. Investment planning (*in shelter, settlements and infrastructure*) geared to strengthening local economy and maximizing employment potential (*both short and long term*) in view of current needs and future trends
5. Strategic and enabling subsidization
6. House designs and settlement layouts sensitive to indigenous building form, local materials, construction technique and future needs. Also responsive to recurring natural disasters, climate, living habits, economic pursuits, social customs, tradition and culture
7. Proper balance between process and product
8. Due emphasis on repair and retrofitting option
9. Integration of rain water harvesting and other water conservation methods and use of solar energy in design and planning of houses and settlements
10. Effective community participation in decision-making, design, planning, implementation and performance monitoring.
11. Introduction of earthquake resistant technology in a de-mystified, non-threatening (*to local artisans*), non alienating (*from local building materials, indigenous construction technique and skills*) and people friendly manner
12. Minimum government (*essentially in a facilitating, enabler role*)
13. Stake-holder partnership offering appropriate role to communities, NGOs, professionals, corporate houses and private sector
14. Transparent systems, non bureaucratic procedures and responsive administration
15. "Adequate" transit shelter with basic minimum services
16. Priority on restoration of economy, livelihood and employment generation
17. Special attention to the needs of the poor, unorganized and vulnerable
18. Gender sensitivity in the entire operation
19. Minimum wastage
20. Productive use of debris
21. Realistic time frame for rehabilitation of settlements
22. Learning from the past
23. Education, awareness and technical assistance to strengthen vulnerable housing stock and other buildings in disaster prone areas

24. Integration of long term disaster preparedness in rehabilitation planning and programme development

2.0 Details

Most of these are self-explaining. A few, however, are elaborated here in view of the declared policy and programme packages and popular perceptions. The remaining could be elaborated later, if necessary.

2.1. Minimum Relocation

Though `relocation' of villages on new sites is a common, immediate response by affected communities, donor agencies (*adopting villages*), politicians and Panchayats, the available experience does not favour relocation. The ravaged communities and their leaders, in fear and shock immediately after the calamity, do demand relocation (*on the grounds that existing site is unsafe, that it is located on a "fault line" and also "how can we live where so many have died?"*). However, feeling and opinion change once impact of initial shock is reduced and it is realized that a new site cannot be far away from the original village (*relationship to the farm land and other job opportunities being a decisive factor*); that a new site just a few kilometers away cannot be safe from a future earthquake; that relocation would invariably entail economic and social dislocation; and that relocation would also mean emotional de-rooting from the ancestral land. It is also known that relocation is expensive and wasteful in terms of land use (*old Gamthal is deserted, new Gamthal consumes productive land*) and service installation. A relocated settlement seldom recreates the qualitative dimension of physical landscape, social environment and cultural ethos of the original village. Experience is that the "spirit of the place" somehow gets lost.

Except in special circumstances—such as old Gamthal being on a real fault-line; excessive loss of life (*irreconcilable emotional tragedy*); unfavorable topography; vulnerability to other forms of natural disaster; water scarcity; irreconcilable social conflict within or neighbouring villages, etc -- discouraging relocation is advisable. The World Bank, I assume, may share this view. You may also verify this with Shri Sharad Pawar, who piloted the Latur earthquake rehabilitation programme and is now the Deputy Chairman of National Disaster Management Authority. The people's wishes, however, should prevail. Community participation in decision making (*whether to rebuild on the old site or to relocate*), therefore, is important. It is also important that people make an informed choice, that political factors and money power do not hijack the process, that decision-making is transparent and truly participatory.

This is no place to elaborate on the process of ascertaining peoples' choices. However a just `yes' or `no' response, to the question whether to relocate or not, is simplistic. Giving options to a community with a price tag is a more rational, though politically and administratively less favoured, method of choice assertion. To tell the villagers that as relocation option entails expenses on the land and higher cost on infrastructure, they would get a smaller house on the

relocated site, compared to the old site, is decision making with a price tag. This method might give a more accurate and responsible picture of people's choice.

2.2. Time Frame for Rehabilitation of Settlements

The state government's plan/promise to build new houses and settlements in four to six months, probably before forthcoming monsoon, has been reported and debated. The political compulsions, people's desperate need, and the government's genuine desire to put an end to people's hardship at the earliest are understandable and appreciated. However, the impractical target, organizational and programme responses it would generate and impact it would have on the processes and the quality of outcome may cause more harm than good --- to the people and the government both. As this is an important matter, kindly permit me to elaborate.

