



# Operational Guidelines for Vulnerability and Risk Assessment



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## I. Background of the Project

The project on Strengthening Resilience of Tsunami affected Communities in India and Sri Lanka was implemented from April 2006 to March 2009. The project components include community mobilization and organization, establishment of mangrove and non-mangrove bioshield, establishment of Village Resource and Village Knowledge Centres, strengthening livelihood and community based disaster risk reduction. In India project was implemented in 10 villages in Tamil Nadu (including 2 Village Resource Centres) and 8 villages in Andhra Pradesh. In order to enhance the capacity of the grassroots organizations in designing and implementing developmental projects in the coastal areas, grassroots NGOs were taken as project implementers at the village level. Informal relationship was established with various strategic partners such as local elected government (Panchayat Raj), government institutions, research organizations, developmental NGOs for participation in the implementation of different project components.

With participation of community and strategic partners mangrove bioshield has been established in about 280 ha and non-mangrove bioshield in 27 ha, which are about 1 to 2 years old. Presently, except in about 30 ha in Keezhavaipar region in Tamil Nadu, in all other places bioshield are showing promising results. In order to sustain these bioshields long term management plan needs to be prepared and pilot tested. In Tamil Nadu and Andhra Pradesh, 4 VRCs and 10 VKCs have been established with the support of community and strategic partners. However, satellite connectivity has to be established with VRCs. Other processes such as need assessment, content creation and information and knowledge dissemination were followed to operationalize VRCs and VKCs. These VRCs and VKCs had also implemented many proactive services as per the need assessment. In almost all the 2 villages, target groups and livelihood interventions were identified through PRA.

Women headed families were given priority in all the livelihood strengthening activities. About 1500 poor families have been covered under various livelihood programmes including reclamation of agriculture from aquaculture farms, eco-friendly aquaculture, integrated mangrove fishery farming system, revolving fund for various micro enterprises etc. Activities to enhance the capacity of MSSRF and partner NGOs in Community Based Disaster Risk Reduction could not be implemented due to delay in starting the process.<sup>1</sup>

Thus, MSSRF has proposed to conduct Vulnerability and Risk Assessment (V&RA) towards disaster in 4 of the selected villages (2 each in Tamil Nadu and Andhra Pradesh). One of the major purposes of the process of V&RA is to enhance staff capacity. The outcome of V&RA has to be correlated with the project intervention to analyze and understand its contribution in strengthening the community resilience. These guidelines will help in conducting the V&RA in these villages.

***(These guidelines are a compilation from several sources for conducting Vulnerability and Risk Assessment and can act as a source of reference for practitioners.)***

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<sup>1</sup> Strengthening Resilience in Tsunami affected communities: Coastal Bioshields, Livelihood Development and Village Knowledge Centres in India and Sri Lanka, project report by MSSRF, May 2009.

## II. Introduction:

The development process does not necessarily reduce vulnerability to natural hazards. Instead, it can unwittingly create new forms of vulnerability or exacerbate existing ones, impeding efforts to reduce poverty and promote growth, sometimes with tragic consequences. ‘Win-win’ solutions for securing sustainable development, reducing poverty and strengthening hazard resilience, therefore, need to be explicitly and actively sought, particularly as climate change looks set to increase the incidence of droughts and floods and the intensity of windstorms. Such solutions are best derived by integrating disaster risk reduction strategies and measures within the overall development framework, viewing disaster risk reduction as an integral component of the development process rather than as an end in its own right.<sup>2</sup>

Mainstreaming Disaster Risk Reduction into development began in the late 1990’s and this requires analysis both of how potential hazard events could affect the performance of policies, programmes and projects and of the impact of those policies, programmes and projects, in turn, on vulnerability to natural hazards. This analysis should lead on to the adoption of related measures to reduce vulnerability, where necessary, treating risk reduction as an integral part of the development process rather than as an end in itself.

Increasing appreciation of the need to mainstream disaster risk reduction into development was formalised in January 2005 when the Hyogo Framework for Action 2005–2015 was adopted by the World Conference on Disaster Reduction with 168 nation and multilateral institution signatories. The Hyogo Framework is centered around three principal strategic goals, the first of which is “the more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, and preparedness and vulnerability reduction”.

Community Based Disaster Risk Reduction (CBDRR) has evolved into a key perspective not only for disaster management professionals but for the development professionals as well. RedR India’s experience of past three years of working with grassroots NGOs and communities from Kashmir, Maharashtra, Gujarat, Uttar Pradesh, Bihar, Andhra Pradesh, West Bengal and Tamilnadu, is that CBDRR is becoming essential process to integrate and sustain their development programme.

Though its been a challenge for RedR to simplify the complex concept of CBDRR to the grassroot workers, it has successfully reached out to these practitioners through trainings and other hand holding support.

It is observed that PRA tools are usually used for the risk assessment process, however communities hardly participate in the data analysis. These guidelines aim at strengthening the CBDRR process by providing simple but effective tools for Risk as well as Vulnerability assessment through the participation of the community members, from data collection, to analysis and prioritizing the needs so that appropriate measures are taken.

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<sup>2</sup> Tools for Mainstreaming Disaster Risk Reduction: Guidance Notes for Development Organizations by Charlotte Benson and John Twigg with Tiziana Rossetto, 2007, Pg 3.

### III. Community Based Disaster Risk Reduction (CBDRM)

‘Community-based disaster risk management (CBDRM) is a process in which at-risk communities are actively engaged in the identification, analysis, treatment, monitoring and evaluation of disaster risks in order to reduce their vulnerabilities and enhance their capacities’.<sup>3</sup> This means that people are at the heart of decision making and implementation of disaster risk management activities. The involvement of most vulnerable social groups is considered as paramount in this process, while the support of the least vulnerable groups to them is necessary for successful implementation.

CBDRM emerged as an alternative during the 1980s and 1990s. Over the past two decades it has become apparent that top-down approaches fail to address the needs of vulnerable communities, often ignoring local capacities and resources. The top-down approach can increase vulnerabilities and undermine the quality of life, security and resiliency. The CBDRM approach emphasizes the active involvement of communities in all phases of risk management.<sup>4</sup>

CBDRM is built upon the following principles:

- CBDRM contributes to addressing the root causes of vulnerabilities and transforming the structures that generate inequality and underdevelopment.
- CBDRM is a development approach. Recognizing the need for community action for disaster risk reduction in all development practice.
- Any efforts to reduce disaster risks should build upon a community’s knowledge and experience about hazards, vulnerabilities and disaster risk reduction. It will also be essential to recognize the importance of local customs, culture and materials while developing and implementing risk reduction programs.
- CBDRM requires a high level of coordination and cooperation amongst stakeholders e.g. among Government departments, NGOs, donors, vulnerable groups
- CBDRM advocates and workers believe that they are accountable to the people first and foremost.
- There is a need to maintain efforts to enhance inclusiveness, decentralization and empowerment.

CBDRM aims at achieving disaster risk reduction, sustainable development and poverty reduction, people empowerment and equity. CBDRM is envisioned as an integral component of sustainable development, since it helps in avoiding the negative impacts of disasters on development<sup>5</sup>.

Institutionalization of CBDRM is required to:

- Achieve the vision of disaster-resilient communities
- Scale-up the impact

<sup>3</sup> **Abarquez, Imelda and Murshed Zubair** 2004 Community-Based Disaster Risk Management: Field Practitioners’ Handbook. ADPC, UNESCAP and DIPECHO Bangkok.

<sup>4</sup> **Sheshu Kanta Kafle**, A Framework for Community-Based Disaster Risk Management in South East Asia.

<sup>5</sup> **ADPC** 2004. Buildig Disaster Risk Reduction in Asia: A Way forward ADPC Looks Ahead to 2015. ADPC, Bangkok, Thailand.

- Enhance learning
- Sustain the gains
- Recognize that strategic success lies in the hands of people in communities
- Position of CBDRM as a viable to sustainable development
- Mobilize partner resources for disaster risk management.<sup>6</sup>

#### A. The CBDRM Process

The following are the seven steps in the disaster risk management process:

- **Selecting the Community.** This is the process of choosing the most vulnerable communities for possible assistance on risk reduction using a set of criteria.
- **Rapport Building and Understanding the Community.** This is basically building the relationship and trust with the local people. As relationship is established, general position of the community in terms of social, economic, political and economic aspects is understood. Deeper appreciation of the community dynamics will happen later, when participatory risk analysis is undertaken.
- **Participatory Disaster Risk Assessment/ Analysis (PDRA).** This is a diagnostic process to identify the risks that the community faces and how people overcome those risks. The process involves hazard assessment, vulnerability assessment and capacity assessment. In doing the assessments, people's perception of risk is considered.
- **Participatory Disaster Risk Management Planning.** This follows after the analysis of the results of participatory risk assessment. People themselves identify risk reduction measures that will reduce vulnerabilities and enhance capacities. These risk reduction measures are then translated into a community disaster risk management plan.
- **Building and Training a Community Disaster Risk Management Organization (CDRMO).** Disaster risks are better managed by a community organization that will ensure that risks are reduced through implementation of the plan. Therefore it is imperative to build a community organization, if there is none yet or strengthen the current one, if there is any. Training the leaders and members of the organization to build their capacity is important.
- **Community-Managed Implementation.** The CDRMO should lead to the implementation of the community plan and motivate the other members of the community to support the activities in the plan.
- **Participatory Monitoring and Evaluation.** This is a communication system in which information flows amongst all the people involved in the project: the community, the implementing staff and the support agency, concerned government agencies and donors.

#### B. Outcomes of the CBDRM Process

The CBDRM process should lead to progressive improvements in public safety and community disaster resilience. It should contribute to equitable and sustainable community development in the long term. For the

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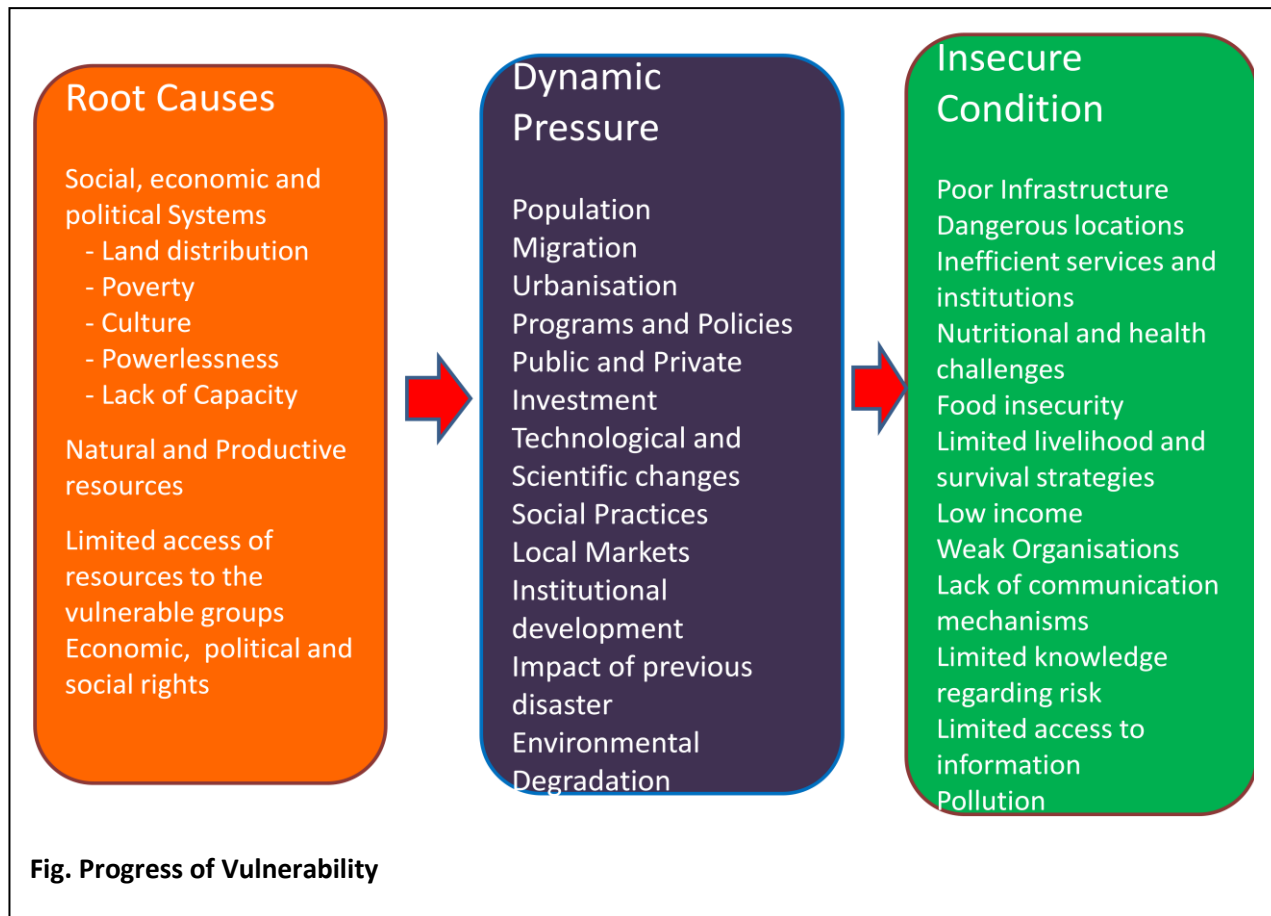
<sup>6</sup> Sheshu Kanta Kafle, A Framework for Community-Based Disaster Risk Management in South East Asia, Pg 6.

