

Annexure III: Questionnaires used during the study

Questions for Stakeholders in the Ministry of Environment and Forests

The Ministry of Environment and Forests plays a key role in reducing the adverse impacts of natural disasters. There are many programmes under which the impact of natural hazards like drought, flood, landslides and tsunami could be reduced. The improvement of forest areas and afforestation programmes are two key elements of the strategy to reduce the impact of natural hazards like drought, flood, landslides and tsunami. In order to elicit the views of key stakeholders on the aspect of mitigation as emphasised in several national flagship programmes, the following questions were put to them:

- Has a vision document been prepared to respond to climate change imperatives?
- Have there been any attempts to develop documents exploring opportunities for disaster mitigation through the flagship programmes being implemented by the ministry?
- What steps are being taken to safeguard coastal zones and how effective are they?
- In order to minimise the impact of coastal disasters such as a cyclone or tsunami, has the ministry considered the possibility of coastal plantations, including mangroves, in coastal areas?
- Have afforestation programmes been undertaken in landslide prone areas along with proper landslide protection measures?

- Have afforestation programmes been initiated in areas prone to desertification?
- Have afforestation programmes been initiated in catchment areas of major rivers?
- To what extent does the community participate in the formulation and implementation of your programmes? How is its effectiveness assessed?
- Are any activities being undertaken to address concerns of climate change?

Questions for Stakeholders in the Ministry of Drinking Water and Sanitation

Drinking water and sanitation is a critical sector due to its linkages with health, the economic well-being of individual households as well as the nation. At the same time, it has its own share of social and technological challenges. Among them are the urgent need to adapt solutions to suit specific geographical features, to change the perceptions of the community and gain its cooperation in terms of a change of habit, and resource constraints. Moreover, a wealth of information available on issues related to climate change, such as the need for water conservation and rain water harvesting, to name just a few, has added to the existing complexities of this sector. Natural calamities have the potential to destroy the real gains made on ground and hence, in the context of sustainable development, it is crucial to focus on adequate mitigation measures as well as the training of people who manage the systems.

Keeping these issues in mind the following questions were posed to key stakeholders of the National Rural Drinking Water Programme:

- Is there an emphasis on constructing the tube wells on higher platforms in flood prone and low lying areas? It may increase the costs marginally but would ensure water availability in the event of a disaster.

- Does the programme have any provision for repairing, restoring and rehabilitating water sources damaged in the course of a disaster?
- Is there a mandatory provision for the creation of an emergency fund for municipalities (with or without government support) toward immediate restoration of water supply in the event of a disaster?
- Does the programme have the benefit of sufficient facilities/equipment and trained personnel for testing water quality, generating and transmitting reports as well as mechanisms for acting on the reports?
- Do you have a Standard Operating Protocol (SOP) for testing water quality at the time of a disaster if it is required in a PPP mode?
- What is the level of training of engineers and public health officials in water quality testing and in fixing and operating water purifier systems in the event of a disaster?
- Do you maintain reserves of water purifying systems for emergency need?
- There is a point of view that communities lose interest in safeguarding traditional water management systems when they are provided with piped water supply that is safe and easy to access. Is that true? If so, what are the measures being taken under this programme to address these concerns? Has any document been prepared on the impact of climate change on drinking water systems as well as possible mitigation measures?
- What are the mechanisms in place for ensuring effective implementation of water harvesting systems?

Sanitation

- Are there guidelines in place as well as procedures to ensure that there is no contamination of drinking water sources with faecal matter, especially in areas with a high water table? Is adequate attention given to appropriate designs for toilets in such areas?
- Are there any guidelines and designs for establishing smaller water treatment plants to cater to communities comprising a smaller population?

Questions for Stakeholders in the Department of Agriculture and Cooperation, Ministry of Agriculture

Agriculture is the backbone of India's economy as it not only provides the bulk of employment opportunities to rural communities but also is a source of food security for the country's vast population. Food production in sufficient quantities is important to keep inflation in check. Disasters such as floods and drought and associated events such as the El Nino effect brought upon by climate change have an adverse impact on agriculture and food production.

There are several national flagship programmes being implemented by the ministry, among them the Rashtriya Krishi Vikas Yojana, the National Food security Mission, the National Horticulture Mission as well as the Modified National Agriculture Insurance Scheme. These programmes are backed by ongoing research on issues relating to climate change. They address concerns about sustaining adequate levels of food production as well as keeping the vulnerable farming community safe from disaster risks. To understand the extent to which these flagship programmes address such concerns, the following questions were put to key stakeholders:

- Does the ministry have any disaster management policy or policy for mainstreaming DRR in the flagship projects implemented by it?
- Is there a mechanism such as a seed bank which protects diverse seed varieties against incalculable harm or even extinction in the event of disasters such as floods or droughts?

