

# RESILIENCE AND CASTE IN ORISSA, INDIA

PROGRESS IN THE HYOGO  
FRAMEWORK FOR ACTION

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## 1.0 Executive Summary

*“A disaster occurs only if a community or population is exposed to the natural hazard and cannot cope with its effects” (ISDR 2010)*

At the World Disaster Reduction Conference in 2005, the Hyogo Framework for Action (HFA) was adopted by 168 countries, aiming to reduce disaster losses by building the resilience of nations and communities. Conceptually, it has many strengths, promoting self-reliance and cost-effectiveness; citizen participation; and integrating disaster risk reduction (DRR) with climate change adaptation (CCA). In practice, it must respond to complexity.

This report examines the situation in India generally and in the state of Orissa – one of the poorest states, and heavily afflicted by natural disasters – more particularly, to gain an understanding of how resilience planning is operating. Both the effectiveness of the priority actions and the building of resilience are assessed in relation to the caste system in India.

The report first introduces the origins of resilience and the caste system, before turning to the state of Orissa to analyse progress towards resilience in terms of the HFA priority actions. Progress is assessed in relation to the overarching theme of caste, before presenting recommendations.

Steps are being taken towards resilience building and, while impact varies, there are some good practices that should be strengthened and extended. There are many challenges facing resilience building in India: the lack of resources coupled with high poverty rates has a major impact, which is heightened by social divisions, such as those along caste lines.

This report presents the argument that the use of such globally formulated frameworks as HFA can neglect important local contexts, and thus that India’s use of such documents must be backed up by a commitment to actively confront the social issue of caste.

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## ACRONYMS

CCA	Climate Change Adaptation
CBA	Cost Benefit Analysis
DM	Disaster Management
DRR	Disaster Risk Reduction
EWS	Early Warning System
HFA	Hyogo Framework for Action
IIRS	Indian Institute of Remote Sensing
INCOIS	Indian National Centre for Ocean Information Services
ISRO	Indian Space Research Organisation
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MFI	Microfinance Institution
MDG	Millennium Development Goal
NEOC	National Emergency Operations Centre
NIDM	National Institute of Disaster Management
NREGS	National Rural Employment Guarantee
NRSA	National Remote Sensing Agency
OSDMA	Orissa State Disaster Management Authority
OBC	Other Backward Caste
SAARC	South Asia Association of Regional Cooperation
SC	Scheduled Caste
SDMC	SAARC Disaster Management Centre
ST	Scheduled Tribe
SCP	Special Component Plan for Scheduled Castes
UNISDR	United Nations International Strategy for Disaster Reduction

### 2.0 Introduction

Resilience has become the emphasis of disaster strategies worldwide. Conceptually, it has many strengths: it takes a positive stance towards fighting disaster impacts; it promotes self-reliance and cost-effective solutions; it advocates the involvement of citizens in decisions making and disaster management. In practice, it must respond to complexity.

This report examines the situation in India generally and in the state of Orissa – one of the poorest states, and heavily afflicted by natural disasters – more particularly, to gain an understanding of how resilience planning is operating.