purpose of CBDRM, we use the following most widely known definition of sustainable development which comes from the Brutland Commission, "**development that meets the needs of the present without compromising the ability of future generations to meet their own needs.**"<sup>7</sup>

## Risk Analysis

Risk Analysis is the critical step in both DRM and CBDRM process. Risk analysis is based on the recognition that risk is the result of the link between hazard and vulnerability of elements affected by the hazard. The aim of risk analysis is to estimate and evaluate the possible consequences and impact of extreme events on the community and their basis of life. This involves impacts at the social, economic and environmental levels. Risk analysis focus on the following

- a. Damage potential of the extreme event (hazards) on the societal elements
- b. Potential damages and losses
- c. Impact on people mostly the vulnerable



<sup>7</sup> Rees, William E. and Roseland, Mark. 1991. *Sustainable Communities: Planning for the 21st Century*. Plan Canada. 31: 3. 15. <http://www.rec.org/REC/Programs/SustainableCities/What.html>



Hazard and vulnerability analyses are parts of risk analysis and are inseparable activities. Besides nature as the cause of majority of disasters, increasing attention is being paid to analyse the role of societies, their mode of production and living and their development as possible causes, and integrating the results of this analysis into the various protective strategies. This means that vulnerability is increasingly understood as the result of economic and social development process, which needs to be documented and reduced on the basis of comprehensive analysis. It is very important to understand the progress of vulnerability which is consequence of inherent causes of vulnerability like poverty and marginalization and its relation with the consequences of development and insecure conditions which makes the community susceptible to extreme events/hazards.

Risk analysis is a basic instrument of disaster risk management which is used to study the factors of disaster risk and provides the basis for planning and implementing measures to reduce risks and impacts of disasters.

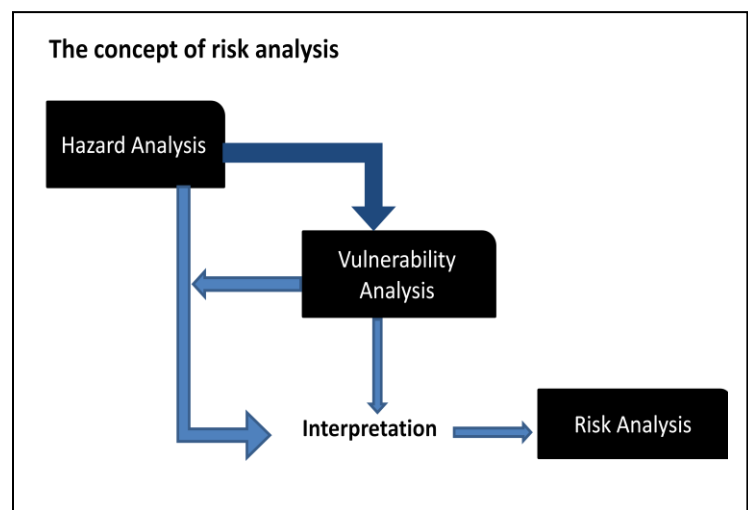
### Hazard Analysis

A hazard analysis investigates, identifies and documents natural hazards (drought, floods, landslides, cyclones, earthquakes, etc), their causes and impact chains. Knowledge of the types of hazard is essential for analysing and assessing risks. The resources required for an analysis depends on the situation. A simple analysis data inputs may be sufficient to document hazard potentials.

To be able to estimate and evaluate the degree of risk and the characteristics and scale of possible loss from extreme natural events, it is necessary not only to estimate the probability of occurrence but also to investigate the force and duration of the event.

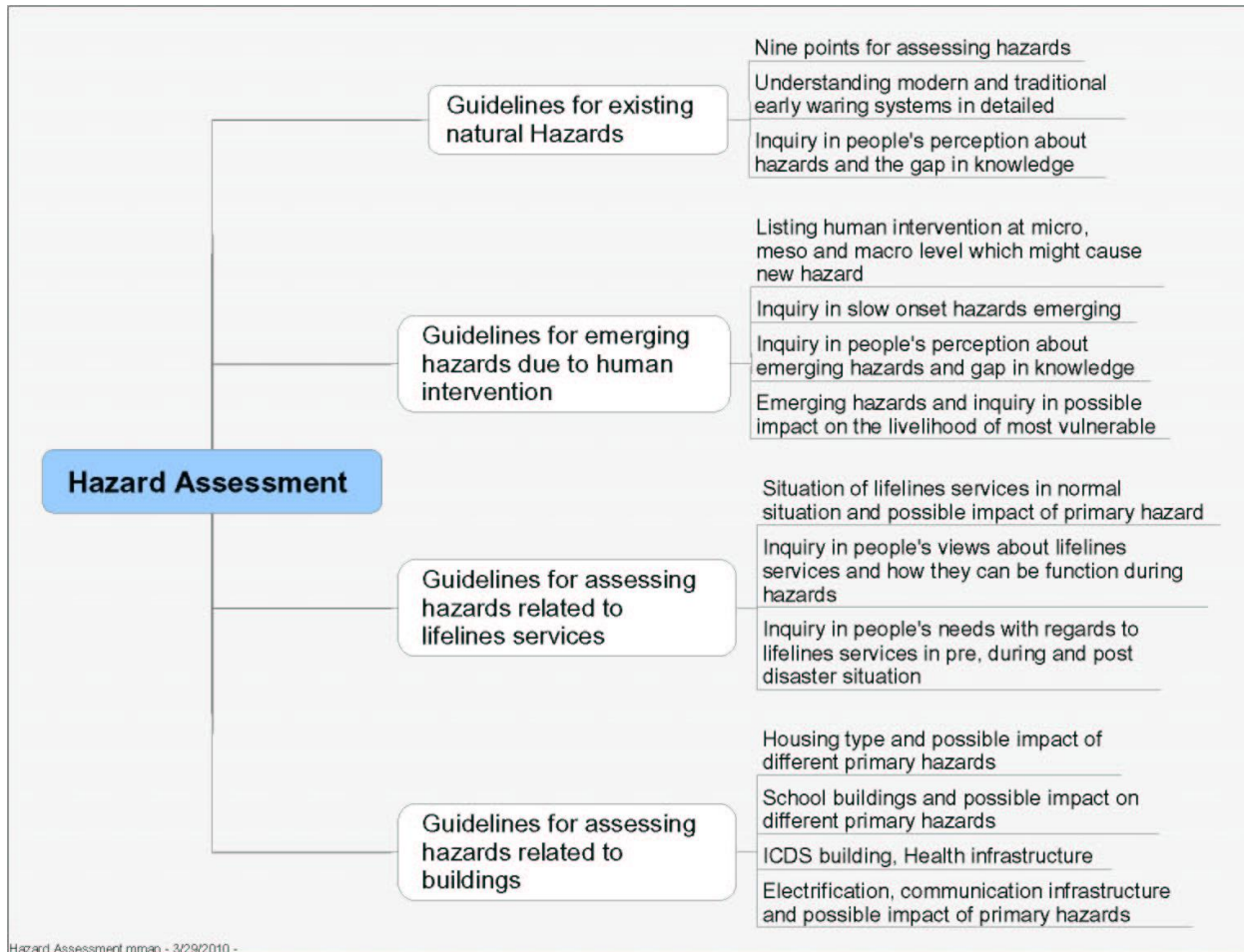
In hazard analysis, it is necessary to establish how far population groups and their elements of life are potentially affected by the hazard event i.e. how susceptible they are to the event and how vulnerable they are to this hazard. If there are no vulnerable populations or elements at the site of hazard, no hazard analysis is required. Thus identifying potential hazards and the elements of risk is the first step to start any detailed hazard analysis with the communities.

Hazard analysis is not a linear sequence of analytical steps relating to the hazard. It is constantly being interrupted by steps in the vulnerability analysis, and supplemented by the learning loops and results generated by this.





## Procedure for hazard assessment



### The important tasks and steps in hazard analysis are:

- The first stage in hazard analysis is to identify the types of hazards. There are to be classified depending on the causal factors and the types. E.g. natural events occurring suddenly or gradually, climate related, geographical related, biological etc.
- Depending on the types of hazard identified, the process may need to be continued on a separate basis for each type of hazard or group of hazard types. Floods and droughts require different methodologies and study parameters.
- Identification and characterization of hazard prone locations.
- Identification and determination of the probabilities of occurrence on an ordinal scale (high-medium-low)
- Estimate or calculate the scale (strength, magnitude) of the hazardous event
- Identify the factors influencing the hazards e.g. climate change, environmental destruction and resource depletion or degradation, major infrastructural facilities such as dams or high ways etc.

- In case of weather based hazards, there is a close connection between weather and floods. The weather determines the precipitation, which in turn determines the runoff of the waters. Floods are determined by the specific characteristics of the catchment area and also by local climatic factors. If these climatic factors change, the vegetation also changes, which modifies the runoff behaviour of the water and ultimately the scale of flooding?

Hazard analysis is better describes and assess the probability of occurrence of an extreme natural event at a specific place, at a specific time and with a specific intensity and duration, for a vulnerable population and their vulnerable basis of life (elements of life). It describes and evaluates the degree to which the population, animals, structures and goods would be at risk (elements of risk).

**How to analyse the information – Following format is used for the collation of the information of Hazard Assessment.**

Hazard type	Force	Warning signs	Fore-warning	Speed of onset	Frequency	When	Duration
Flood							
Drought							
Earthquake							
Civil war							
Landslides							
Pollution							
Epidemic							

*Write the details in the boxes below.*

<b>HAZARD</b>	
<b>HISTORY</b>	
<b>FREQUENCY</b>	
<b>SPEED</b>	
<b>LOCATION</b>	
<b>DURATION</b>	
<b>SEVERITY</b>	

## Vulnerability and Capacity Analysis

Vulnerability analysis studies the ability of a system (or element) to withstand, avoid, neutralize or absorb the impacts of hazardous natural events. Before starting an analysis of the vulnerability of a population group and its bases for living, the extreme natural events and the locations they threaten must be identified and studied. Without extreme natural events as a hazard, there are no vulnerable elements and hence no hazard. Conversely, without threatened locations with vulnerable elements, there is no risk, and hence no need for either hazard or vulnerability analysis

The vulnerability of a group of people or region is inseparably linked to the social, cultural and economic processes developing there and the agro-ecological transformation of the locality/region. Vulnerabilities are created, they are the products of social development or faulty development, and they reflect deficits, shortages or disruptions within social development.

Vulnerabilities are assessed by the potential loss resulting from a natural event. It expresses the degree of possible loss or damage to an element threatened by disaster. Damage can be to the population (life, health, wellbeing) or natural assets (land, water bodies).

Vulnerability Assessment also considers the capacities, resources and assets people use to resist, cope with and recover from disasters and other external shocks that they experience. Capacity is a key element in understanding and reducing vulnerability and VCA methodologies should be designed to take it into account.

Economically and socially marginalized groups in society generally suffer worst from natural disasters this question of people's vulnerability and capacity in the context of natural hazards is very important for understanding the potential impact of disasters and making choices about how to intervene. More generally, socioeconomic vulnerability is also now seen as a key to understanding poverty and designing poverty reduction programmes.

Some factors in vulnerability are readily apparent (e.g., threats arising from environmental degradation or human settlement in hazardous locations such as flood plains and unstable hillsides). Less immediately visible are underlying factors such as poverty, population movement and displacement, legal-political issues (e.g., lack of land rights), discrimination, macroeconomic and other national and international policies, and the failure of governments and civil society organisations to protect citizens. The chain of causality, from root causes to local dangers, can be long and complex.