The difficulty with many disaster rehabilitation efforts --- and this one may not be an exception if the stance remains unchanged --- is that relief and rehabilitation get confused and intermixed. Relief is temporary, immediate and oriented primarily to giving and dispensing. By definition it is short term, not expected to continue or last long. Rehabilitation, on the other hand, by its very nature, is long term as it involves creating new, longer lasting and hopefully better products and services than the ones it replaces. The difficulty, however, is that a culture of 'emergency' gets loaded on decision making. Therefore both the 'process' and the "product" suffer. It is not without reason that end product of many disaster rehabilitation programmes is disastrous. The underlying problem is 'emergency culture', 'hasty' decisions and total 'negation' of processes. The real tragedy is that a suffering community's temporary disablement and handicap get enlarged and projected as some sort of extended, permanent disability, which also result in denial of their legitimate role and participation in reconstruction and rehabilitation process.

It is this tendency that you, Keshubhai Saheb, as the leader and key decision maker, must fight. The past experience, both local and international, tells us that there is nothing like instant rehabilitation. Rehabilitation always takes time irrespective of what one says or does as it involves long term assets creation, heavy investment, creating new organizational infrastructure where little existed before, bringing a number of unrelated actors and agencies to perform together and often inventing new solutions. Can all this be done over-night? And if one tries to do that, what will one end up creating? It will neither create good assets, nor get the maximum out of investment, nor solve problems.

It is useful to note, sir, that hundreds of villages and thousands -- lakhs -- of houses that are destroyed or damaged, and to replace which you intend building hastily, in the shortest span of time, took decades, if not centuries, to come up. However efficient we are or whatever the nature of technology, we cannot capsule time in that manner. The idea here is not to say that one should take years and decades to rebuild houses and villages. What is suggested, however, is that they cannot be produced over-night. Both planning and construction takes time. And that must be given.

If we try to construct new settlements in a hurry we would not have time for any of the legitimate processes. In fact, the `emergency' would provide a rationale and justification to skip, bypass and even reject those processes. This is especially true for the villages to be relocated on new sites. As experience shows, finding 200 new village sites, which are topographically suitable, acceptable to residents, involves minimum socio-economic dislocation, have reliable source of drinking water, is easily accessible, readily available and is cost effective in laying services and social infrastructure, is not easy. These sites cannot be found over night. And if they are found and accepted, with a contrived consent of the end users under pressure of `emergency', they may prove either dysfunctional or unacceptable or non-viable or expensive in the long run. We have known deserted and unoccupied new settlements under Indira Awas Yojana. Village rehabilitation under Sardar Sarovar Yojana is not without problems. A rehabilitated village Dhanora, near IPCL, Baroda, built at a cost of Rs. 50 lakhs, after an elaborate participatory process, is still unoccupied 15 years after it was built.

In relocating villages, planning is equally important. How would land plots and houses of different sizes in an old village be adjusted on the new site? Would all be given equal sized plots, equal sized houses? How is the caste factor, which reflected so prominently in the neighborhood pattern in a destroyed village, to be handled? Would all castes be put together? Would lots be drawn for allotment of plots and houses? Would Harijan and caste – Hindus share common walls, courtyards? Would Hindu and Muslim live side by-side? Has a 90 second earthquake eliminated age-old problems, customs and preferences or neutralized long-standing prejudices? Would people agree to these things? Would the state government impose itself on these sensitive issues? The point is that if we ignore these issues in planning new settlements, they would end up having social problems and new tensions. And if everything is to be done instantly and in a hurry where is the time for consulting people, finding answers to some of the above issues and feeding them in the design/planning process?

The quality -- in design, planning, construction, workmanship, materials and details- would be the first casualty. The word "**quality**" is seldom on a priority list of a rehabilitation programme. The emergency/haste syndrome lends credibility to and justifies poor quality. The results are everywhere to see. Aren't some of the houses built under rehabilitation schemes, even the conventional, Indira Awas Yojana, insult to the people?

The same may happen to planning and laying of infrastructure services, construction of community buildings and other facilities. If the new houses, settlements and related infrastructure and services are to cost Rs. 5000 to 6000 crores, a good question to ask is: is it possible to invest purposefully such a large sum of money in a short period of a few months? Can it deliver good results? Is the delivery system equipped?

All this is not an argument to cause or justify delay. It is an argument against impractical haste. The point, sir, is that the task of building new settlements demands time for consultation, planning, evolving new solutions, preparing people to participate and construction. And all this is process oriented. By efficiency you could compress the time schedule somewhat. You could possibly compress processes to an extent. But you cannot eliminate them altogether. If you do so, the results would be questionable.