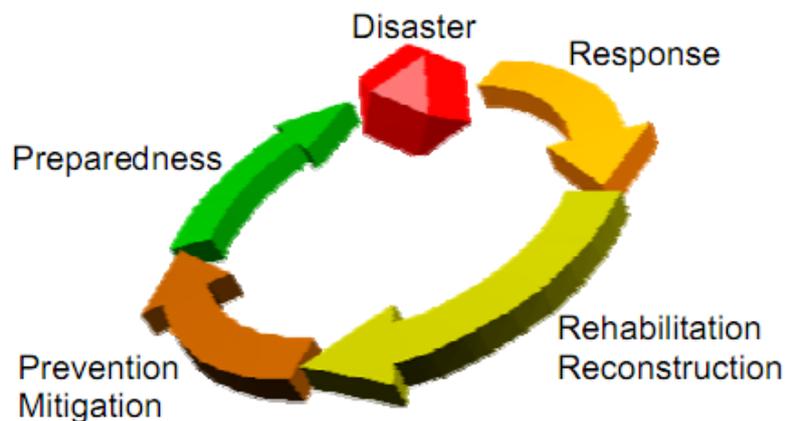
The report is structured thus: firstly the origins of resilience are considered, showing how it emerged from previous disaster management (DM) paradigms. Then the caste system in India will be looked at, which the authors consider to be a key – and often overlooked – context of resilience there. The report then turns more specifically to the state of Orissa, providing information on levels of resilience by working through the objectives stated in one of the key documents of the resilience movement: the Hyogo Framework for Action (HFA). Lastly, recommendations are offered for Orissa, and the authors present the argument that the use of such globally formulated frameworks as HFA can neglect important local contexts, and thus that India's use of such documents must be backed up by a commitment to actively confront the social issue of caste (as well as issues highlighted by the Framework such as gender).

### 3.0 Background

#### 3.1 Disaster Management & Resilience

Disaster management theory and practice has evolved over time from being a reactive process – focused on recovery and reconstruction – to a more proactive one, focusing on improving preparedness. An early disaster management cycle (shown in Fig. 1) is concerned with actions taken pre and post disaster (ASDRC 2005). Prevention and mitigation actions are taken before an event to reduce impacts (e.g. building dams to stop flooding), whilst preparedness focuses on the population being prepared and able to act in a disaster event. Response occurs immediately post-disaster, followed by reconstruction and rehabilitation, where the cycle starts over as prevention and mitigation are implemented in reconstruction.

Figure 1: Disaster Management Cycle



Source: ASDRC 2005

Wisner introduced the concept that in disasters, **Risk = Hazard x Vulnerability**; showing that risk was intrinsically linked to underlying factors, such as poverty and social exclusion, which increase vulnerability (2004:337). However, this simplified notion does not allow for feedback from emergency planning that could reduce risks (such as Early Warning Systems). A fuller understanding of risk can be gained by conceptualising it as the result of the hazard, vulnerability, and deficiencies in preparedness (Vilagran de Leon 2004). Focus thus turned to disaster risk reduction (DRR).

The United Nations International Strategy for Disaster Reduction framework (see Fig. 2) provides an overview of the different facets of DRR (UNISDR 2004). The framework places risk outside the response framework, with the flows indicating that risk cannot be directly reduced: only that early warning, preparedness and response could reduce disaster impact (Birkmann 2006:25).



more easily. Both the effectiveness of the priority actions and the building of resilience will be assessed in relation to the caste system in India.

**Table 1: Hyogo Framework for Action, Priority Actions**

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**Priority Action 1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation**

Countries that develop policy, legislative and institutional frameworks for disaster risk reduction and that are able to develop and track progress through specific and measurable indicators have greater capacity to manage risks and to achieve widespread consensus for, engagement in and compliance with disaster risk reduction measures across all sectors of society.

**Priority Action 2: Identify, assess and monitor disaster risks and enhance early warning**

The starting point for reducing disaster risk and for promoting a culture of disaster resilience lies in the knowledge of the hazards and the physical, social, economic and environmental vulnerabilities to disasters that most societies face, and of the ways in which hazards and vulnerabilities are changing in the short and long term, followed by action taken on the basis of that knowledge.

**Priority Action 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels**

Disasters can be substantially reduced if people are well informed and motivated towards a culture of disaster prevention and resilience, which in turn requires the collection, compilation and dissemination of relevant knowledge and information on hazards, vulnerabilities and capacities.

**Priority Action 4: Reduce the underlying risk factors**

Disaster risks related to changing social, economic, environmental conditions and land use, and the impact of hazards associated with geological events, weather, water, climate variability and climate change, are addressed in sector development planning and programmes as well as in post-disaster situations.