Vulnerability Assessment is used principally as:

- A diagnostic tool to understand problems and their underlying causes.
- A planning tool to prioritise and sequence actions and inputs.
- A risk assessment tool to help assess specific risks.

- A tool for empowering and mobilizing vulnerable communities

### The steps in vulnerability analysis

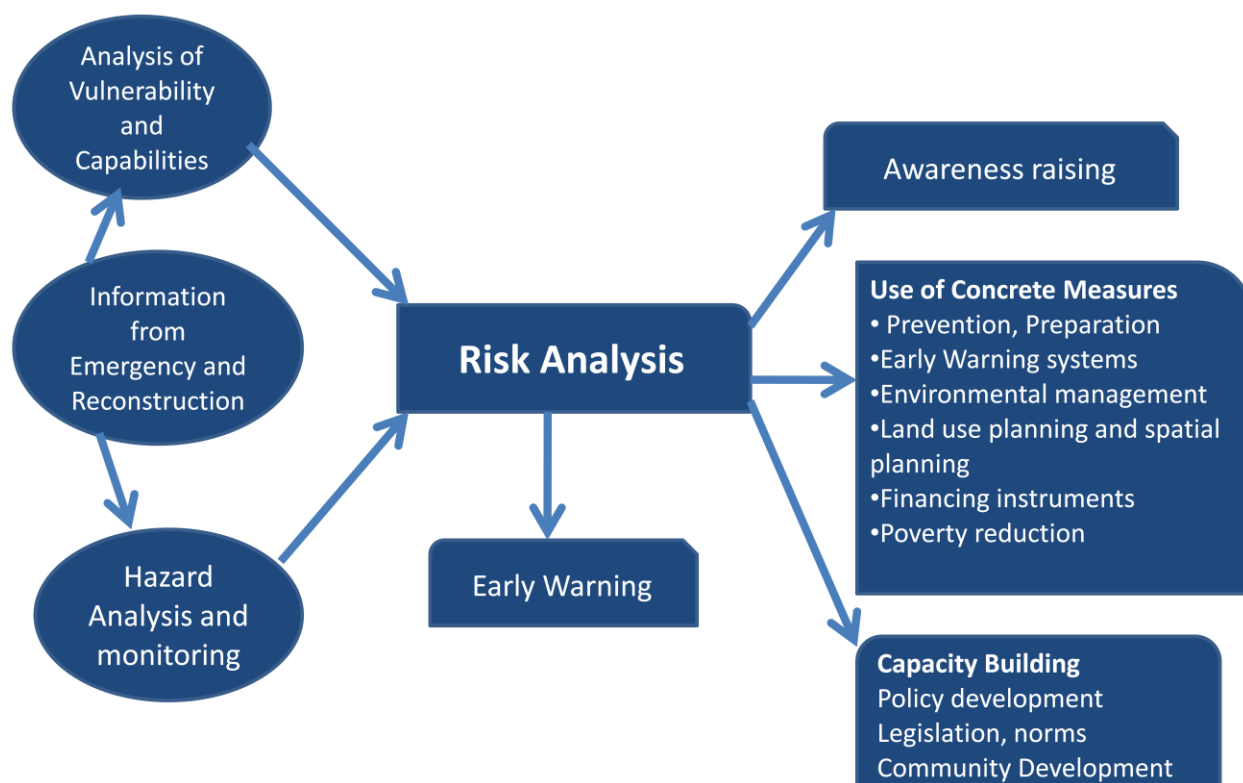


- Identification of potentially vulnerable groups or elements. E.g. agriculture production, houses, infrastructure, health, land, water sources, people etc). In this, basic data is collected on population (age, density, gender, social groups, structure, socio-economic status, and wellbeing), location (houses, important infrastructures like schools, temples, and hospitals), self protection capacities for coping with disaster events for disaster preparedness – response, training, prevention, early warning etc.
- Identification and analysis of factors influencing or resulting in vulnerability, that means, vulnerability factors. Analysis of risk perception and the factors determining this e.g. education, poverty, marginalization, access to resources and information, etc., and their inter-linkages. A checklist of factors of vulnerability is enclosed in annexure 1.
- Development and identification of indicators for identifying vulnerabilities and estimating the degree of vulnerability (quality and location of houses, buildings, access to information, diversity of agriculture, seeds etc)

- Analysis of capacities (self protecting abilities/ capability) includes identification of indicators to show or measure capacity for preparedness (protective and preventive infrastructure like safe shelters, early warning, forecasting systems, etc). Here strategies and measures are identified and analysed at the various levels – individual, family, community and village. A check list for VCA is enclosed in Annexure 2.
- Estimate of accepted risk (risk level) and hence residual risk. Preventing measures are taken to reduce the risk to a socially and culturally acceptable risk.

### Outcome of Risk Analysis (Need Assessment of CBDRM)

#### “Inputs” and “outputs” of Risk Analysis



- Vulnerabilities of the communities to hazards includes probabilities of occurrence, possible potential damages, possible weaknesses and gaps in existing capacities of the community (i.e. protective and adaptive strategies)
- Formulate realistic suggestions for measures to overcome weaknesses and reduce the identified and assessed disaster risks.
- Identify and improve existing capacities and coping strategies.
- Help in planning – spatial planning and land use planning
- Planning preparedness measures – contingency plans, emergency plan, evacuation routes, early warning and forewarning systems, task forces to manage emergency situations etc.
- Help in linking the information into developmental planning

- Analytical tools and method used for undertaking risk assessment will help in targeted interventions for promoting livelihoods and other social-economic development processes in the village.
- The data generated are to be updated and made available to the communities on regular basis and thus strengthen the village knowledge centres in providing the much needed information on DRM.

#### **Stakeholders' identification –**

- For success, VCA depends to a large extent on the involvement of relevant stakeholders in providing and analyzing data, whether at national or community level. As well as supplying more valid data through incorporation of a range of expert knowledge and perspectives, this ensures wider ownership of the findings, which can be further enhanced if participatory methods are used. Note that it may not be possible to identify all the stakeholders initially; others may be identified as the VCA process develops and should be incorporated into it.
- It is particularly important to include vulnerable people in the process and, in hazard-prone areas, all those who are at risk from those hazards. It is also important to remember that the nature and impact of vulnerability varies across different groups. Collaborative involvement of vulnerable people and external stakeholders (e.g., government officials) in the VCA process should be encouraged as this can stimulate a shared understanding of the issues and the appropriate solutions, as well as having the potential to influence policy and practice elsewhere.

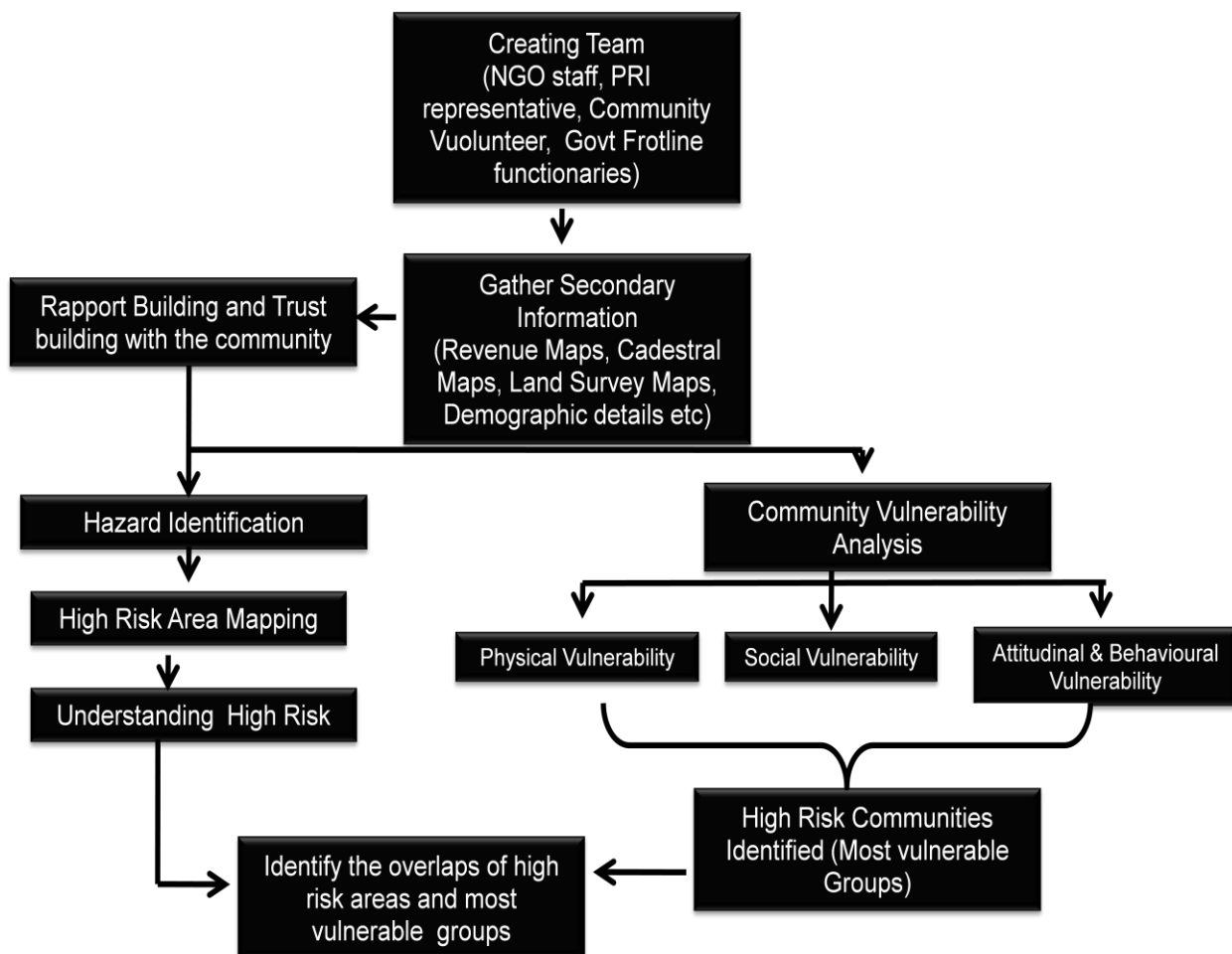
## IV. Participatory Approaches for carrying out need assessment

“Go to the people  
Live with them  
Learn from them  
Start with what they know  
And build with what they have...”  
- Lao Tsu – 7<sup>th</sup> Century BC

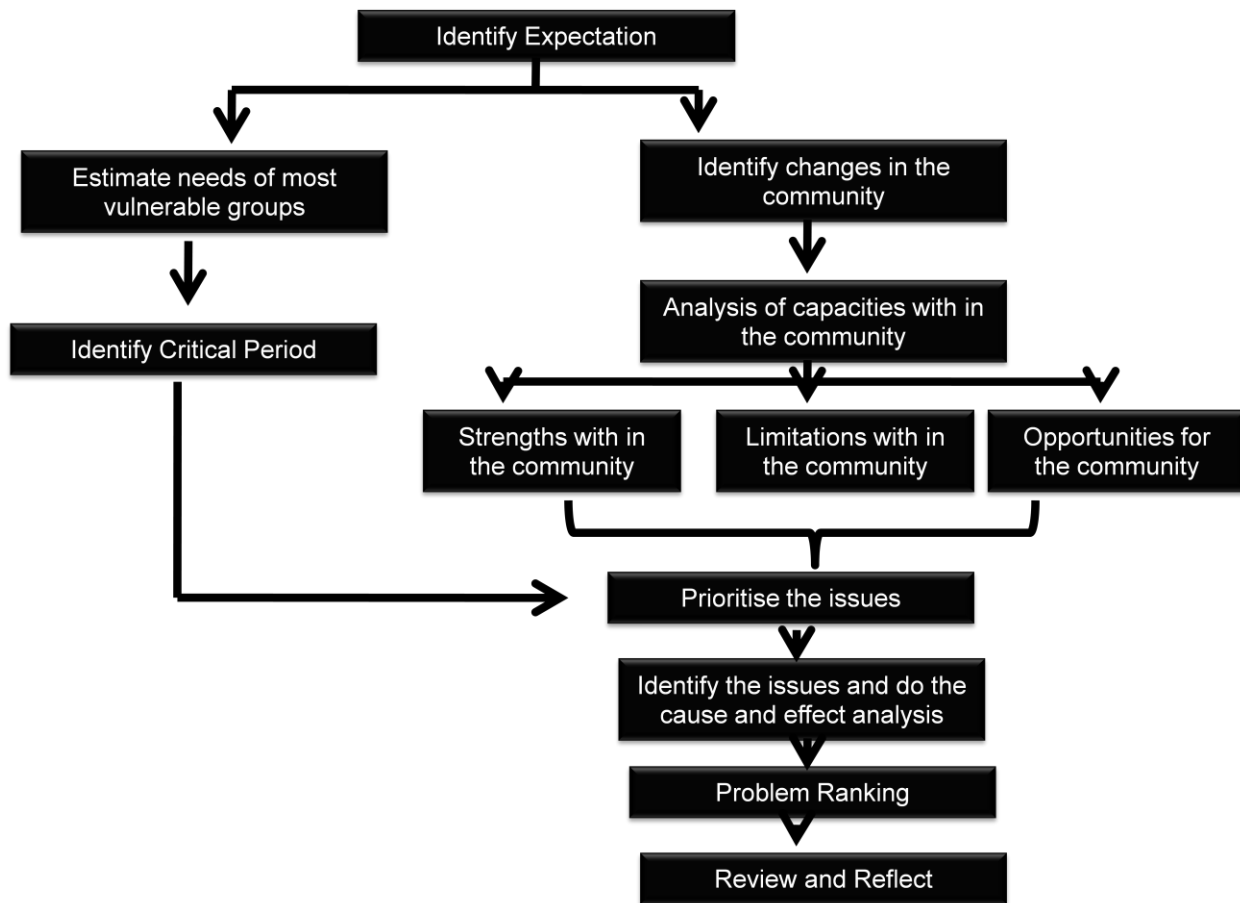
This section looks at how participatory Risk Analysis is carried out in the villages. The analysis includes, hazard analysis and vulnerability analysis (includes capacity analysis). The assessment is more process oriented and has the following process.