2.3. Time for processes

The real question then is: is there time for the “**processes**”? Aren't people out in the open? Aren't they helpless, shelterless? So long as the affected people are kept in the culture of helplessness, made to feel incapacitated and encouraged to be dependent, they would remain so. Natural disasters, emergencies and our response to them usually create such dependency environment and culture. Not only political compulsions but even charity orientation of people and agencies also contribute to their making. However, if we observe a disaster victims' behaviour it would be found that once the shock of death and destruction has blunted a bit, he/she wastes little time in trying to put pieces together again. That is the human law. The principle of survival; putting life above death, construction over destruction; to move on with the game. And the people of Kutch and Saurashtra are known for their resilience, courage, fighting spirit, capacity to survive against odds and, above all, keeping their head high in adversity.

It is this positive aspect of the disaster victims' behaviour pattern that most rehabilitation planners tend to neglect, even negate. Given the environment, encouragement and support, most disaster victims would assemble a makeshift shelter for themselves or with an outsider's marginal help in labour and materials. That neither takes much time nor money. In both urban and rural situations, especially in the rural, self – help practices and mutual help networks get activated more easily, almost spontaneously, in a disaster situation. Shouldn't this phenomenon be explored to buy time required for the processes mentioned earlier?

Whether the disaster victims agree to wait or not, for a `reasonable' period not endlessly, would depend mainly on how the processes are unfolded; how meaningfully they get involved in planning their future habitat and livelihood; how they are shown long term benefits of proper planning; and how he/she is helped to adjust and pull on in the interim. It would also depend on whether their benefactors in the government, anxious to restore normalcy, and the voluntary agencies, eager to undo the damage, all well intentioned and in good faith, are able to resist temptation to do everything yesterday and desist from building a culture of over-dependence. More importantly, it would depend on the level of help, kind of arrangement and type of investment that gets made in the interim phase.

Though not many may agree with my assertion, this is mainly a matter of attitude: on part of the disaster victims, on the one hand, and on part of those engaged in helping them, on the other. Relatively friendly climate (*waiting will be impossible in Europe or similarly harsh climate regions*), social relations and accommodating nature are conducive to pulling on little longer in make-shift, even uncomfortable, transit shelters.

2.4. Transit Shelter

It is in this context that the issue of transit or temporary shelter in the earthquake rehabilitation programme should be seen. Though temporary in nature, reasonably well built and “**livable**” transit housing, built at the lowest possible cost, preferably self-built, using recyclable materials, for an individual family (*not a mass transit camp*), useable for a period of one to two years, with electricity, community water and toilets (*with proper sanitation*), school, dispensary, etc, depending on the size of the community, helps people to recover from shock, to restart life, settle down and break the dependency syndrome earlier. Equally important, it provides required time for decision-making, design, planning, participation and construction of good quality permanent houses and settlements.

On the need for and provision of temporary shelter, one understands, there is some uncertainty. The estimated cost of a temporary shelter (*in one of the Technical Committee meetings it was mentioned at Rs.200/- per sq.ft, Rs. 30,000 for a 150 sq.ft, unit*) and the suggested method of provision (*to be built and financed by the government at a centralized location*) seem to confuse the picture somewhat.

Though it can be done in many ways the following approach may have greater acceptability and better results:

- encouraging/assisting families to build their own transit shelter at a location of their own choice
- providing required financial assistance, in form of materials and cash (*between Rs. 8000 to 10,000?*)
- giving a major portion of assistance in form of re-useable building materials (*the material used in the transit shelter would be reused to extend the core house built under the rehabilitation scheme; either to build a verandah or an extra room or an animal shed*)
- considering transit shelter subsidy as an integral part of total housing subsidy and transit shelter cost as part of overall housing development cost. No or only marginal extra cost on transit shelter account.
- according priority to site clearance and removal of debris (*to facilitate construction of transit shelter at the old village site and preferably on one's own land plot*), and
- Facilitating provision of required physical infrastructure and social services by the government or NGOs.

Expenditure on transit shelter is an additional cost if it is seen as a separate activity. What might help is to view it as the first phase of a two-phase house

construction process. Therefore proper selection of materials for transit shelter is important, especially its dismountability, re-usability and functional and aesthetic integration in new construction at a later stage.