**Priority Action 5: Strengthen disaster preparedness for effective response at all levels**

At times of disaster, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and are equipped with the knowledge and capacities for effective disaster management.

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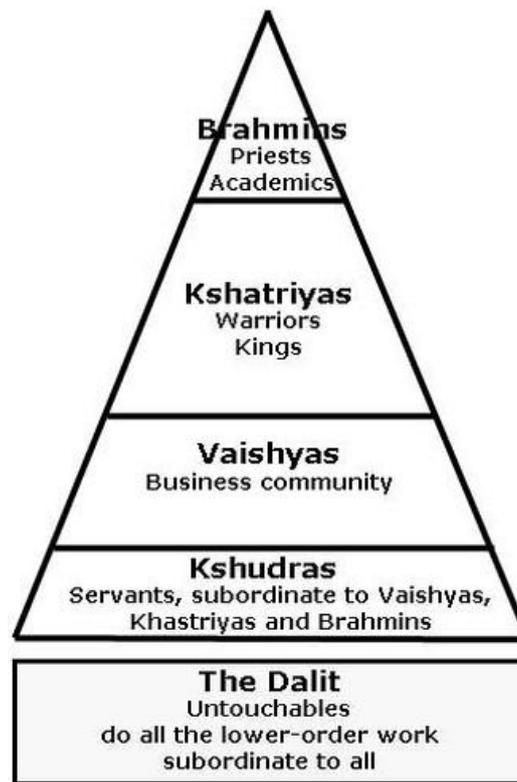
*Source: UNISDR 2007*

### 3.2 Caste

Indian society has been dominated for the last 3,000 years by the caste system. Originally developed by the *Brahmins* (Hindu Priests) it was designed to maintain their superiority over society through a number of levels said to be divinely inspired. Over time these became formalised into four castes or *varnas* (shown in Fig.3): the *Brahmins* or priests, *the Kshatriyas* or warriors and administrators, *the Vaishyas* or commercial class and *the Kshudras* or peasants and farmers (Kethineni & Humiston 2010).

These castes are said to come from various parts of the god *Brahma* with the *Brahmins* originating from the mouth and the other castes from the arm, thigh and feet respectively (Izzo 2005). This structure has evolved into a number of complex, interlinking systems which vary spatially across India, interacting with a variety of economic conditions (Gupta 2009).

Figure 3: Caste system



Source: <http://www.annemariemink.nl/india-project/situation-of-women/>

Underneath the distinct castes is another group called the Dalits, or broken people, often referred to as the untouchables or scheduled caste (SC), reflecting their status in society. For centuries they were excluded from mainstream society and assigned menial and degrading jobs. They also experienced segregation such as being consigned to separate drinking wells and temples (Kethineni & Humiston 2010). Despite protection in the new Indian constitution written in 1947 and the concept of untouchability being made illegal, discrimination is reported in some areas to be at an all-

time high with violence and social and economic boycotts by higher castes a frequent occurrence (Kethineni & Humiston 2010). Doobay and Lyons (2003, in Ray-Bennett, 2009:.2) describe the caste system saying:

*“Centuries of this ‘hidden apartheid’ that has perpetuated discrimination and denial of their human rights, has resulted not only in Dalits representing a disproportionate amount of the poor in India, but also in the creation of numerous other obstacles that hinder Dalit’s ability to change their situation”.*<sup>2</sup>

The caste system is a very resilient system despite its oppressive nature. One of the major reasons for this is how intrinsically embedded it is into society. Over 3,000 years it has become a norm which is supported by the institutional and religious elite of the country and this endures to various extents today despite its illegality (Human Rights Watch 2007). This increases the vulnerability of those in the caste system (Gupta 2009) and particularly but not exclusively the Dalit caste. Any failure to recognise the caste system or any active caste discrimination obviously presents a challenge for resilience building in India.