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### Process of conducting Risk Analysis in the village







### Creating a team for conducting the village level analysis

PRA is intensive process and requires full time engagement of facilitators. Hence, the people to be part of the team should be able to meet some specific / minimum requirements.

- Reading and writing skills
- Local cultural and linguistic acceptance and relevance
- Willing to give full time
- Empathy towards poor and women
- Should have some basic training on Participatory tools and methods

The various stakeholders preferred to be the part of team. Efforts should be made to involve major frontline functionaries of the stakeholders like ASHA worker, Anganwadi Worker, Village Sanitation Worker, ward members, youth volunteers, leaders of the self help group and NGO's field functionary.

People from different discipline with different development perspective involvement of all these people will give a comprehensive analysis of the village situation from different dimensions and stakeholders to identify their role in addressing some of the issues. All the team members need to be selected among the local people because the capacities of the people will be further utilized during the operationalisation of the project through continuous action-reflection process.

## Methodology

The methodology used for the need assessment is participatory methods. Participatory process means the democratic way of doing things. The definition of the participation can be identified with the definition of democracy – for the people, of the people and by the people. Implies that any analysis should be done in the manner that the people identify their problems and needs, further they also lead in finding optimal solutions for the problems and own the process for interest of the larger community.

Many factors influence the degree to which participation is evident. The condition under which participation flourishes differs from place to place. The following parameters may be important in determining the degree and extent to which participation is present in any one context.

- traditions, including cultural rules and norms of social behavior
- political environment
- local power structures
- previous contact and interaction with development agencies

Participation leads to gradual ownership of the process ensuing sustainability. People can be enabled to accommodate the diversity of perceptions – creativity and various dimensions of analysis carried out in the community.

## Participatory tools

The participatory exercises would primarily be used to understand different dimensions of risk assessment in context to DRM. Towards this various tools such as Spatial Mapping (social and resource map), time line, seasonality analysis, mobility map, cause and effect diagram, preferential scoring, Venn diagram, vision mapping, focused group discussions will be carried out with both different categories of people.

Throughout the assessment, there will be conscious effort made to focus vulnerable families and groups. The assessment team would stay with the vulnerable groups to understand and document their lifestyle, dignity, social interaction and access related issues from their point of view.

### Tools for Hazard Assessment

Objectives	Information Needs	Methods/Tools
<ul style="list-style-type: none"> <li>Identify and understand hazards in the community</li> <li>Identify knowledge gaps/needs</li> <li>Identify risks – present and future</li> <li>Linkage of hazards with vulnerabilities and capacities</li> </ul>	<ul style="list-style-type: none"> <li>List of hazards, location and extent</li> <li>Frequency and probability of occurrence</li> <li>Intensity and severity</li> <li>Duration</li> <li>Predictability</li> </ul>	<ul style="list-style-type: none"> <li>Hazard mapping (Spatial mapping)</li> <li>Historical profiling / Time line/ trend analysis</li> <li>Seasonality Calendar</li> <li>Oral History</li> </ul>

### Tools for Vulnerability Assessment

Objectives	Information Needs	Methods/Tools
<ul style="list-style-type: none"> <li>Identification of vulnerable groups</li> <li>Identification of the factors for vulnerability</li> <li>Assessment of the community needs and capacities</li> </ul>	<ul style="list-style-type: none"> <li>Vulnerable Groups in the community</li> <li>Identification of risks and potential damage</li> <li>List of risks faced by the community</li> <li>Community level, institutional level capacities</li> <li>Capacity needs to reduce vulnerability and risks</li> </ul>	<ul style="list-style-type: none"> <li>Social and Resource Mapping</li> <li>Access and Control mapping</li> <li>Community level capacity mapping</li> <li>Ranking</li> <li>Institutional Venn Diagram</li> <li>Institutional Assessment Matrix</li> <li>Daily Schedule analysis</li> <li>Well Being Analysis</li> <li>Food Security Assessment</li> <li>Focused Group Discussion</li> </ul>

### Secondary data collection

Before conducting participatory assessment in the village it is often possible to get some background information on the area to be covered. Review of such information helps in describing the broad

features and trends of the area concerned. The secondary source of data can be found in published materials which may include transcript or summaries of primary source materials. Some secondary sources are surveys, books, reports, official records, census records, maps, news paper clippings etc. This documentary evidence provides data link-up with other data obtained through field analysis.

### **Avoiding raising expectations**

A participatory need assessment can create high expectations among people given the depth of discussion involved in it. It is important to explain the community about the context of the process is very clear to restrict the expectations. The purpose of the assessment is to be made clear to the communities at the beginning stage itself. The facilitators and the assessment team should be aware of this throughout.

### **Reviews**

Regular review shall be in place in order to ensure the quality of assessment and is not left to the end of the field work. Daily reviews among the facilitators and the team members help in sorting out the constraints faced in the process and to understand the results emerging out of an issue or theme across different groups or different locations.

### **Preliminary Arrangements**

Based on the outcome of the discussion presented by different groups during the training, it was decided to undertake the following significant steps before implementing the tools of Participatory Rural Appraisal at any village where the project is commenced.

- ◆ Identify key persons and establish rapport with them
- ◆ Identify the required target group for each exercise with the help of key persons for conducting the exercise
- ◆ fix a convenient date, venue and time with the participating members for conducting the exercise and inform the same to them
- ◆ assemble and verify adequate members are available as per requirement for carrying out the exercise
- ◆ Brief the members about the purpose of the exercise

The facilitators should always follow the under mentioned rules:

- ◆ Have checklist for each exercise
- ◆ Delegate the roles and responsibilities among the members (facilitator / documenter / observer etc.) and act accordingly
- ◆ Keep all the required materials such as color powder, small card / charts, papers etc.
- ◆ Assist the facilitator to focus the missed points during the discussions
- ◆ Never create unnecessary expectations among the participating members

## Facilitation Skills

- Facilitator should have checklist for collecting information through the set exercised
- Facilitator should delegate tasks to the team members e.g. For documenting and observations
- Facilitator should explain the purpose of the exercise and discussion to the participants
- Facilitator should ensure that participants represents different segment of the community
- Facilitator should ensure that each participants gets equal opportunity to participate and share their review
- Facilitator should not influence the participants with his/her ideas, views etc
- When the groups gets diverted or deviated from the focus he/she has to bring them back to the track
- The other team members should not take the role of facilitator when he/she missed any points or when the team members get new insights. Instead express it to the facilitator in a written form
- Facilitator should sustain the interest of the participants
- Facilitator should avoid one side concentration and give equal attention to all the participants
- Facilitator should monitor and ensure that the information are ascertained as per checklist
- Facilitator should not dominate instead moderate the discussion
- Facilitator should ensure that the identified person among the team documents the process and its outcome as decided
- Facilitator should periodically brief the participants about the identified issues/ problems and needs and the decisions taken to solve those
- Facilitator should strategically handle the dominating participants
- Facilitator should finally close the exercise by briefing the whole process and its outcome to the participants and thank them

## Make the practical arrangements

Issues to consider include:

- Travel and stay arrangements – who, where, when, and how?
- Food and drink – are refreshments required for the focus group participants?
- Resources for the facilitation team, such as guideline questions, note book, pencil open and camera.
- Resources required for participatory exercises – large sheets of paper, pens, chalk, or local resources (such as sticks and stones) and aids for drama.

## Documentation

Documentation and synthesis of information generated by participatory methods is a very important part of the process often this is where the facilitators have most problems. They are due to the following reasons

- field workers are often more comfortable using verbal mode of communication
- Lack analytical and writing skills
- Due to open discussions, it is very difficult to capture all information.

- Converting information into a structured form is also difficult

To overcome the shortcomings, need to take the following steps for ensuring that the information collected is not lost.

- Each team conducting an exercise will have one full fledged documentationist to support the facilitator. Also encourage a community member to document and their notes can be shared and reviewed. Note that the documentationist should not be interfering in the process of community's exercises.
- Tool /exercise wise documentation should be done on the very day itself. Have the facilitator's, documentation person and the community member to share their notes, observations and analysis.
- Each tool is provided with a format to be filled. Converting the exercise's outcomes to the provided format is to be done as soon as possible in the field itself.
- All exercises are to be drawn back on A 4 paper with title of the exercise, village name, date, participants' details, facilitators' details and legend.

The following shall be kept in mind while recording field notes

- Recording of all discussions and the visual output
- Good to start by requesting permission from the participants to take notes
- If for any reasons it is not possible to take notes during a discussion, this shall be done at the first opportunity
- Record all discussion, debates, disagreement during analysis carefully. Copy all visual analysis (do not try to beautify the visual but retain as much of the original features as possible)
- Record all names of the participants those who were taken part in the process
- Record the date, time and place
- Analysis is not complete until the visual is discussed and analysed by the group
- Record questions asked and responses to it. Also record if there are any arguments or disagreements
- While recording the visual outputs make sure to have notes on the symbols (or) colours used and reasons for the same
- interesting stories, anecdotes, case studies are also to be recorded
- any observation by the member of the study team shall be noted as such and recorded separately
- Record the hidden transcript? The body language of people and their fears, sentiments and who's do more talking in the assessment? Is marginalized groups are able share their views and perceptions? Etc
- Repeat the answers from the community to make sure of whether you understood it correctly.
- Record during the day and summarize during the evening.
- Fill all the structured formats provided that day itself. This will help to retain the original data and if any data is missing, one can always go back to people to get it.
- Use an agreed format for recording the field work
  - Each tool wise report should consist of the following information
    - Materials used
    - Process followed

- Findings (copy of the visual, details of data collected, discussions)
- Conclusions
- Learning's

### Synthesis report preparation

After completion of field work, synthesis of the report need to be done based on the emerging issues. All the information available on each theme or topic shall be analyzed. Any new issues emerged are also added. It is very important to synthesis the information collected tool /method wise to find commonalities and differences, like are there any interconnections, are there any patterns emerging from the data. Use the following table for synthesis reporting

Name of the village  
Issue for analysis

	Tool 1	Tool 2	Tool 3	Tool n
Output (actual findings)				
Learnings				
Commonalities (trends and patterns emerging)				
Differences				
Key Issues/ Problems identified				

### Tools and Methods for Need Assessment

#### Tool 1: Mapping

People living in villages or towns for years and have a clear perception of the area. They possess the ability to represent their surroundings very accurately and diagrammatically, irrespective of their literacy status. They have a clear mental picture of their village and its environment. They can easily transfer the picture from their mind onto the ground in the form of a map. The maps are a very effective and immediate source of communication.



Mapping helps in visually representing the physical attributes and various resources which can be found in the community. Social and Resource map can be combined with a hazard map to come up with a local vulnerability map where one can easily identify settlements, resources and infrastructure which are threatened by certain hazards.