Though an individual building a transit accommodation on his/her old plot is a preferred option, in towns like Bhuj and Bhachau there would be a need for centrally located and agency built transit shelters. The re-usability of materials is key to minimizing cost and wastage. The quality and live-ability of shelter, however, is important as productivity losses could offset cost savings. A reasonable transit shelter is an important first step towards normalcy and thereby productive life. It is therefore important to avoid ghetto-isation of "transit colonies". The approach to transit shelter and investment in it should be based on an understanding that new settlements would take two to three years to build. That is normal experience.

Use of good quality tents as transit shelter, where a large number of units are required — such as Bhuj, Bhachau and other towns — needs serious consideration, even if they cost a little more. Reusability of tents offsets the cost factor. They can be stored as a permanent state asset for disaster preparedness. 100,000 to 200,000 such tents, distributed over disaster prone areas of the state, kept in custody of the collector or local government, would be an useful asset in future disasters. Easy and quick in mounting and convenient in storage, a tent is a good transit shelter option.

2.5. Site clearance and debris removal

The state machinery, philanthropic private sector and commercial private sector should be engaged in an expeditious removal of debris and site clearance. Absence of a debris removal plan became a major handicap to the people in Latur.

A forward looking and imaginative strategy would convert a perceived liability into a real asset. An early, time-bound action will be helpful in the following ways.

- Uncleared debris is a grim reminder of the tragedy. It stops mind from functioning, prevents action on part of the people. It is a hurdle to moving ahead.
- Undertaking debris removal as part of relief operation would expedite clearance, make relief funds and volunteer help available for the purpose and activate home losers in site clearance. Though families and volunteers should be involved, transport and heavy machinery would be needed for speedy clearance.
- Disposal of debris on commercial terms, through a time bound contracting arrangement, is a realistic option. A village committee could negotiate terms and use of the proceeds.
- Depending on type of building materials used in the old construction, debris can be put to productive use. The most efficient use is in reconstruction of buildings: stone and brick for walls, salvaged windows and doors for openings, etc. In case of an agency built core house, debris could be used for addition and extension.

The other possible uses are: crushed hard stone to make stone crete- blocks; for stone masonry (*with earthquake resistant features*); for road; compound wall; community building, etc. Depending on anticipated use, arrangement could be made to store, remove or recycle debris.

2.6 Investment planning to strengthen local economy

A huge investment is to be made in rebuilding villages and towns and reconstructing houses, infrastructure, services and amenities. Rebuilding industries and restoring livelihood are also important tasks.

A major part of this investment will be in construction: in building materials, in skilled and unskilled labour, in transport, etc. The proposed investment, to be made in two to three years in housing and infrastructure, would probably be more than cumulative investment by communities and the state over decades. Productive employment is a perennial problem in Kutch and Saurashtra regions, especially after successive draughts, cyclone and earthquake. Therefore, using this investment in a manner that strengthens local economy should be an important objective of rehabilitation policy and should form a core consideration in programme development and activity planning.

Much will depend on how the construction programme is conceived and executed as construction generates both short and long term employment. Big builders, non-local materials and imported technology would take money away from the area. Participatory construction through use of small local contractors and communities; use of local materials (*such as Bella stone*); proper training in earthquake resistant technology to local skilled craftsmen, especially masons (*which will save them redundancy and ensure proper earthquake resistant new construction*); and setting up production centers for some of the required materials (*suited to local conditions*) would help local economy.

This is a matter for in-depth examination and planning. However, including this aspect - strengthening local economy and maximizing short and long term employment for the local people--as an essential objective -- not only a by-product -- of the rehabilitation programme is vital. Asking the questions: *how many local people employed? how many permanent jobs created? how many local artisans trained in earthquake resistant construction?* would induce thinking on and planning for this aspect. The employment generated, not only houses constructed or money spent, should be used as a yardstick to measure success of the rehabilitation programme.

Among other things, the rehabilitation programme should be seen as an opportunity to train women in skilled construction jobs — masonry, carpentry, plumbing, etc. As women work as unskilled labour in construction jobs -- carrying bricks, helping masons, etc -- they are capable of and accustomed to hard labour. They also have innate skills for crafts, capacity for refined workmanship and quick learning ability. Training them in skilled construction jobs would help them access value added jobs, reduce drudgery, enhance their social

standing, contribute to poverty alleviation and create a dependable skilled work force to ensure quake and cyclone resistant buildings.

2.7. Learning from the past and others

A significant and relevant experience in handling post-earthquake rehabilitation exists in India. It is with the state governments, government officials, donor agencies, NGOs, technical experts, professionals, academics, and people themselves. Latur, Chamoli, Uttar Kashi -- especially Latur-- experience is recent and most relevant to Gujarat. Repeating the same mistakes would be tragic and expensive. Waste is avoidable. And there is no need to re-invent the wheel.