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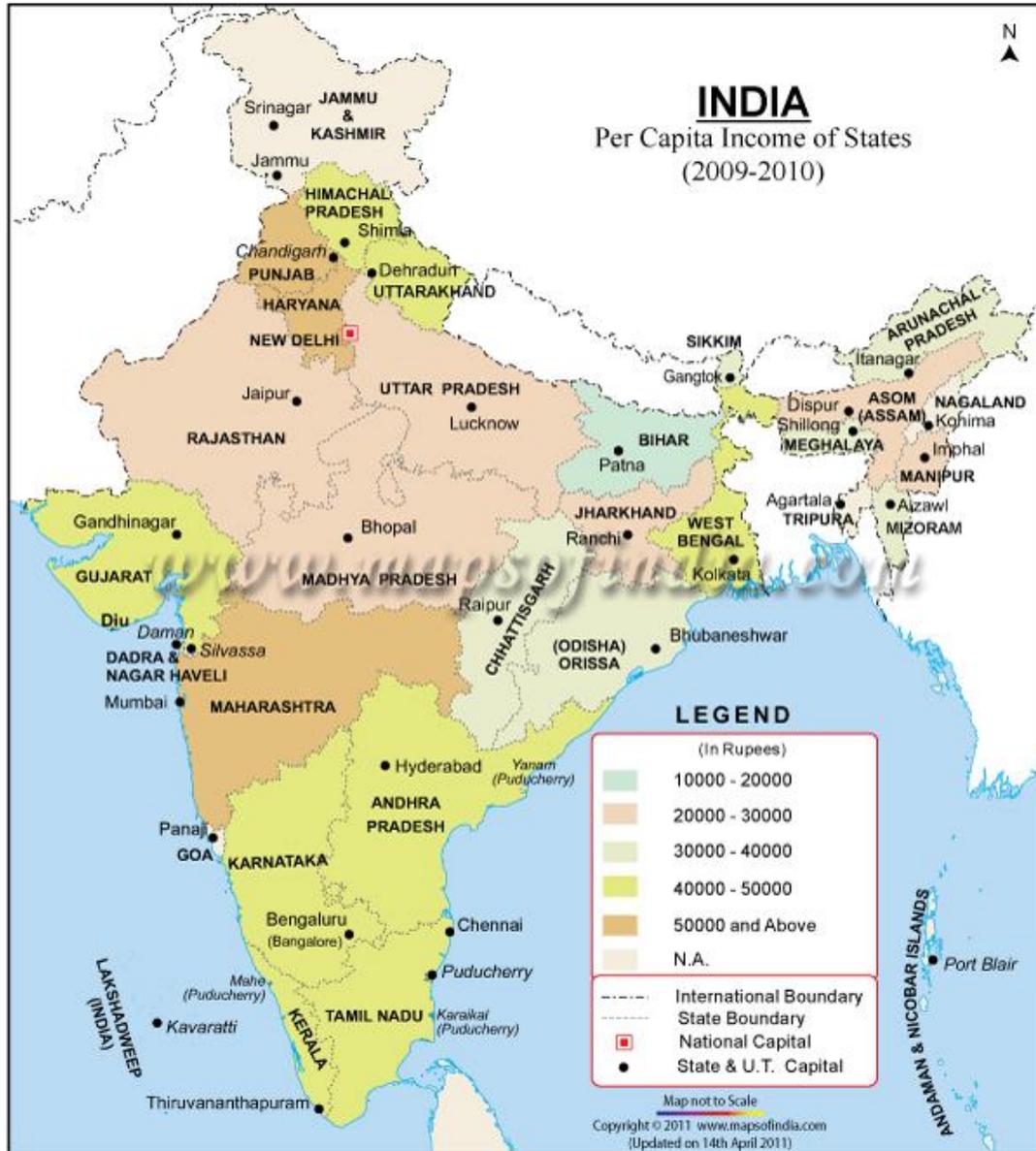
<sup>2</sup> See Appendix B for further details on poverty in India, by caste and tribe.