### How to Facilitate

Mapping is another activity that can be done while waiting for other members of the community to arrive. This activity can always be interrupted any time. If the map is made on a flip chart, this can be hung on a wall where community members can add to the map any time they want. Oftentimes, community members will just draw the map using sticks or their fingers on the ground. Do not interrupt the process. The note taker will then have to copy the map on his/her notes.

- Before beginning of the mapping activity, the facilitating team should brainstorm its checklist of the issues that the team would like to see covered in the map and discussions that follows.
- Fix the location and time for the exercise in consultation with the local people. Invite them for it.
- Explain the purpose of the exercise and decide with local people on what sort of map will be drawn, thus agree upon the subject of the mapping exercise.
- Request the community to start off with drawing the prominent places and key landmarks of their locality. Allow the community to choose their own symbols and materials – as creatively as possible.
- Sit and observe the process of drawing (what is drawn first, what parts of the map generated discussions among the participants, listen attentively and take notes as much details as possible). Do not interrupt the process. Ask them “what about this? What does this mark or symbol represent? Etc for clarification and take notes.
- Once the mapping is over, ask the community to identify their houses in the map. Number the households, which is useful for gathering data later.
- Ask them household wise details which are required for you as per the checklist developed.
- Interview the map, ask probing questions on the aspects you are not clear about, and ask for more information on them, if necessary. Some key questions could be on access and control over the resources facilities.
- Community members will then be asked to mark the areas at risk from hazards like drought or flood.
- After this, community members will identify who are most at risk; capture the factors of vulnerability (location, housing, etc).
- Ask the participants to interpret the overall diagram, if appropriate, suggest that they identify the main problems revealed by the map and ask them about possible solutions with in the locally available resources.

- Keeps a permanent record including the mapper’s and participant’s names to give them credit? Transfer the map on the ground to paper after its completion. The map should have a title, name of the site/village, date of analysis, names of the participants from the community and the facilitators.

**Dos**

- Do spend time thinking about what information are to be collected through map and why the information is needed
- Allow the community themselves to draw the map according to the way they perceive and decide among themselves
- Interview the map

**Don’ts**

- Don’t impose your way of drawing the map
- Don’t neglect the children and elderly

The maps drawn on paper could be further copied and used for various exercises with the community like drawing health profile of the village, education map of the village, vulnerability map, leadership map, mapping of various CBOs in the village, indigenous skill map, livelihood map etc.

**Reporting Format from Social and Resource Map**

**Date/Month of data collection**

**Quantitative Information**

Family/Social Organization			Occupation		Education (gender disaggregated data)	
Population (Age Community wise)	M	F	Agriculture		School Infrastructure	
0-5			Share croppers		Children enrolled	
6 to 14			Daily Labour		Teachers	
15 to 40			Rural Artisans		Literates	
40 to 60			Employees (Govt. employees, private employees, migrants, NRIs)		Continuity of education (girls and boys)	
> 60			Fishing and related		Adult Education	
Total Population			Skilled workers		<b>Health</b>	
No. of Families			<b>Domestic Animals</b>		Health related infrastructure	
No. of Houses (type)			<i>Cattle Variety</i>	<i>No.</i>	Health functionaries	
Thatched houses			Oxen		ASHA worker	
Tiles			Cows and calves		Traditional Birth Attendants	
Asbestos/tin sheets			Buffaloes		Traditional Healers	
Slab			Goat		RMP/UMP	
No house			Sheep		Anganwadi Centre	

<b>Social organisation (Households)</b>		Pigs		Chronically Ill/ diseases	
Scheduled Caste		Poultry			
Scheduled Tribe		any other animals		<b>Water and Sanitation</b>	
Backward Class		Veterinary Services		Community drinking water facilities (by type – hand pump, open well, tap supply, OHT, Tank/pond)	
Muslim Minorities		<b>Land holding</b>	HHs	Individual level drinking water facilities	
Christian Minorities		Marginalized farmers (<1 ha)		Individual Latrines	
Other Minorities		Small farmers (1 to 2 ha)		Community latrines	
Other Castes		Large Farmers (> 2 ha)		School Latrines	
<b>Infrastructure</b>		Landless households		drains	
Roads		<b>Land use patterns</b>	in ha/acre	Access and control of drinking water sources	
Internal Roads		Forest Land		<b>Community Buildings</b>	
Internal Drains		Barren land			a. Panchayat Office
Electricity		Land used for non-agriculture use		b. Community Hall	
<b>Movable Properties</b>		Grazing land		c. Library	
Boats (type wise)		Cultivable Land		d. Cyclone Shelter/ Flood Shelter	
Bicycles		Orchids and other horticulture		<b>Community Organisations/ Leadership</b>	
Motor Cycles		Fallow Land		Panchayat Member/Sarpanch/ Secretary	
Mobile Phones		Other land		Fisheries Federation	
Telephones		<b>Services</b>		Village Organisation/SHG leaders	
Radio		Public Distribution System		Task force members	
Television		Weekly Market/hat/shandy		Water User Committee	
<b>Livelihood Assets</b>		Fishing market		School Committee	
Tractors		Agri-related market		Health and WATSAN Committee	
Agriculture appliances (use a checklist)		Livestock related market		Mothers Committee	
Fishing gear		<b>Irrigation Facilities</b>		<b>Leadership</b>	
Other artisans related		<b>Sources</b>		Traditional leaders/ social	

(e.g. handlooms etc)					organisations/ PRIs/ task force members etc	
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### Qualitative Information

- Information related to access and control over resources, infrastructure and services
- Those who are marginalized in the process of development, uncovered under any government schemes, social organizations, leadership and denied services and access to resources
- Where ever necessary collect qualitative information for analysis.

### Tool 2: Transect or Joint Walk

To understand life, livelihoods, risks and vulnerabilities of the people as well as the resources of different kinds that support their lives demand a direct observation. It is not possible to draw a better, deeper and more comprehensive analysis of their vulnerabilities, risks and capacities by just sitting and interacting with a group of people in a village. There is need to do a leisure, relaxed but focused walk in and around the village, walk through their fields, spend great deal of time in directly observing the resources of the village, interact with people on the basis of observation and learn gradually from the people. Transect or joint walk, a participatory learning method provides opportunity for such an analysis. Through transects one gets insights and information into the nature and complexity of the existing scenario in a way that the traditional approach does not provide.

Transect is different from other spatial tools like social and resource mapping. The later provides a bird’s eye view where as transect provides worm’s eye view (one development worker quoted that transect mean seeing through your feet<sup>8</sup>). transects depicts a cross sectional view of environment and agro-ecological geographical systems with various parameters including topography, land type, land usage, ownership, access, soil type, vegetation, crops, problems, opportunities and solutions.

- Transect helps intervening agencies to observe directly and to have a firsthand knowledge about any location/ item/ situation/ condition.
- It leads to in-depth probing of an area and intricacies of the issues involved
- It takes account of micro-environment (chambers) in a locality which tend to get overlooked in maps
- It helps to directly observe, describe and cross-check points for discussion with local community members.
- It helps in concretizing discussions and demonstrates ability of local people with local knowledge to show physical locations/ items while describing them verbally or through maps
- It also helps in improving communication links with local communities
- Generate a trend in land use, changes in environment, natural resources use, locations of risk from different hazards, etc
- Identify changes that have occurred over time and space, identify the reasons for changes taken place, and examine the implications and causes of these changes.

<sup>8</sup> Concept used by G. Vengal Reddy, Senior Government Official GoAP

- It enables to reach outer limits of the territory, thus reduce the spatial bias that often results because of bulk of activities are likely to be carried out in the inhabited part of the community.

### Types of transect

- Village Transect is an observatory walk through the residential area of the village, observing and making notes of the layout of the village, housing, drainage, backyards, topography (highlands, low lying areas), infrastructure etc. Apart from the physical features of the village, it gives greater insights into the “social” aspects of village life, for example, segregated housing colonies as per community/caste. It also throws number aspects of life and livelihood practices of the communities.
- Resource Transect is an ecological tool of getting into a quick understanding of the particular agro-ecological zone by analyzing a cross section / different cross sections of the area. It gives an understanding of various aspects of the local situations that are related to natural resources and their management, it also provides areas of vulnerability (physical and natural), e.g. weak bunds, breaches in canal/tanks/ rivers etc. The transect usually begins in the path starting from upper reach and moving downwards towards the village. During the transect, observations are made at different locations, such as the highlands, midlands and low lands.
- Cultural Transect<sup>9</sup> enables to traverse through the ‘life’ of a person, a subject of the village or the village itself over a period of time (it may a day or a week or more). It involves attaching oneself to a person, a subject or village and following on a journey of observation and discussion to discover the patterns of daily life. E.g. life of a fisherman at sea, life of woman, a week in the company of migrant labor, a day spent with minor forest produces gatherers and so on.

Making a transect consists of two sets of processes. A systematic walk by the facilitators and the local community (key informants) to observe the nature-scope and clarify doubts with them in order to arrive at a detailed understanding of the area- its topography, areas of vulnerability, risk and safer areas during hazards and disasters, drainage flow, natural resources, entitlements, problems, opportunities etc, as perceived by the community. The second process is the production of the transect diagram depicting the cross-section view of the walk route in terms of various parameters used for the walk with a matrix of comparative analysis of zones across the selected parameters.

### The Process

#### *Pre-Transect walk preparation*

- Locate a group of local people having some knowledge of the area and who are willing to walk with you for the exercise
- Explain the purpose of the transect to the people and involve them in the process of decision making regarding the transect path to maximize the observing of details of the locality. It is very important to take decision on the transect route, number of transects and type of transect and the transect group. The social and resource map drawn on the ground could help in deciding the transect route and the type. The participants of the mapping exercise could be consulted to decide on these factors.

<sup>9</sup> Word coined by late Jimmy Mascarenhas, MYRADA/ later in OUTREACH, 1992

- Have discussions and arrive at the parameters according to which data is collected during the walk.
- Ensure that the timing is convenient for all the key informants including women to participate in the walk.
- Prepare a check list of data and information to be gathered during the transect.
- An area for transect/joint walk with local people is required to be within the manageable limits of walking so that in-depth observations and discussions can take place without such walk becoming tiresome. For large area involved, multiple walk are required to be undertaken or the team can be divided into sub-groups with its own guides/ community members. By walking different set routes, the team can ensure that more area is covered and thus further reduce spatial biases.

#### *During the transect walk*

- Go along with the people at the prefixed time on the already decided transect path. If the situation on the field demands so, do not hesitate to make modifications. Also carry the checklist developed for setting the parameters and preferably the resource map for the walk. The resource map will come handy to make references during observations and discussions en route.
- Ask questions to clarify things you are not clear about to the local people accompanying the team. Listen carefully to what they say and amongst them. Encourage them to explain during the walk. If necessary, stop at certain locations for detailed discussions on the points emerging. It also gives the team a breather and time to note down details.
- During transect, there are a variety of chance encounters happen such as shepherds, woodcutters, landless labour and so on. Do not avoid them. Speak to them; interact with them on issues related to the problems or issues under the study.
- Similarly, observe the crops or any other biomass. Ask the people about the relationship between productivity and the characteristic of their land and other resources. One may ask the farmers to make a sketch map of their own field on the ground, showing the problems and constraints in the map.
- Collect and bring items which are interesting but are not familiar with and this helps to refer to them in discussions later and also in documentation. If the team has camera, capture key photographs for both for discussions and for documentation.
- After returning, draw a transect on a large sheet of paper. Let the local people take lead in drawing the transect diagram. Use the notes of the team while making the diagram.
- Show the transect to others in the locality and ask them their views. Clarify doubts. This helps in triangulating the details.
- Thank the participants for their active participation and time.

#### **Dos**

- Give some thought to the type of transect desired to pursue
- Try to start at a low point and move towards a high point or vice versa
- Walk slowly, observe keenly, ask and listen
- Record the observations in the form a map
- Take notes in detail on what you have observed, seen and heard

### Don'ts

- Don't do the transect in a haphazard manner
- Don't miss an opportunity to talk to the "chance encounters"
- Don't walk too fast, you may miss important thing

### Reporting Format for the transect walk

Features	Locality1	Locality 2	Locality3	---
Locality				
Resources (use local names )				
Uses of these resources (Who owns it? Who uses it? Usage patterns?)				
Vulnerabilities perceived				
Problems				
Opportunities provided for future				
Perceptions of the community				

### Tool 3: Venn or Chappati Diagram

Over last few years, a network of different organisations, institutions and agencies have been established to serve the social, economic, political, religious, cultural and other interests of the people. These organisations are of different types: government and non-government, public and private, formal and informal, institutional and non-institutional, service-oriented and profit-oriented, sponsored and spontaneous, permanent and temporary, constitutional and customary etc. while of the organisations are created to promote the interest of all sections of the community while some other are to cater to the needs of special category of people. It is very important to know what are the various types of organizations functioning in the village to promote the interests of the people. What are their roles and responsibilities? Do they provide services to the people as expected of them? Are they able to put 'the rules of the game' into practice? What do people perceive about them in terms of importance and effectiveness? Venn diagram, popularly known as 'chappati diagram' provides answers to these questions.