Putting available experience to maximum productive use -- from damage assessment survey to transit housing to relocation dilemma to community participation - should be a priority concern of the state government. Some of it is already happening spontaneously and informally. Some formal arrangements could be considered. A Rehabilitation Plan Advisory Committee, set up by the state government, could accommodate and use experiences and services of various people. **Prof. Arya** is already involved. Administrators like **Mr. Siddhu** (*who managed reconstruction programme in Latur*), **Mr. Pardesi** (*who was the District Collector in Latur at the time of earthquake and played an important role in relief administration and formulation of rehabilitation project*); research and training institutions like **Tata Institute of Social Sciences** (*who conducted several support studies*); NGOs like **SPARC** (*who was Community Participation Consultant to the World Bank funded MEERP*), **Ravi Chopra** of People's Science Institute, *Derhadun* (*who did credible work in Uttar Kashi, Latur, Jabalpur and Chamoli*); **Rajendra and Rupal Desai of ASAG** (*who did pioneering work in retrofitting and community awareness in Latur*); corporate and business houses like **HDFC** (*who adopted a village and provided other inputs in the programme*), just to mention a few, should be brought in the process formally. Their contribution will be valuable.

NGOs, the private sector and academic institutions, I understand, are already contemplating ways to exchange ideas and experiences, including people to people dialogue and experience sharing. A few house-wives and local leaders from relocated villages of Latur would explain cost benefit of relocation to Kutch villagers better than any expert or social scientist.

For an effective programme implementation it is necessary to value this skill and experience. More importantly, it is necessary to find ways to use these resource persons in planning and implementation

2.8 Organizational Arrangements

An imaginative organizational arrangement for planning and implementation is critical to success of this massive endeavor. This is where things go wrong, objectives get diluted, distortions set in, processes get derailed and the outcome suffers. There are many ways of doing this. However, a better way is to give shape to the unstructured partnership that has spontaneously evolved between

government, non-governmental agencies, corporate houses, private sector, professionals and disaster victims. All are needed in this task: the government with its resources – money, land and organizational machinery; NGOs (*defined in a broader sense to include voluntary agencies, civic groups, communities, CBOs, etc.*) to organize communities, provide services, evolve alternatives and to act as a watch-dog against possible deviations and leakages; the private sector (*corporate houses, business, industry*) to contribute entrepreneurship, management, planning and resource mobilization skills and funding assistance; professionals to offer safe and cost effective structural solutions, appropriate house designs and settlement plans; and disaster victims themselves to articulate needs, contribute skills and resources and monitor progress and performance. Developing an appropriate organizational structure to coordinate among and benefit from these diverse strengths is a challenge.

The government's role in this operation should be primarily one of '**facilitator**' not 'doer'. The government should create conditions for other partners to play their role effectively. Both the organizational structure and operational arrangements should reflect philosophy and culture of "facilitation" and "enablement". Decentralization should be a key theme of the operation and the partners mentioned above should be assigned roles commensurate with their respective strengths. Devolving responsibility to the lowest possible level and creating responsible, accountable and performance enhancing arrangements at that level is important.

How does the government perceive this problem and defines the task would largely determine the nature of response. If you, as the Chief Minister, say that the government is to rebuild hundreds of villages and construct lakhs of houses, in a few months, it would generate one kind of organizational response: big contractors, fast building technologies, massive procurement, high flying professionals. The controls would move to power wielding, manipulating hands. Alternatively, if you say that 200 Panchayats are to rebuild/reconstruct destroyed villages and, more importantly, that each family is to rebuild or repair its own house, it would generate an entirely different kind of organizational response: local people, small contractors, indigenous materials and *technology (albeit improved for disaster protection)*. The control would remain in hands of people, villagers and community leaders. The government won't be burdened, as lakhs of families would assume responsibility. The government won't be criticized for poor construction, leakages, favouritism and corruption. The contractors and builders won't be able to hijack the programme and the much-maligned nexus won't have much operational space.

Implementing a programme of this kind effectively demands more than conventional decentralization. It requires atomization: activating and putting in charge the smallest and the lowest component of the conventional organizational hierarchy-- the earthquake victim, the "beneficiary", the family. With them in the center of the process and in charge, there is not much chance of things going wrong. ***Gujarat is Gandhi's land***. We do understand grass roots democracy, decentralization, people's power, bottom –up approach, and '***small is beautiful***'.