## 4.0 Findings

### 4.1 Orissa

Orissa, at 62,000 square miles, is the 9<sup>th</sup> largest state in India. It is located in north-eastern India, and has a population just under 42 million (Census India 2011).

Figure 4: Map of India showing per capita income by state



Source: <http://www.mapsofindia.com/maps/india/percapitaincome.htm>

Orissa experiences natural disasters and variable weather, with extremes of drought, wind and rain in different years<sup>3</sup>. Natural disasters have a devastating impact: the supercyclone in 1999 killed 10,000 people, made 750,000 homeless and destroyed many livelihoods. There have also been severe flooding incidences in 2001 and 2003 killing 150 people and affecting over 3 million.

<sup>3</sup> See Appendix C1 and C2 for natural hazard and cyclone risk maps.

## Resilience and Caste in Orissa, India

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Poverty is declining but remains high, and Orissa suffers extreme religious and caste-based violence (Catholic Relief Services 2004). Table 2 shows the high level of poverty incidence, and inequality by caste: average poverty incidence is 48% throughout the state, dropping to 33% for 'others' and jumping to 73% for SCs<sup>4</sup>.

**Table 2: Poverty incidence in rural Orissa by region and social group, 1999-2000**

	Social groups			
Regions	Scheduled Castes	Scheduled Tribes	Others	All
Coastal	66.63	42.18	24.32	31.74
Southern	92.42	88.9	77.65	87.05
Northern	61.69	57.22	34.67	49.81
Orissa	73.08	52.3	33.29	48.01

*Source: Orissa HDI Report*

The practice of segregating villages by caste and religion continues in many areas. Bonds of cohesiveness predominantly exist between members of the same caste and there are many examples of discrimination during natural disasters. During the supercyclone Ray-Bennett (2009) describes how some Dalit families were refused access to a shelter and survived by hugging nearby trees. The lack of community resilience as a result of the caste system increases the vulnerability of everyone: Ray-Bennett also found an example of how some upper caste women would not enter a shelter during the 2003 floods due to the presence of lower castes.

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<sup>4</sup> See Appendix C3 and C4 for further details of poverty in Orissa.

## 4.2 Hyogo Framework for Action

This report will now examine progress in resilience-building in Orissa, in relation to the five HFA priority actions. Caste is subsequently considered as an overarching issue, in section 4.3.

### 4.2.1 Ensure the Disaster Risk Reduction is a national and local priority with a strong institutional basis for implementation

Plans have been formulated on the national level, but the size of the country requires that they are implemented in a decentralized fashion by State Government. However the links between these are not strong, so despite India's National Disaster Management Act (AIDMI/Concern Worldwide 2010) being established in 2005, no new DM authorities have appeared in states. Only Orissa and Gujarat have authorities, both set up previously as a response to the 1999 supercyclone and the 2001 earthquake respectively (AIDMI/Concern Worldwide 2010). From the state level there is too much focus on macro-level assessment, and despite local government having responsibility for *"carrying out relief, rehabilitation and reconstruction activities in a post-disaster situation"* (Srivastava, 2011: 8), this level has neither the resources nor legislative capacity to achieve resilience (Swalheim & Dodman 2008). There is also the problem of relationships between local governments – the mayor of Bhubaneshwar has pointed out that his city's resilience depends upon that of the rest of the Orissa State (PreventionWeb 2011). Further to this we must consider the role of NGOs – another type of institution which has the potential to improve governance in India. Their importance is highlighted by the Disaster Management Act (Bhatt 2007).

### 4.2.2 Identify, assess and monitor disaster risks and enhance early warning

Table 3 overleaf shows organisations utilised by the government for hazard information collection and compilation. The government has also established a National Emergency Operations Centre (NEOC) with equipment to sense and assess impending disasters, initiate EWS and begin response activities, with plans to replicate this resource at state level. Furthermore, a Vulnerability Atlas, intended to explain the differential effects of disasters, is being compiled, so risk assessment will extend beyond the physical hazard (Goswami 2008). Information is being gathered, but access to this information is complicated: much of it is online (e.g. information for schools and hospitals can be found on <http://www.safecommunities.info/index.php>) which makes it easily accessible only to internet users. It is on this level, of "last mile connectivity", that more work is needed (Srivastava 2011:11).