A Venn diagram or Chappati Diagram is a visual depiction of key institutions, organisations and individuals and their relationship with the local community or groups. Venn diagram provides a basis for discussion of

- the roles and significance of various institutions for people in a locality
- levels of communication between organisations
- the role of project bodies and their intervention
- improving the missing link between existing organisations
- the potential for working through existing organizations
- the potential roles for new organisation
- Local perceptions about the organizations are discussed.

### Process

- Find the interested people who are willing to try it out. Identify key informants including women
- Define the objective of the study and make a mental checklist (keep the list in the background until the villagers have completed the diagram)
- Explain the purpose of the exercise to the participants Make the procedure of doing the exercise very clear that the analysis focus on assessing the importance of the organisations/individuals as perceived by the community, their effectiveness or ineffectiveness. Perceptions about the services extended and the reasons for its effectiveness are ascertained through visual diagrams. Reasons for effectiveness or ineffectiveness are studied through discussions after the diagram. The diagram part of the exercise needs to be clearly explained in order to ensure adherence to the principles that “they do it”.
- Ask the participants to what kind of organisations or institutions or individuals that are relevant either in general or for a specific issue. Ask them to write and/or depict them on small cards. Visual depiction becomes necessary if there are non-literate participants.
- Ask the participants to place the cards on one of the variables of study. E.g. perceived importance they would like to analyse, in a descending order. Once the cards are arranged in an order, ask them whether they agree or would like to make modifications. Encourage them to make changes, if they are interested.
- Facilitate the participants to draw a big circle or square which represents the group or the village.
- Ask them to assign paper circles of different sizes (cut and keep ready) to the institutions or individuals. The more significant/ more important organisation is assigned bigger circle the lesser the smaller circles. Paste on the circle the cards with names of institutions or individuals / write the name of the institution/ depict on the circle.
- Once all the cards are assigned different sizes (circles/chappatis), ask the participants to place the circles from the central circle (depicting the village/community). The distance between the central circle (the village) and the selected bigger or smaller circles indicate the effectiveness of the services rendered by the organisations. The longer the distance between the village and the chosen circle, the lesser the effectiveness of the organisation. The lesser the distance, the greater is the effectiveness. It should be noted, at this juncture, that the size of the circle can mean the importance while the distance can mean the accessibility and effectiveness of the organisation as perceived by the community.

- Once all the cards are placed around the central big circle (the village), ask them to discuss and explain why they placed the cards in such a manner. Note down the points of discussion and explanation.
- Do not suggest, at the same time try to see that each organisation is objectively assessed and reported. Facilitate the exercise on the ground so that cards can be easily moved, more people can participate, greater discussion is generated and proper triangulation results.
- One completion of the exercise, ask one of the participants to explain the exercise and the outcome to fellow participants and others who have assembled and participated in the exercise.
- Copy down the exercise with all the details. Thank the participants for their involvement and time.

### Reporting format of Venn diagram/ Institutional Assessment

Sl.No.	Institutions / organisation	Expected Services / benefits	Perceived benefits/ services delivered (relative score of preference)	Reasons for proper or improved services/ unable to access services	Constrains /bottlenecks in accessing services	Suggestions
1						
2						
3						
4						
5						

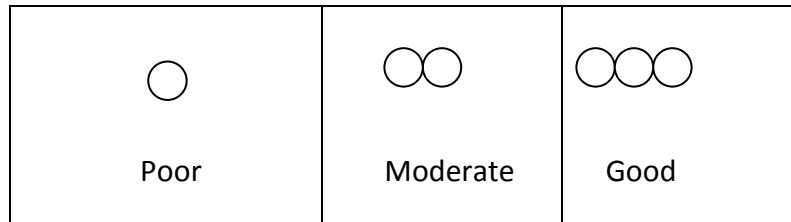
Another tool using scoring /ranking exercise could be taken up in assessing the performance of the key functionaries of government and the community.

Objective : To understand the role and qualities of activists and Para-professionals and their performance

Method : Matrix Scoring (use three seed technique)

**Process:**

- Orient the members about the exercise
- List the different types of activists
- Facilitate the members to list out the roles of an activist as perceived by them
- Facilitate the performance rating of their activists in relation to the identified roles by using three seeds technique



- Facilitate the community members to list the qualities of the activists and Para-professionals.
- Repeat the exercise with different activists and Para-professionals.
- Analyse the information and document the output

**Reporting Format**

Roles and Clarity of frontline functionaries of government and the community

Functionary	Perceived Role(s)	Rating	Qualities	Rating	Reasons

**Tool 4: Time Line**

Every village, every community, every family and every individual has a history behind it. The past is full of events, incidents, happenings, processes, experiments and development initiatives. The past carries a great deal of experience along with it. People’s efforts to cope with different calamities and disasters are to be carefully studied and viewed in a proper perspective for understanding the present and the shaping the future. This is so because the present and the future are the continuum of the past. The best prophet of the future is the past. Timeline is a very simple tool that narrates the disaster history and significant events that happened in the community in the past.

A time line is a list of key events, changes and landmarks in the past, presented in a chronological order. It is often a useful way of putting an individual’s or a community’s history into perspective by

identifying the broad framework of events which shaped its past. This tool enables to discuss the following:

- What really happened and why?
- What are the factors that contributed to the events?
- Can the core trends be observed and what are they?
- Which of the core trends may be expected to continue into the future?

A time line exercise is done to identify the important key events that occurred in the past. The events could be generic (time line of the village) or specific (timeline of hazard /disaster history) in nature, depending on the objective of the timeline.

### Use of time lines

- Identification of sequences of significant events / changes over time and identify coping strategies
- Provide reference points for trend/change analysis and monitoring and impact of these identified changes
- Understanding past interventions
- The exercise can be applied to find out the back ground of a village of the evolution of specific activities or programmes and other social amenities
- It can be used for learning about relationship of local communities with local resources, which has impact on livelihoods, coping strategies to disasters, changing habits, community efforts, quality of life etc.
- It can be used to describe community's history or individual's history. It can capture changes over time and can be used for analysing many variable across time
- Significant hazard events, its impact on life, resources and property, impact on social conditions, coping mechanisms, government and other agencies responses etc
  - Area under cultivation, cropping systems, yields, cropping varieties
  - Agro-ecological systems and habitation
  - Prices, credit and interest rates
  - One column gives the year and the other column lists down the events that took place.
  - Migration trends
  - Basic amenities and its access and control, time and distance
  - Disease outbreak
  - Rainfall, climate variations, timing of drought etc

### Procedure

- A time line analysis is done in a very relaxed manner.
- Identify some elderly persons in the village willing to talk about the history of the village. Invite them for a meeting
- Explain to them the purpose of the exercise. Initiate discussion on the history of the village. Ask them what period and place they would like to review historically (e.g. how many years back and for which area)

- Ask participants about the events and trends that cause stress either regularly or intermittently. Also ask about historical occurrence of floods, drought, cyclones, fire accidents, epidemics, local environmental trends etc. Use the helpers what, when, how and why?
- Ask one of the participants to note down the major events in brief on cards in bold letter. People can also depict symbols and use locally available materials like stick, stones etc on the ground. (if participants are unable to do so, ensure that one of the facilitators take this role)
- Prompt and probe with short questions, which encourage participants to expand further in one direction. Use open end questions, like, could you tell more about that? Etc
- Record or depict the events narrated on the cards and also record the perceived year of the event. Ask them for more such events that they would like to add. Once, they feel that the list is more or less complete, ask them to keep the cards in a chronological order- the earlier events on the top and the later events lower down. One can also go horizontally with earlier events on the left end and the later events towards right. Read out the events and ask them whether they are happy with the order or if they would like to modify it.
- Add years to the left side of the list of the events (in case of vertical time line) or down (in the case of horizontal timeline). People either due to loss of memory or use of different time frame and calendar system may be a big obstacle in arriving at the exact years. The facilitator (s) to use their best judgement to arrive at the years. Use significant events which people have in memory (like introduction of Rs. 2/- Kilo Rice scheme in AP, Super cyclone in Orissa, Super cyclone in Diviseema in AP, etc).
- Once the exercise is over, ask one of the participants to read out the events or the incidents in a chronological order and ask the participants to reflect and be flexible for any additions, deletions and modifications suggested by them.
- Copy the details onto paper. Note down the names of the participants, facilitators, location details, dates, legend etc.

#### **Dos**

- Decide in advance the type and nature of the timeline for the participants to develop
- Encourage the participants to use symbols and visuals
- Start from general observation.
- Ensure the participation of the people from different age group. But see that elderly who are interested to share their experiences and narrate the past incidents are in the group.
- Create an atmosphere where women can participate and talk

#### **Don'ts**

- Don't insist on the participants to come out with exact date, month and year of occurrence of an event or an incident.
- Don't get carried out by elaborative narrations and some time "hijack" by the members.

### Reporting format for Time Line Analysis

Time/Chronology	Key events/ incidents	Impact	Response	Coping strategies	Interventions to mitigate/ prevent/ preparedness
General Trend emerging from the time line analysis					
Traditional Systems/ practices (of early warning, coping strategies, mitigative measures if any)					
How are the interventions helped them in mitigating/reducing the impact of disasters?					
What are reasons for reduction/ reoccurrence of specific hazards events?					

### Tool 5: Seasonal Calendar

Seasons tend to influence lives and livelihoods of local communities in major ways. It is important to appreciate and learn about seasonality dimension in lives of the community. Seasons bring about changes in climatic conditions, in crops grown, in prices, in physical conditions, in availability of water, food, fuel and fodder, which in turn influence the living conditions in different localities and areas. The seasonal variations and distress conditions also causes for hazards. Thus analysis of seasonal variations, its impact on livelihoods, occurrence of disasters (floods, cyclones, drought, fire, epidemics etc) according to the season/months and community's response to processes, institutions, structures etc. help in the assessment of hazards and vulnerabilities. This tool can lead to comparisons of related aspects of local livelihoods such as seasonal variations and their linkages with food, employment, workload, disease etc. It captures the seasonal dimensions and trends in activities, problems, opportunities and so on. This analysis also helps in understanding the risks and shocks encountered by poorer and vulnerable communities, its resultant impact on exploitation, marginalization and

indebtedness. The calendar also helps in discovering suitable times for interventions that can be planned in different seasons/times/months of the year.

### Meaning

Seasonality calendar is a diagram drawn by people with locally available materials to provide a trend in the main activities, problems and opportunities of the community throughout the annual cycle. It can be drawn for major seasons or festivals or months (local). A month wise depiction of seasonal calendar helps to identify the months of great difficulty or vulnerability or other significant variables which have an impact on people's lives and livelihoods.

### Process

- Explain the purpose and objective of the study.
- Let the participants describe their classification of seasons. This can be done by referring to their festivals or to the food production cycle. Write the names on cards in bold letters. Ask them to identify unique characteristic of each season/month, one by one, that would remind them of the month. Use symbols or drawing. (do not impose your calendar)
- Draw a grid with chalk on the floor or ground. Keep the cards with the name of the months and visuals or symbols in the top boxes in order, horizontally.
- Now on the vertical axis, take the aspects whose seasonal variations to be explored. Start asking questions using the checklist. In this case, start with occurrence of hazard events (based on the hazard mapping), crops, agricultural activities, labour, income, expenditure, debt, health, migration, etc to be depicted across the months.
- Ask the participants to show duration or amount by months or other time units using seeds, stones, twigs, sticks, pebbles etc on the floor. Using ten stones (ten being the highest score) indicates degree, severity or extent of the change.
- Select each topic and proceed gradually. Don't rush, do not dominate, do not try to impose facilitator's ideas on them and don't assume. Allow them to discuss and debate. When they are ready with the answers, ask them to depict them on the respective rows against respective months, preferably in visuals or use scoring method.
- Remember that information got from the exercise would be mostly qualitative in nature. Do not insist on exact value or quantity. However, ensure that the information collected is facts.
- Once, all the activities are covered, ask the participants whether they would like to take up any other aspect or activity or make any modifications to the diagram.
- Interview the diagram, i.e. ask them questions on aspects about which you are not clear.
- Facilitate a discussion and analysis among the participants and others present. The points of discussion could include:
  - a. Major findings and learnings
  - b. Implications of the findings
  - c. Recommendations and action points
- Copy the diagram on a piece of paper with legends and details of the participants, facilitators, locality and date.
- Thank the participants for their active participation and valuable time.