It is in this organizational context that one is concerned about the state's announcement – or is it just a “wish”, “hope”? - to build villages and houses before forthcoming monsoon. If so, it would give wrong signals organizationally (*wrong in the above stated context*). If the state seriously attempts to achieve that objective (*quick construction in four/ five months*) it would have to work in a centralized, top down, process-devoid, contractor- dominated and government-officer managed organizational system. Even if it succeeds in target achievement (*no one really believes that it would*) there is little doubt that the quality would suffer and that the “development” objective would take a back seat. And if it fails, not only will the state face criticism, it would also be saddled with a wrong (*in the above context*) organizational set up.

It is a lose- lose situation, whichever way one may look at it. It is therefore important that this matter of time frame is clarified now.

2.9. Transparency and Accountability Structures

Preventing/reducing, to the extent possible, leakages and corruption in use of relief and rehabilitation materials and funds is vital for the government's credibility, civil society's morale, affected peoples' spirit and performance of the rehabilitation programme. The people are struck by tragedy. They have lost lives and property. The state's economy is delivered a massive blow. In response, the affected people have shown amazing courage and resilience. The civil society, including NGOs, business and industry, common citizens and international community, have poured in material, manpower and moral help. The government machinery is also in the forefront of relief and rehabilitation effort. A special environment of solidarity and support has been created. A spontaneous partnership between various stakeholders has developed. Leakages, corruption or even perception of corruption would undermine this partnership and spirit.

A convincing assurance by you and others in responsible positions in the government that the leakages would be prevented and that corruption would be dealt with firmly would certainly help. However, that is no substitute for putting a transparent and accountable system in place. A few preliminary suggestions include the following:

- a) A separate relief and rehabilitation funds account to be audited by CAG.
- b) A participatory and transparent performance monitoring system at the state, district, taluka, town, village and project level, to monitor progress, quality and finances, if structured and managed properly, would ensure transparency and accountability. Proper structuring and equipping the civil society and communities to play active role is essential

2.9 Community Participation

Saurashtra and Kutch regions have a special tradition in indigenous construction— especially in house design and settlement planning. The existing settlements bear an eloquent testimony to people's ability to design, plan and construct climatically suitable, functionally adequate, socially appropriate and cost effective houses using locally available materials and skills. The region also has skilled artisans. The settlement pattern bears an organic link with the economy of towns and villages. The cultural history of the place is scattered in its settlements. The region's tradition and people's knowledge and skills should be put to creative use in rebuilding houses, villages and towns.

Involvement of sensitive, experienced and properly oriented designers and planners who can build on and benefit from this valuable resource is critical. Also crucial is introduction of earthquake and cyclone resistant technology in construction. The opportunity must be used to introduce rain water harvesting, water conservation methods and, wherever possible and viable, solar energy system in new construction. The NGO or the professional intermediary may not necessarily have the required skill on this count. This aspect needs stressing. Most rehabilitation housing programmes start with this promise- sensitivity to tradition and commitment to participation-- but fail miserably on delivering. The government should ensure that the sad story doesn't repeat. Participation and learning from tradition are attractive concepts but difficult to practice. Preparing tools and materials to facilitate participatory planning and design and arranging required orientation and training for the NGOs, professionals and artisans is important.

2.11. Flexibility in Design

A cost ceiling is obviously needed but the intermediate agency and the concerned community should have freedom to select size and design of house/s. What is necessary is to encourage people and agencies to build a "functional" house, what is required for a village family, not a minimum house (*a rural house is rarely an exclusive dwelling, it is almost always an economic space too*). An incremental house design, which accommodates future incremental growth, should be the norm. It must be remembered that the 'residence' is also an economic asset. Flexibility in interpreting area, cost and other norms would leave space for creativity.

2.12. Repair and Retrofitting

Repair and retrofitting of buildings with non-structural, limited damage needs to be pushed as a legitimate, viable and sustainable option. Technically aided retrofitting (*structural strengthening*) is fast, cost effective, locally implementable and desirable. As this approach is not very popular education, communication, awareness and demonstration are necessary. Orientation and training of local construction artisans and small contractors besides confidence building of home owners, local communities and authorities are important steps

2.13. Reconstruction of Towns

Mandi and district towns Bhuj, Bhachau, Anjar and Rapar have been severely damaged. Assessing damage; ascertaining community views and preferences on in-situ or new site reconstruction; evolving "conservative surgery" strategy and plans (*what to rebuild, what to demolish; which functions, which areas to relocate and where, etc.*); viewing reconstruction plans in the context of town's macro-economy; projecting future scenario (*especially city's role in the region's economy*); examining social issues; conserving tradition, culture and heritage; a special focus on needs of the poor (*especially their livelihood*) and assessment of water availability are some of the important considerations.