Table 3: Technical organisations

Technical Organisation	Hazards monitored
India Meteorological Department	Cyclones, Earthquakes, Rainfall
Central Water Commission	Floods

Technical Organisation	Hazards monitored
Geological Survey of India	Landslides
Ministry of Agriculture	Drought
National Spatial Data Infrastructure	Various
Indian National Centre for Ocean Information Services (INCOIS)	Various
Indian Institute of Remote Sensing (NRSA)	Various
National Remote Sensing Agency (NRSA)	Various
Indian Space Research Organisation (ISRO)	Various

*Source: Srivastava 2011*

### 4.2.3 Use knowledge, innovation and education to build a culture of safety and resilience at all levels

Education has two functions, often considered separate: firstly, to inform the entire population of hazards; and secondly, to create a culture of disaster research which will foster expertise within India. The first involves introducing DRR and climate change adaptation (CCA) issues into school curricula and citizen education (Local Governance Network; SEEDS 2010). It links to issues in point 4.2.2 with EWS, where we see that distribution of information remains limited, in this case to those in formal education of some kind. It needs to reach further. The second will take time but has begun, with India Disaster Knowledge Network, training for teachers, university courses and planned Hazard Specific Centres of Excellence (Goswami 2008; Srivastava 2011: 15). A Disaster Management Centre (SDMC) was set up in 2006 in New Delhi's National Institute of Disaster Management, mandated to exchange research, information, advice and training on disasters with seven other countries in the region, so clearly India is important to the international disaster research community already (the South Asia Association of Regional Cooperation - see <http://saarc-sdmc.nic.in/index.asp>). However, concerns exist that current study focuses too much on the technical aspects of risk and that more could be done in the fields of cost benefit analysis (CBA) and of vulnerability, as showing the links between poverty and risk is crucial to ensuring commitment to both (Global Assessment of Risk: Asia 2009).

### 4.2.4 Reduce the underlying risk factors

This report considers underlying risk factors of environmental, social and economic nature. Environmental factors are difficult to combat but can be lessened through good practice such as the use of building codes and regulations. Such things do exist in Orissa, with guidelines to "build back better" after disasters, but in reality funds do not exist to enforce codes or assist re-building, and so people will build where they can using the materials available to them, irrespective and often unaware of risk (Goswami 2008, Srivastava 2011). Buildings already standing can be improved upon, and although state government does not have the resources to retrofit all buildings in Orissa, it

could begin with hospitals and schools – important to reducing social risk. SEEDS have produced work on the prices of school retrofitting, which they calculate would cost \$3200 million for the entire country (SEEDS 2010). Economic underlying risks must also be combated and this can be a question of attitude. Many still consider long-term development and poverty alleviation to be a separate issue to DM, despite the clear links between the two. Reducing disaster risk will help reduce poverty but it is also imperative to DRR that India combats its chronic problem of poverty. According to the Orissa Human Development Report, “poverty in Orissa is overwhelmingly a rural phenomenon” (2004:21). As we look at consumption patterns we see rapidly growing inequity between the poorer rural population and the relatively more wealthy urban communities. This has led to much development in the rural areas of the State, and Table 4 summarises some current policy practice.