- Are pest control / management actions a regular component of the Krishi Vikas Yojana?
- Are any measures being taken to promote drought or flood-resistant seeds and make them available to the farming community?
- Keeping in mind the risks posed by climate variability and change, is there any research underway to identify and produce seed varieties resistant to conditions such as salinity, inundation or low water availability?
- Is there any research underway on agricultural practices which could be of benefit in drought affected / flood affected regions?
- In what way is the issue of climate variability being communicated to farmers through these flagship programmes?
- What are the efforts being made to customise weather forecasts to the requirements of farmers?
- What measures are being taken to protect horticulture from the impacts of changing weather patterns and climate variability?
- Has there been any introspection on the much debated subject of providing timely risk insurance to farmers? Current rules state that a disaster has to be declared at the panchayat or block level for farmers to claim insurance. A farmer affected by drought or flood may not be eligible to claim insurance if the panchayat or block is not declared affected.
- What kind of capacity building programmes are being undertaken to help farmers understand issues pertaining to disasters, climate variability and change?
- Have there been any efforts to create additional storage facilities by combining the RKYV with MGNREGA?

- Are there any efforts underway to enhance water storage capacity by combining the RKVY with MGNREGA? Similarly, is there any emphasis in the programmes on strengthening water channels so as to allow for the drainage of excess water which is essential for protecting crops against inundation in the event of a flood?

Questions for Stakeholders in the Ministry of Health and Family Welfare

The health of its citizens is one of the key determinants of development for any country, exemplified in the aim of providing accessible and efficient healthcare services for all. Public health is a marker of the robustness of development efforts for it indicates the value that is placed on human resources. In recognition of this fact the GoI earmarks a large part of its revenues for providing health care to the people through initiatives such as the National Health Mission.

It is a well recognised fact that in a developing economy characterised by economic and social inequities, as in the Indian context, there are groups or sections of society that are more vulnerable than others, and this includes vulnerability to disaster risks as well. To address disaster risk comprehensively, it is important to integrate disaster risk measures into actions that have been designed to address public health needs.

The following questions were put to key stakeholders to find out whether actions under the flagship programmes being implemented by

their ministry are indeed addressing disaster risk while providing healthcare services to communities:

- Is there a mechanism to ensure that village and district health plans explicitly address DRR concerns, and is there any linkage between disaster management plans and health plans at the village and district level?
- Is there a specific focus on providing training to Accredited Social Health Activist (ASHA) workers on disaster health preparedness and response?
- Is there a specific focus / plans / provisions to strengthen the monitor the outbreak of diseases during a disaster, especially in rural areas?
- Is adequate attention being paid to the structural safety aspects of new hospital blocks and delivery centres coming up under the flagship project?
- Is there a system in place to mobilise additional medical services (doctors) from the private pool in the event of major disasters?
- Is there a system in place to mobilise additional medical resources from neighbouring districts and states in the event of a major disaster? Are there any clear SOPs in this regard?
- Does the programme provide resources for mobile medical units in community health centres at the village and sub-district level?
- Does the programme have a provision to stock medicines adequately in health centres before the onset of seasonal disasters such as floods, cyclones, drought, landslides and snow slides or localised hazards (such as snake bites in some areas, for instance)?

- Do the district medical plans keep a portion of the budget to procure medicines at the time of emergencies?
- Do doctors as well as the paramedical staff receive training on mass casualty management and emergency medicine?
- Does the programme have a specific budget for training ASHA workers, Anganwadi workers, Auxiliary Nurse Midwives (ANMs), Red Cross volunteers and PRI members on the types of injuries that may occur in the event of a disaster and providing the corresponding first aid for it?
- Is any thought being given to setting up emergency response teams in the community, sensitising them on the medical issues that may come up in the event of a disaster and training them in first aid?
- Is there any attempt to use community level facilities such as panchayat bhavans and halls for organising campaigns to sensitise the community to the public health aspects of DRR management?
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Ministry of Human Resource Development

Schools are potentially vulnerable to disaster risk on account of structural and non-structural reasons. For one, a school building lacking in earthquake safety features would be vulnerable to seismic incidents and that would make the school children vulnerable to potential harm. Similarly, the use of inappropriate building material may put the building and children at the risk of fire hazards. Also, lack of awareness about proper response during an emergency may put the lives of school children at risk.