A more detailed work on the strategy for reconstruction of the urban centers is necessary. However, the following preliminary ideas deserve consideration.

- Establishment of a Special Town Development Authority for each ravaged city for a period of 5 years to oversee physical and investment planning and development. The organizational structure should include, besides the government and its agencies, space for businessmen, industrialists, artisans, farmers and workers from hinter land, civic organizations, NGOs, labour representatives, professionals, etc.
- The task of the Town Development Authority should include (a) economic development, and (b) settlement development. These functions are often – almost always- delinked and happen in an uncoordinated manner through different agency channels. The organizational structure and staffing pattern should reflect this broader, integrated role. The cities are engines of economic growth. In reconstruction their economic role should reflect prominently.
- To avoid recurrence of human loss and destruction of property (*these cities are very near a potentially explosive epicenter near Bhuj*) it is essential to ensure disaster resistant construction. Revising zoning regulations, building bye-laws, building permit system, compliance and monitoring procedures etc. is essential. Besides capacity building of concerned authorities through legislative support and trained man-power, it is also necessary to train professionals in earthquake and cyclone safe design and educate people on these matters.

2.14. Disaster Mitigation in Ahmedabad

Extensive damage to a metropolitan city is a new feature of the recent earthquake. Neither the state government nor NGOs have much experience in post-earthquake reconstruction/rehabilitation in a metropolitan city.

Considering the location (*urban*); extent and nature of damage (*total or partial collapse, heavy structural damage*); type of buildings (*mostly multi-storey or high rise apartments*); nature of ownership (*collective*); delivery system (*constructed by builders*); and economic status of the victims (*mostly middle or upper middle class*), the government intervention, both financial and organizational, compared

to villages and towns of Kutch and Saurashtra, is marginal. A package of assistance for the lost or damaged *property (besides loss of life and injury)*, in form of subsidy and loan, has been announced. Though useful, it is inadequate as due to a wider systematic failure the situation is very complex. Early mitigation requires handling the complex institutional issues on a priority basis. AMC and AUDA (*for building bye-laws, safety code, zoning regulation, building permission, FSI utilization, illegal construction, etc.*), banks and HFIs (*for past and future loans*); insurance; legal and financial liability of builders for compensation; role and responsibility of municipal/ AUDA officers; role and responsibility of professionals (*especially architects and structural designers*) are some of the institutional issues demanding urgent attention.

The matter has an added complexity as role, responsibility and work of the builder – he is accused of incompetence, greed, illegality, neglect, cheating and corruption-- is in focus, rather than the natural disaster. Emphasis is heavy on punishing the ‘guilty’ rather than rebuilding destroyed or damaged property. Paucity of competent and experienced structural engineers and related professionals to assess damage, advise on repair and structural strengthening, and restore confidence for reoccupation of damaged buildings are major handicaps to restoring normalcy.

A speedy mitigation in Ahmedabad demands the following:

- Technically competent damage assessment and unambiguous categorization for compensation, demolition and repair
- Clear norms for damage compensation
- Redrafting of the building code with safety provisions and other related features
- Rethinking and restructuring building permission system for greater responsibility on the professional team, better compliance monitoring, greater client participation and control, improved agency (AMC, AUDA) capacity (*through improved frame-work, trained manpower, better tools, etc.*) for scrutiny, guidance and monitoring
- Emphasis on mediation for dispute resolution and across- the- table-settlement rather than lengthy and uncertain legal procedure with respect to the builder’s liability. Using the opportunity to reinvent and reactivate the ‘Mahajan’ tradition for conflict resolution
- Encouragement and support to the association of property losers for collective action
- Evolving cost sharing formula through consultation among concerned parties to finance reconstruction
- Professional assistance-- legal, architectural, structural (*for repair and retrofitting of existing buildings, for new construction*), construction management, etc.
- Working out, expeditiously, special assistance schemes: loan rescheduling and fresh loans; insurance; construction, repair, etc.
- Re-training and skill upgrading of concerned professionals

The situation in Ahmedabad is rather complex. Considering its visibility, media proximity, political reach of the affected middle class, comparative inexperience in handling the metropolitan situation and nature of loss (*expensive properties have been destroyed or damaged*), it is necessary to evolve a proper disaster mitigation response. Besides the professional bodies, professionals, academic and training institutions, corporate houses, business, industry, trade and trade unions should play a role in coordination with the government. As majority of the affected families are non-poor, the setting is urban and the damaged structures are complex, the NGO interest is limited. Civic organizations and concerned professionals with interest and experience in urban governance have an important role to play.