**Table 4: Social development policies and organisations**

Policy/Organisation	Activity
National Rural Employment Guarantee (NREGS)	- To ensure food security in rural households
Jawaharlal Nehru National Urban Renewal Mission (JNNURM)	- City development to stimulate local economies. - Involving local communities
National Rural Health Mission	- Rural public and primary health care
Swarna Javanti Shahari Rojgar Yojana	- Self employment through micro-enterprise set up - Development of women and children in urban areas
National Social Assistance Programme	- National old age pension scheme - National family benefit scheme
Indira Awas Yojana	- Housing for Scheduled Castes, Scheduled Tribes, bonded Labourers and others living in poverty (rural focus)
Bharat Nirman	- Rural irrigation, road connectivity, housing, water supply, electrification and telephony
Sarva Shiksha Abhiyan	- Elementary education (rural)
Rajiv Awas Yojana	- Urban housing scheme for the poor
The National Institute of Social Work and Social Sciences	- Entrepreneurship work aimed at the emancipation of the disadvantaged
Ruchika Social Service Organisation	- Education of children living in urban slums, emergency assistance to families living in slums
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	- Environmentally sustainable, “safety net” employment service for rural poor

Source: Srivastava 2011

However, variance also exists within the urban setting where slums house around 40% of the population and are growing, as rural poverty pushes people into the city. Table 5 shows more detail of the growth of slums in Bhubaneswar, the capital of Orissa (Rout 2008). Those living there are at greatest risk of the effects of climate change (Swalheim & Dodman 2008), therefore urban work is also crucial (shown in Table 4).

**Table 5: Growth of slums in Bhubaneswar**

Year	Number of Pockets	Households	Annual Rate HH Growth	Population	Annual Population Growth Rate
1971	7				
1981	23				
1989	70	17,175		86,901	
1991	86	21,003	11.14	110,112	13.35
1993	101	24,318	7.89	117,000	3.13
1999	145	30,000	3.89	200,000	11.82

*Source: Rout 2008, from Bhubaneswar Development Authority (Cited in Environmental Management Plan Bhubaneswar; OSPCB; 2003)*

The key point here is that people do not necessarily want disaster work that pushes development forwards in the immediate aftermath, and are more likely to support longer term slower impact poverty alleviation, and so the links between these two types of work must be stressed (Huairou Commission 2010).

### 4.2.5 Strengthen disaster preparedness for effective disaster response at all levels

Planning exists from the national level (e.g. the National Emergency Communication Plan) (Goswami 2008). Policy is described as “*well established*”, but ultimately not fully adhered to (Srivastava 2011: 23). The states, with their limited resources, use financial assistance to meet people’s basic needs, rather than compensate losses (Orissa Human Development Index 2004: 40), and tend to focus too often on generic assessments, missing the details of disaster risk (Srivastava 2011: 26). At the community level, once again, we see the work of NGOs like Gram Vikas who promote the combat of chronic development problems: the issues that face people daily but will aid their disaster resilience (Todd & Palakudiyil 2004). There is also evidence of state level objectives such as Orissa State Disaster Management Authority (OSDMA), working with the UN to try and promote community contingency planning (OSDMA & UN).

### 4.3 Overarching Issue of Caste

The Hyogo Framework is not limited to these objectives: it also allows overarching themes as discussed in section 3.1. Bhatt (2007) considers recommendations around one of the cross-cutting themes: that of gender. Gender is an important context to consider in disaster work, as is poverty and the urban/rural divide (discussed above in 4.2.4). But it has been our objective to consider a different perspective – the perspective of caste. The entrenched nature of caste makes it crucial to understanding vulnerability in India. Many works have stressed its continued influence on people's lives (Gupta 2009; Kapoor 2007; Rew & Rew 2003: 216; Thorat & Gupta 2009) and the inequities suffered because of caste are exacerbated by disasters. The Orissa Human Development Report shows how SC and ST minorities are among the most vulnerable members of the population throughout the state, looking at levels of poverty and nutrition, and claiming that the supercyclone disproportionately affected the Dalit population (Orissa Human Development Report 2004). Thorat and Gupta (2009) call for disaggregation of disaster data on caste bases to avoid the practice of “caste blindness” - which intensifies such problems by dismissing them (Gill 2007).

This is where we are concerned that the Hyogo Framework and other global understandings of resilience may not suffice in India, where this highly political issue remains under-researched and is not always considered.