At the same time efforts have demonstrated that children are quick to grasp disaster risk related issues and they respond well to a disaster situation if trained well. This provides immense scope for mainstreaming DRR in various programmes of the Ministry of Human Resource Development, such as the Sarva Shiksha Abhiyan (SSA), the Madhyamik Shiksha Abhiyan as well as in higher and technical education. The following questions were put to key stakeholders at the ministry to get a sense of the current vulnerabilities and possible scenarios that they deal with in their flagship programmes, and also the ways in which they plan to adopt appropriate mitigation measures that address not only the current situation but also a future context:

Questions about DRR mainstreaming in the SSA

- At the design and construction stage of schools, does the ministry keep in mind the hazard and vulnerability profile of the region? If so, is there any policy directive related to it?
- Is there a policy paper for new initiatives on school safety? Do you think this is necessary?
- Have any efforts been made to develop prototypes for structurally safe designs for schools? Were there any efforts to popularise these prototypes?
- Have there been any efforts to train rural engineers and masons on building schools that are structurally safe?
- Is school safety from the point of view of DRR concerns an integral part of the SSA guidelines?
- Have aspects of school safety been introduced in the training curriculum of teachers – from the induction stage to the periodic refresher trainings?
- Is disaster awareness a component of education in all schools? Do the state and district education training institutes design and promote innovative methods to teach disaster preparedness in SSA schools?
- Are SSA teachers and students made part of the efforts to promote community awareness about disaster preparedness?

- Are mock drills compulsory in all schools running under the flagship programmes?
- Has school safety audit been made a regular part of school inspection?

Questions about DRR mainstreaming in higher education

- Is DRR research and teaching related to disaster management promoted separately or along with subjects such as Geology, Geography, Engineering, Medicine, Veterinary Sciences, Management and Law, among others?

Are universities encouraged to set up disaster management departments and encouraged to collect data, documents, good practices as well as undertake research in DRR concerns?

Questions about DRR mainstreaming in technical education

- Have there been any efforts to make disaster-resistant construction technologies a compulsory subject in all engineering and architecture courses?
- Have any steps been taken to make DRR a compulsory component of education in other professional courses such as medicine, agriculture and veterinary sciences, among others?

Questions about DRR mainstreaming in elementary education

- Are there any specific guidelines related to DRR for various activities?
- Is disaster management included as a subject at all levels of elementary education?
- Does the ministry have a separate budget to train teachers in aspects of DRR awareness? If so, how are the teachers trained and by whom, and what is the periodicity of such trainings?
- Have any references to DRR been introduced in subjects such as geography, physics and natural sciences, among others? Is special care taken while establishing water points in schools to prevent submergence in the event of flooding?
- Is all new school construction keeping to the benchmarks of seismic safety?
- Does the ministry have a review mechanism which includes a review of DRR integration?
- Is there any manual on guidelines? If so, does it include a specific reference to DRR?
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The Central Public Works Department, Ministry of Urban Development

There is an emerging concern that the rapid and unplanned urbanisation of India could increasingly make Indian cities vulnerable to a range of potential hazards and climate change. The ministry has a great responsibility to plan urbanisation in a way that it does not expose urban centres and the infrastructure created therein to disaster risks, thereby adversely impacting the socio-economic development process. In order to ensure this, the process of urban development needs to consider current vulnerabilities and foresee emerging scenarios so that it is able to adopt mitigation measures not only to respond to current situations but also to future contexts.

Among others, the CPWD puts in place benchmarks and protocols for the construction of public buildings; appraises detailed project reports (DPRs) from states / municipalities; and implements some of the major infrastructure projects under the CSS such as the JNNURM. With a view to understanding how DRR can be mainstreamed in programmes like JNNURM so that the infrastructure being created withstands hazards and also does not add to the risks being faced by the surrounding environment including the communities. The following questions were posed to key officials of the CPWD:

- Are the construction protocols and standards for various structures created under the CSS regularly updated?

- Is Environment Impact Assessment / disaster risk assessment conducted at the stage of planning infrastructure programmes? If so, what are the parameters of such assessment?
- Are there any policies or guidelines in place for disaster risk assessment to guide project design and appraisal?
- How are issues of safety, especially those relating to disaster risk or environment risk, monitored and reviewed when the project is in progress?
- What are the corrective mechanisms for dealing with inappropriate practices in the course of a programme?
- Is there any involvement in the process of redrafting building by-laws in accordance with the hazard profile of urban areas?
- Do you have any special designs for construction of lifeline buildings such as hospitals, schools and buildings housing the offices of important public officials as well as police stations, among others?
- Are there prescribed seismic safety standards for non-structural mitigation mechanisms such as fixing of false ceilings and water tanks?
- Are retrofitting procedures and plans addressing disaster risk concerns of existing lifeline buildings in place to cater to the requests of state governments seeking guidance on such matters?
- Do you undertake conceptual exercises such as designing a new capital city for a new state by integrating DRR and CCA concerns in the plan?
- Do you seek the MHA's facilitation in any way to ensure that DRR is mainstreamed in the various infrastructure projects being undertaken through the CSS in the country?