**Dos**

- Decide the theme for seasonality calendar/diagram
- Decide the season in consultation with the people. Let it be their 'season'.

**Don'ts**

- Do not impose your choice of seasonal calendar on the participants
- Do not use materials that restrict the participation of the people

*Do separate seasonality exercises with men and women among fishing communities on their livelihoods and impact of hazards*

**Reporting Format for seasonality Diagram**

Activities/ themes	Trends and variations observed across the months	Problems	Coping strategies and its implications	Opportunities available

**Tool 6 Mobility Map**

Village is neither self sufficient nor self contained. Villagers may not have all the facilities and services they require in the village itself. Hence, they need to move from their place of domicile to other places, either to avail services and facilities or to seek livelihood opportunities. Where do people go? Why do they go? What is the purpose of their visit or migration? What is the distance? What is the frequency? How do they go? Or what is the mode of transport? Are the places of visit easily accessible? A mobility map provides answer to these questions.

**What is a mobility map?**

A mobility map is a map drawn by the people to explore the movement pattern of an individual, a group or a community.

## Purpose of mobility map

- To understand the movement pattern of different sections of a community
- To ascertain the problems, if any, in travelling distance
- To plan for the placement of services and facilities
- To assess the impact of an intervention on the mobility pattern of the people
- To compare the mobility patterns of men and women and to ascertain the variations, if any

## Procedure

- Decide on the type of mobility map to be analysed with people. Select key informants from different sections of the community from different age groups. See that the women fairly represent the group.
- Explain the purpose and mode of doing the exercise. Make sure that the participations understand the purpose and procedure of doing the exercise.
- Initiate a discussion about the places they visit. Take down the names as they list them or ask one of the literate participants to take down the names.
- Ask the participants to write down the names of each place they visit in bold letters on a separate card. Ensure that all places they visit are written on the cards. Facilitate the participants to symbolically represent the places on the cards. This is possible because each place they visit may have some significance, which can be depicted by symbols. Leave it to their choices; do not impose your ideas or symbols.
- Generally, in the mobility map, the village is at the centre and the other places visited are placed around it. The distance of other places from the centre may or may not be proportionate to the actual distance.
- Facilitate the participants to draw a circle in the middle of the ground/ chart paper/ floor representing their village. Now ask the participants to place or locate each card with names of places they visit in correct direction.
- Ask the participants to link the place/ locality with the places they visit by drawing lines.
- Facilitate them to follow the same procedure for all the places they visit one by one
- Ask them to represent each aspect (credit, agriculture inputs, hospitals and others) with a symbol. Ask them to give details such as
  - Purpose of visit (Why people visit the place)
  - Distance of place (between the place of visit and the village)
  - Mode of transport (bus or walk)
  - Preference (why people prefer the place over other places, why women prefer this place in comparison to men)
  - Accessibility (in terms of size – bigger the size the easier the access)
  - Whether travel alone or with someone
  - Importance of the place and
  - Frequency of visit
- Ensure that all the participants actively take part in the exercise.
- Request one of the participants to explain the map, allow participants to add details or to make alterations in the diagram

- Interview the diagram, listen carefully to what they discuss and take down notes
- Take a copy of the diagram onto paper with all details
- Thank the participants for their involvement

**Dos**

- Decide whose mobility pattern you would like to analyse. Ensure the participation of each category of people.
- Facilitate the participants to use symbols for easy understanding and discussions
- Allow them to depict the direction in the local language

**Don'ts**

- Do not insist on exact and accurate distance
- Do not depict too much of information on the mobility map

Mobility Map may appear similar to that of Services and Opportunity Map in many ways. The later focus on the availability of services and opportunities while the mobility map focus is on the places local people visit. Service and Opportunity map in addition can also reflect the distance, importance and accessibility of local services perceived by the participants. For livelihood related assessments, the services and Opportunity maps are carried out like agriculture services map, fisheries opportunities map etc. the process is same to that of the mobility mapping.

**Reporting Format**

Place of Visit	Purpose of visit	why this place is very important	Perceived distance from the village	mode of transport	frequency of visit	Perceived risks

**Tool 7: Well-being Analysis**

Inequality of wealth can be seen invariably in every human community. It is the most important characteristic that differentiates people within the community. Development initiatives and efforts should be able to recognize this difference, indentify the asset-less and resource-less and their vulnerability to disaster situation and their survival mechanism. Thus it helps in mainstreaming them into the development process. The participatory tool helps in identification of people’s perception of

poverty and characteristics and features of poverty help in identification of different categories of the community. In recent times, the action oriented approaches, define wealth in terms of access and control over key economic resources. The definition of wealth varies from community to community due to the nature of variation of economic resources they possess. Well-being analysis goes a step ahead of wealth ranking exercise as it touches a much broader description of quality of life includes economic security, physical health, education but also with the subjective status of mind and social relations.

### Process

- Well being analysis has following two steps, one, well being matrix development and second is mapping it on social map or use social map household numbers for mapping them in the matrix.
- Arrange the list of households in the locality for conducting well being analysis (use social map information including their house no.)
- Select the audience for the exercise and spell out clearly the purpose of the exercise and seek their time and analysis. Ensure the participation of women and all vulnerable groups in the exercise.
- Facilitate the members to define what is well being? Based on their view facilitate to identify different categories of well being
- Facilitate the members to develop indicators/ characteristics / features for each of the category identified. Encourage them to depict the categories with visuals or symbols.
- Draw a grid on the ground, place the different categories on the first column of the grid and is followed with the indicators/ characteristics.
- Read out the households names with their corresponding social map no. and ask the participants to place them under which ever category of well being as they perceive. Don't rush and let the participants discuss and debate over placing the households in different categories of well being. Note down the discussion points for analysis. Add the necessary details on each household card, where ever possible.
- Interview the exercise and ask the participants for any suggestions or modifications.
- Copy the map on paper and thank the participants for their analysis and time.

### Variation

Map these categories on the social map. The houses in the social map are ranked on the basis of well-being using symbols or colour codes etc. Suppose the participants come out with five categories of well-being, using five different symbols or colours, the houses could be classified directly on the map itself by the participants. The criteria for each category of well being are placed in the legend.

## Reporting Format

Category type	Category 1 (most vulnerable and Poorest of the poor)	Category 2 (Poor)	Category 3 (Not so poor)	Category 4 (Better off)
Criteria				
Households (Social Map HH Nos)				
Any mobility (upward or downward) observed in last 10 years				
Opportunities for improvement				

## Tool 8 Ranking and Scoring

A community or a village may have several problems. However, the degree of intensity may vary among the problems. Some problems are severe and some may require immediate attention. It is also not possible to address all the problems at the same time. Therefore there is need for understanding these problems and ascertain the problems and needs on the basis of urgency. Prioritizing issues and revealing preferences are important ways of community participation and decision making. With resource constraints, whether in terms of funds, natural resources, material resources, human skills or social capital, all plans and actions need to be prioritized. Ranking and scoring methods help in prioritizing group/individual issues/preferences at the local level and support practical decision making within limited resources. These methods provide opportunities to deprived or vulnerable groups/individuals to reveal priorities and preferences, whose nuances are difficult to capture through interviews and oral talking.

Ranking and scoring can be used to stimulate discussions among people whenever any choices are to be made. It helps to make the decision-making process transparent. It helps to achieve a better clarity on the existing perceptions about the advantages and disadvantages of various possible solutions. It also aids in identifying key constraints and opportunities and to discuss the selection of criteria. This is also used as planning tool.

Ranking means placing or putting something in order (Theis and Grady, 1991). Scoring relates to the weight or prominence people give to different items.

### Process

- Identify the group with whom the exercise on ranking/scoring is planned. Explain the purpose of the exercise. It is important that the ranking/scoring system used clear to the facilitator and the participants.
- Choose the theme for discussion (Risk Reduction priorities, based on the outcomes of the other tools used earlier).
- Ask the participants to list down the items/issues where there are various options to be preferred or to be prioritized by the community. Note down the options/items coming out of the discussion. Write each point on a card or depict symbols or pictures on the cards.
- The next step is to facilitate the participants to list the criteria. This is very important stage and allows the participants to discuss and debate in arriving at the criteria for ranking/scoring. (if no criteria evolves, do pair wise comparison)
- Elicit criteria from the participants by asking questions like, what is good about each item? What else? Continue asking till all the possible criteria are elicited. Similarly, ask what is bad about each item? Continue asking until no more replies come from the participants.
- Ensure that the criteria are all positive and precise. The use of both positive and negative criteria in the same exercise can be confusing. (if there are negative criteria, convert them into positive ones using opposite of the negative criteria)
- Draw up a matrix with the items /options top to bottom in the first column and criteria left to right in the first row on the top. One can otherwise also. However, keep in mind that the comparisons are made criterion-wise and not item-wise. It means that take up a criterion and then do the ranking /scoring for all the items. Once one criterion is over, move to the next, do the ranking/scoring for all items and record them till all criteria are covered for each of the item.
- Depending upon the preference of ranking or scoring the next steps will vary.

### For Ranking

- Take up the criterion and ask the participants to rank the item/option on the basis of that criterion. Key questions which need to be posed at this stage are
  - Which is the best? The next best?
  - Which is worst or least preferred?
  - Of the remaining, which is better?
- Record the ranking directly onto the matrix. Once all the items/options are ranked for all criteria, reflect on the exercise and draw inferences from the exercise what are the most

prioritized/preferred items/options of the community and which of the items/options are least preferred.

- Interview the ranking exercise to derive the reasons for their preferences and document the discussions and the matrix on paper.
- Thank the participants for their analysis and time.

### For scoring

- Choose fixed scoring on a 1 to 10 scale for this exercise. Take up a criterion and ask the participants to give scores to each of the items/ options in such a way that the items/options scoring high for that particular criterion get high scores and other get low scores depending on the magnitude in the range 10 (highest) and 1 (lowest). Record the scores in the relevant cells using flexible materials like stones, seeds, pebbles, sticks, etc.
- After scores are given for all the items/options on the criterion, move to the next and so on till all the criteria are covered.
- Listen carefully to the discussions which the participants engage in which deciding on the scores and arriving at the criteria. Take notes. Remember that these provide very valuable information.
- Ask the participants to explain the matrix in detail. Also ask them to list their findings. Allow the enough time to reflect. Depending on the objectives, give them some key question to think and reflect.
- Interviewing the matrix can further help you arrive at more clarity.
- Copy the matrix on a sheet of paper with details. Thank the participants for their active participation.

### Reporting Format for Ranking and Scoring

Items /options chosen for assessment	
Criteria chosen for scoring/ ranking	
Prioritized Issues/problems/options	
Reasons	
Key findings and learnings	

## Tool 9: Cause and Effect Diagram

In the course of interactions with the community, family or individual, one may come across a problem or an issue, a situation or a phenomenon. These issues or problems may be broad or specific. They have to be studied in detail. The purpose here is to arrive at a solution. A flow diagram helps to assess the causes and effects of a problem or an issue. The cause –effect diagram present visually the causes and effects and their inter-linkages, which help in arriving at an in-depth understanding of a particular topic, and provide scope for analysis and subsequent action by the local people.

Cause –effect diagram has been used for the study and analysis of the problems of a wider range of areas including migration, low productivity, drought, floods, food insecurity, ill-health etc. It not only helps in identifying causes and effects of the problems or issues but also help in planning interventions to resolve some problems and issues.

### Process

- Decide the topic for a cause and effect diagram and invite a group of participants who are interested in the topic for the exercise.
- Facilitate the participants to discuss about an identified core problem. Ask them to define the problem in precise terms. Ask one of them (literate) to write the problem on one big card and ask him/her to place the card at the centre, preferably on the ground. Visual mode of depiction of the problem could be ideal.
- Ask the participants to focus the discussion on the causes of the problem/ phenomenon. As they come up with the causes, note down. Once it appears that there are no more causes to be discussed, ask them whether they could think of other causes. Each cause to be written on a separate card.
- Place the cause cards on one side of the problem card.
- Similarly, ask the participants about the impact of the problems. For each impact use a separate card. Place these cards on the other side of the problem card.
- Ask the participants whether there are any links between the different causes and effect cards indicate the link by drawing arrows using chalks/ lines.
- Listen to the discussions participants engage in and note down the points.
- Once the diagram is ready, ask the participants to have a look and make alterations if required. Note down the diagram on a sheet of paper with details.
- Interview the diagram, ask questions on aspects about which one has doubts or want to get more in-depth understanding.
- Thank the participants for their active participation and time.