2.15. Structural Strengthening of Vulnerable Building Stock

Another aspect that deserves attention is protecting buildings and structures which have withstood quake with minor or no damage. Considering that earthquake can strike again, almost any day, how to protect these structures should be examined. A small investment now could save a massive cost later. However, if it does not get integrated in the current programme of rehabilitation, it may never happen until it is too late. The strategy, therefore, should be one of encouraging, supporting and enabling people to strengthen their own buildings and houses. Identifying structural solutions and making institutional arrangement for financial assistance for the purpose may help moving in the right direction. Demonstration, education, awareness and training the artisans and the professionals in disaster resistant design and construction are important.

2.16. Development not only rehabilitation

It is important that the rehabilitation is not seen in separate compartments – settlements, infrastructure, employment-- but as part of an overall ‘development’ package for the affected people and districts. Integration, coordination, convergence and planning with the future in mind, are all part of it. The earthquake has necessitated a massive investment in the area. The quoted investment figure is not normally available for such villages and towns. How to make most it for the disaster victims and how to optimize benefits to the region is the real challenge. The conventional rehabilitation, as we know it, is static, status-quoist. **“Development” is dynamic.** And that must be the goal.

3.0 The real challenge before you and the state government is not to allow this rehabilitation effort to degenerate into one more sad story. The investment, to use a familiar phrase, should not go down the drain. The new villages and towns shouldn’t be poorly constructed as lifeless, characterless rows of houses in straight lines. They must have quality, as built environment of Kutch and Saurashtra has a strength, a special character. That must not be lost. Only if that is lost the destructive earthquake would have won the battle.

4.0. I must apologize for the length of this letter. However, as we all know, the challenge before the state is daunting. The main problem is not so much money, mobilization of

funds. It is its use, what we do with it. The experience shows that rehabilitation with multiple targets and diverse expectations is never easy. And no one knows it more or better than the Government of Gujarat, which has spent years and decades defending and sharpening its rehabilitation policy and programmes for the displaced persons of the Narmada project. It is therefore crucial that orientation and direction of the effort is clarified at the outset. That would determine the outcome. A vision, not only administration, is a pre-requisite to guide this effort successfully. The people Gujarat expect statesmanship from you and imaginative direction from others in position of power and authority. They expect the leadership and the system to rise to the occasion.

- 5.0. This letter is an attempt to contribute to putting the basics in place, setting the direction at a time when the state government and its partners are engaged in formulating policy and designing programmes. In a way, this is an advocacy document as it propounds a line of thinking. It is not only 'neutral' experience sharing. A philosophy—viewing disaster as an opportunity; also people centered development—has shaped its thrust and content. As it suggests changes and departures in certain areas and forms, arguing the case and therefore the length, couldn't be helped.
- 6.0. This is written in full knowledge that there is no dearth of advice or advisers on what to do and how. It is also appreciated that in such emergency situations, with pulls and pressures of various kinds from different directions, it is difficult for a decision maker, especially in a political position, to follow a bold and unconventional course. But this calamity, which has inflicted so much pain, suffering and destruction in a flash and is making such heavy demands on the state and the people's resources, calls for a special resolve to perform and deliver. It calls for courage and conviction in guiding the course and in making decisions. In this we just cannot afford to fail.

Let me assure you, sir, that these words are no substitute for action. We are gearing up to contribute to the people and the government's efforts for a satisfactory, development oriented rehabilitation. This letter, in some ways, is our guideline for action too.

We will be happy to offer clarification, elaboration and details, if necessary. It will also be our privilege to meet you or any one you suggest in this connection.

With warm regards

Kirtee Shah

Hon. Director- Ahmedabad Study Action Group (ASAG)

President, India Habitat Forum (INHAF)

President, Habitat International Coalition (HIC)

CC: **Shri Jag Mohan**, *Minister for Urban Development and Poverty Alleviation, New Delhi.*

- *Concerned government departments at the Centre, State and local level; NGO networks; Professionals; Internationals Development and Aid Agencies, and others directly or indirectly concerned with and involved in earthquake relief, reconstruction and rehabilitation work.*