Ministry of Urban Development

Several questions were put to key stakeholders at the ministry to get an overall view on aspects of DRR mainstreaming with regard to the complex issue of planning urban development:

- Is the ministry looking to redraft building by-laws based on the specific hazard profile of urban areas and ensuring its application?
- What kind of efforts are being made to provide adequate infrastructure ranging from Emergency Operation Centres to hospitals with trauma centres for effective disaster management?
- Are DRR concerns being mainstreamed in the plans to design public utilities such as water drainage systems, power stations, parking lots as well as mass transport?
- Is there an emphasis on disaster risk audit at various stages of project development, assessment, implementation and monitoring?
- In the attempt to understand the various impacts of climate change on cities, is there a move to factor in migration patterns due to climate change impact in areas surrounding the cities?
- Is there a move to design adequate mitigation and adaptation measures to address climate change concerns?
- Is there something like a ready reckoner on issues related to disaster risk reduction, climate change adaptation and climate change management?

Ministry of Rural Development

The Ministry of Rural Development has a significant mandate to address the problems of the rural poor in light of the fact that a large percentage of the rural population lacks access to adequate resources and amenities. The purpose of the national flagship programmes is largely to address the socio-economic vulnerabilities of the rural poor by creating a safety net mechanism for them. Since socio-economic inequities exacerbate the vulnerabilities of large sections of the rural poor to a range of disaster risks and hazards, there is a strong case for mainstreaming DRR concerns in social welfare schemes like the CSS. The following questions were put to key stakeholders at the ministry in a bid to grasp the extent to which DRR concerns are translated into programmes such as the Indira Awaas Yojana, the Rajiv Awaas Yojana and the Mahatma Gandhi National Rural Employment Guarantee Scheme Act that fall within the purview of the ministry.

Questions about DRR mainstreaming in the Indira Awaas Yojana and Rajiv Awaas Yojana

- Is there a provision to earmark 5 per cent of the programme fund for families that lose their houses in a disaster to build new housing (including IAY houses constructed earlier but destroyed in a disaster)?
- Has there been a move to revise the cost norms so as to to introduce disaster-resistant and locally appropriate designs and norms for residential structures located in the regions that come under seismic zones IV and V with a higher level of vulnerability?

- Is there an adherence to hazard-resistant design in the construction of IAY and RAY housing right from the choice of site onwards? Are such considerations a part of the guidelines of the programmes so as to ensure compliance?
- Before constructing housing for slum dwellers, is there an effort to carefully universally assess the safety aspects of sites with regard to its vulnerability to floods or landslides?
- Are safety features and safe siting being incorporated in the RAY housing programme in the cities where the programme is being implemented?
- Have there been efforts to introduce training programmes for safe construction practices for community / house owners who benefit from the IAY or RAY? Do these two programmes have a policy that provides for community infrastructure such as multi-purpose shelters as an integral part of the housing clusters? Has there been any attempt to develop prototypes of IAY and RAY housing which can easily be referred to by the District Rural Development Agencies (DRDA) for raising community awareness about DRR concerns?
- Has there been a concerted move to build the capacities of rural engineers and masons with regard to safe construction?
- Have there been concerted efforts to build the capacities of PRI representatives and DRDA officials on DRR mainstreaming concerns?
- Do the IAY and RAY contain provisions for building community-level disaster preparedness capacities under the capacity development component for slum dwellers who are largely vulnerable to disasters such as floods, fire and high wind speed?

Mahatma Gandhi National Rural Employment Guarantee Scheme

Questions about DRR mainstreaming in the Mahatma Gandhi National Rural Employment Guarantee Scheme Act

- Is the hazard profile of chosen locations as also the seasonality of disaster risk taken into account in the programme?
- Is there a provision for offering continuous employment opportunities in the event of a disaster to ensure livelihood security?
- Does the programme accord priority to mitigation works that help reduce disaster risk?
- Is there an emphasis on creating structures for water conservation and harvesting as well as channels to divert flood waters, among others?
- Has there been a concerted move to address concerns such as the creation of flood shelters in flood-prone areas?