### Reporting format

Topic	Information
Problem/ Issue	What is the problem? This will be identified during hazard and vulnerability assessment
Effects	What are the effects of the problems? Cluster the effects
Causes	What are the causes for the problems? Cluster them
Potential Solutions	
Potential actors/partners	

### Tool 10 Trade in and Trade out

There are goods and services which are produced in the village of which some of them are consumed locally and some are sold out and at the same time, few goods and services are coming to the village. It is very important to understand the goods and services come in and go out of the village both in normal situation and during disaster situation.

This tool helps the community in getting a sense of the aggregates of items that are going out of the village and those that are coming into the village. Further, the facilitator can also point out any anomalies present among those items going out of the village and coming into the village like paddy going out at a low price but rice coming in at a high price. Similarly, the items for which there is scope for local value addition can also be pointed out.

#### Process

- This process is some what similar to that of mobility mapping / service and opportunity mapping exercise.
- The community is asked to list all the items that are purchased and sold by the villagers separately, including services provided by outsiders to the villagers and services provided by villagers to persons/institutions outside the village.

- Draw a circle depicting as village on the ground. List all the item including services coming the village on each card (use similar colour card) from outside and another colour card for items and services produced or obtained in the village.
- The participants are then asked to reflect on each item purchased or sold and come up with details
- Ask the participants to list all the item that go out of village and the quantities of products/ services. Write them in different coloured charts. Ask the participants to reflect the exercise.
- Repeat the exercise, in context to disaster situation in the village.
- For items that are purchased/sold by a large number of households or purchased/sold in larger quantities and those items that are a recent addition to the list of purchases/sales and are growing need to be further analysed for the preferred place of purchase/sale, costs associated with making the purchase or sale and the terms and conditions associated with the purchase or sale.
- Care should be taken to include even small items of purchase, as all these small purchases by households can add up to a sizeable quantity for intervention.
- Similarly, the information stated by the participants during the use of the tool needs to be triangulated with the household status obtained in social map, and clarifications for any discrepancies need to be sought.
- Probe the participants on how they cope with goods and services needed for the communities during disaster situation. Ask them solutions for improving access to the needs of the community, especially the vulnerable.

### Reporting Format for the exercise

Village:		Block & District:						
Date of exercise:								
Participants:								
Facilitated by:								
Traded-in (Items coming into the village, including services obtained by villagers from outside)								
Item	HH purchasing	Unit of reporting	Periodicity of purchase	Quantity purchased by HH per period	Quantity purchased by HH per year	Rate per unit (Min & Max)	Total purchases by village	Season of purchase

Traded-out (Items going out of the village, including services provided by villagers to outsiders)								
Item	HH selling	Unit of reporting	Periodicity of sale	Quantity sold by HH per period	Quantity sold by HH per year	Rate per unit (Min & Max)	Total sale by village	Season of sale

**Tool 11 Dream/Vision Mapping**

Vision map is used to depict the future in line with the aspirations of the local people. Helping people to think about the situation in which they would like to be in the future should be the starting point of any process for livelihood development. It provides the reference point around which they can assess options and make the choices that will most effectively contribute to their livelihood development. The process of visioning helps people to think, not about specific actions and possessions they will have in the future, but about the conditions that these actions will create for them.

People’s visions for the future will reflect not just their own personal aspirations for improvements, but also their wider priorities. The process of visioning requires facilitation to encourage people to develop visions that are challenging, and based on people’s strengths and past success rather than their problems and weaknesses, both for people and for the community as a whole.

**Purpose of vision mapping**

- To develop challenging visions for the communities living in hazard prone areas which are based on their own strengths and past successes;
- To build consensus for change, within common interest groups and within the community;
- To identify those visions that is shared by the community and requires community action to achieve.

## Process

- Everybody has different visions for the future. Building visions first of all with groups of people with common interests and common characteristics creates an environment where people have the confidence to participate and can reflect on both their individual, and the group's, strengths and potential.
- Working in small peer groups can also build a recognition that people have common elements in their visions and a feeling that they are not a lone voice. This can help to create confidence and build capacity to articulate ideas and aspirations and this in turn can play an important role in enabling people to participate effectively in larger meetings, such as community meetings.
- The community visioning process, where representatives of these groups participate, should be focused on addressing those elements of the visions of different groups that are common and that either affect, or require action by, the community as a whole. These may include actions such as health care, access to education, sanitation facilities or local infrastructure.

## Group Vision Meetings

- Prepare the facilitators
- Identify & finalize the common interest groups
- Finalise the venue, time, tools and agenda and notify the community
- Help them to analyse their own strengths and past successes, best experiences and enabling conditions.
- Discuss their aspirations and dreams for the future
- Draw out the broad visions of the situation where they would like to find themselves in the future.
- Discuss the elements of each vision – get people to describe that situation in as much detail as possible, and to describe the characteristics of their vision.
- Summarise, review & take notes

## Community Vision Meetings

- Organize the community level meeting with the representatives from the common interest groups
- Ask the common interest group members to present their visions.
- Give people time to look at and understand each others' visions.
- Identify with people the common elements in the visions of the different groups.
- Based on the common elements, build the community vision tree.
- Review the community vision and discuss the key elements of the vision.
- Once it is complete, celebrate the community vision.

### Strategies need to be developed:

- To explore the possible ways of achieving the visions with people;
- To outline achievable actions that the groups/community can take to pursue the vision;
- To give a sense of ownership and responsibility to the community about achieving their visions.

### Characteristics of a Good Strategy Development Process

- High level of community/stakeholder contribution: we are just facilitating;
- Building on their strengths and understanding their own capabilities;
- Realistic, practical and consistent with culture and norms;
- Results in the development of clear options for people to assess;
- Identifies steps and individuals who can take responsibility for actualizing them.

### Process Guidance

#### *Pre-meeting preparation:*

- Identify groups to undertake strategy development process;
- Prepare the facilitation team;
- Consider the specific vision that will be addressed;
  - Understand livelihood diversity/resources/access to resources,
  - Outline people or group strengths,
  - Outline past successes & other revise scoped opportunities,
  - Outline livelihood linkages,
  - Outline support mechanisms and services for that livelihood,
  - Outline the factors that have helped and inhibited livelihood change.

#### *In the meeting*

### Objectives

- To find each component of the vision/simplify/breakdown.
- To recall/develop with the group the vision tree.
- To explore the pathways for achieving for each vision in a focus group meeting.

### Process

- Focus on a specific vision that has been developed for the group or community;
- Help them to describe the vision in more detail – elements, components, characteristics;
- Explain that each of these components represents the end of a pathway;
- “Walk” participants down each of these pathways, describing what they meet along the way:
  - What have you got that can help you travel along the pathway?– people’s contributions, capacities, strengths;

- Different “ways of travelling” down the road – the choices / the elements in each strategy – consider the scoping of potential exercise for ideas about different options for livelihood development;
  - What can help you on your journey? – enabling factors;
  - Who can you travel with? - identify key stakeholders to be involved;
  - What obstacles & threats are you likely to meet?
  - Who or what can help you deal with those obstacles and threats? – service providers, supporting agencies;
  - Why haven’t you already made this trip? – highlight the factors inhibiting changes now;
  - What are you leaving behind? – What are the risks associated with undertaking this journey?
- Use people’s past successes/highlight their current strengths in order to build confidence of the group in their abilities;
  - Use past failure / problems to illustrate obstacles and threats;
  - Once the groups have analysed the different choices that they have to make to achieve their vision encourage them to share these with their friends and families;
  - The responsibility for moving forward should rest with the people themselves

### Structure of the Tree

The tree is made up of three elements:

- i. Roots: The strengths of the people.
- ii. Trunk: The conditions that have enabled success the past and so may be required for success in future.
- iii. Leaves: The visions of people that are based on strengths and past success.

The vision tree should be constructed from the roots the enabling factors to the visions, helping people to appreciate the process they are moving through.



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## Annexure 1

### Check list of Vulnerabilities and indicators

Types of Vulnerability		
Physical/ Material Vulnerability	Social/ Organisational Vulnerability	Motivational/ Attitudinal Vulnerability
<p><b>Environmental factors</b> Forest/Mangroves/ Shelter belts/ erosion, soil quality</p> <p><b>Natural hazards</b> Floods, cyclones, earth quakes, drought etc</p> <p><b>Infrastructure and services</b> Roads, health facilities, schools, communications, electricity, housing etc</p> <p><b>Economic Activities</b> Means of livelihoods, productive and other skills</p> <p><b>Physical Assets</b> Land, water, animals, means of production (access and control issues)</p> <p><b>Human Capital</b> Population, nutrition status, literacy, poverty levels, diseases, mortality etc.</p>	<p>Family Structure (weak / strong) – (Joint/ Nuclear)</p> <p>Leadership qualities and structures</p> <p>Decision making structures (who is left out, who is in, effectiveness)</p> <p>Participation levels</p> <p>Divisions and conflicts: ethnic, class, caste, religion, ideology, political groups, language groups, gender, ability and structures of mediating conflicts</p> <p>Degree of justice, equality, access to political process</p> <p>Community organizations, formal, informal, traditional, governmental, progressive</p> <p>Relationship with government, administrative structures</p> <p>Isolation or connectedness</p>	<p>Attitude towards change</p> <p>Sense of ability to affect their world, environment, get things done</p> <p>Initiative</p> <p>Faith, determination, fighting spirit</p> <p>Religious beliefs, ideology</p> <p>Fatalism, hopelessness, despondency, discouragement</p> <p>Lack of awareness about hazards and their consequences</p> <p>Dependent/ independent (self reliant)</p> <p>Consciousness, awareness</p> <p>Cohesiveness, unity, solidarity, cooperation</p> <p>Orientation towards past, present, future</p>

## Annexure 2

### The VCA Framework

<i>Sector</i>	<i>Vulnerabilities</i>	<i>Capacities</i>
<b><i>Social</i></b>	<ul style="list-style-type: none"> <li>■ Occupation of unsafe areas</li> <li>■ High-density occupation of sites and buildings</li> <li>■ Lack of mobility</li> <li>■ Low perceptions of risk</li> <li>■ Vulnerable occupations</li> <li>■ Vulnerable groups and individuals</li> <li>■ Corruption</li> <li>■ Lack of vulnerability and capacity analysis</li> <li>■ Poor management and leadership</li> <li>■ Lack of disaster planning and preparedness</li> </ul>	<ul style="list-style-type: none"> <li>■ Social capital</li> <li>■ Coping mechanisms</li> <li>■ Adaptive strategies</li> <li>■ Memory of past disasters</li> <li>■ Good governance</li> <li>■ Ethical standards</li> <li>■ Local leadership</li> <li>■ Well-developed disaster plans and preparedness</li> </ul>
<b><i>Physical</i></b>	<ul style="list-style-type: none"> <li>■ Buildings at risk</li> <li>■ Unsafe infrastructure</li> <li>■ Unsafe critical facilities</li> <li>■ Rapid urbanisation</li> </ul>	<ul style="list-style-type: none"> <li>■ Physical capital</li> <li>■ Resilient buildings and infrastructure that cope with and resist extreme hazard forces</li> </ul>
<b><i>Economic</i></b>	<ul style="list-style-type: none"> <li>■ Mono-crop agriculture</li> <li>■ Non-diversified economy</li> <li>■ Subsistence economies</li> <li>■ Indebtedness</li> <li>■ Relief/welfare dependency</li> </ul>	<ul style="list-style-type: none"> <li>■ Economic capital</li> <li>■ Secure livelihoods</li> <li>■ Financial reserves</li> <li>■ Diversified agriculture and economy</li> </ul>
<b><i>Environmental</i></b>	<ul style="list-style-type: none"> <li>■ Deforestation</li> <li>■ Pollution of ground, water and air</li> <li>■ Destruction of natural storm barriers (e.g., mangroves)</li> <li>■ Global climate change</li> </ul>	<ul style="list-style-type: none"> <li>■ Natural environmental capital</li> <li>■ Creation of natural barriers to storm action (e.g., coral reefs)</li> <li>■ Natural environmental recovery processes (e.g., forests recovering from fires)</li> <li>■ Biodiversity</li> <li>■ Responsible natural resource management</li> </ul>

Source: Davis, Haghebaert and Peppiatt (2004).



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