### 5.0 Conclusion & Recommendations

Steps are being taken to address and build resilience by central, state and local government, international and civil society organisations. Impact varies, but there are good practices that should be strengthened and extended. There are many challenges facing resilience building in India, and more specifically, Orissa. The state suffers multiple hazards which are increasing in frequency and intensity. The lack of resources coupled with high poverty rates has a major impact, which is heightened by social divisions, such as those along caste lines.

In light of the findings of this report, the following recommendations are proposed.

1. Financial resources must match the level of responsibility at state, district and local levels. Cost effective solutions to DM must be sought as resources are scarce.
2. Governance must be improved. Officials must be educated to consider disasters an impediment to development and the achievement of Millennium Development Goals (MDGs). Proper cost-benefit analyses (CBAs) must be conducted in order to understand the relationship between vulnerability and poverty. Land use planning and building codes must be effective and enforced.
3. Both structural and non-structural steps must be taken to make existing buildings disaster-resilient, with hospitals and schools – as key components of community capacity – made a priority. In addition, furniture and equipment can be arranged in ways that prevent injury and leave escape routes accessible. Flammable and toxic substances must be stored safely (SEEDS 2010).
4. The mainstreaming of DRR and CCA in school curricula must be extended to all primary and secondary schools, using analysis of experienced hazards as case study material. DM plans should be updated inclusively, consulting teachers and students. Restoring routine education promptly after disasters can aid children's psychological healing (SEEDS 2010).
5. Rural poverty must be addressed in order to slow rural-urban migration. The expanding urban slums adversely affect DM: plans must constantly evolve to account for rapid population growth. Job creation in areas of DRR and CCA in rural and urban communities can address unemployment, poverty and be advantageous for resilience.
6. Community based adaptation should be adopted, utilising the community's own knowledge and perceptions to define their vulnerabilities and needs, and develop solutions. This is cost effective and sustainable as it is community-managed (Swalheim & Dodman 2008). Communities should be assisted in areas such as hazard and vulnerability mapping, awareness of rights and entitlements, search and rescue and first aid training, etc.

7. Locally embedded institutions are more likely to be accepted than imposed structures and are therefore more effective. Programmes must fit the social and cultural context of individual communities, and progress at an appropriate pace (AIDMI/Concern Worldwide 2010; Rew & Rew 2003). Organisations already working in communities may possess suitable resources.
8. The weak insurance culture must be addressed. Compensation currently only covers basic needs, not all lost assets. Financial risk sharing must be cost effective and inclusive, such as community emergency funds. Microfinance institutions (MFIs) can help people protect themselves and their assets in disasters, by offering risk-mitigating products such as savings and micro-insurance. However, it is essential that MFIs prepare for the impact of disasters on themselves as well as their clients (FDC 2007).
9. It is imperative that the excellent national level EWS reaches the state and local level. Information must be accessible in medium and content.

Vulnerability is the *“most important link between hazards and disaster risk in Orissa”* (Global Assessment of Risk 2009:29), and therefore sustainable DRR can only be achieved in conjunction with long term poverty reduction.

The effect of caste on resilience must be recognised and acknowledged at all levels of DM and resilience building. Twigg (2009) suggests that new thematic areas can be created in HFA, as explored by Plan UK with regard to child rights. The authors advocate that caste should be a thematic area that cuts across the HFA priority actions. There must be increased representation of lower caste and vulnerable groups at all levels of DM, and advocacy in DM legislation. Data must be disaggregated by caste in order to fully understand the unique vulnerabilities faced by different groups. Preparedness and contingency exercises must include vulnerable groups. Training and education must include all societal divisions. One Indian-based NGO, Gram Vikas, (Todd & Palakudiyil 2004) applies an all-inclusive, consensus building principle to projects. Development projects will only take place when all community members are involved and agreed, therefore the onus is on the community to get everyone ‘on board’ so they can benefit. The replication of this principle should be sought, but it is recognised that it is a slow process.

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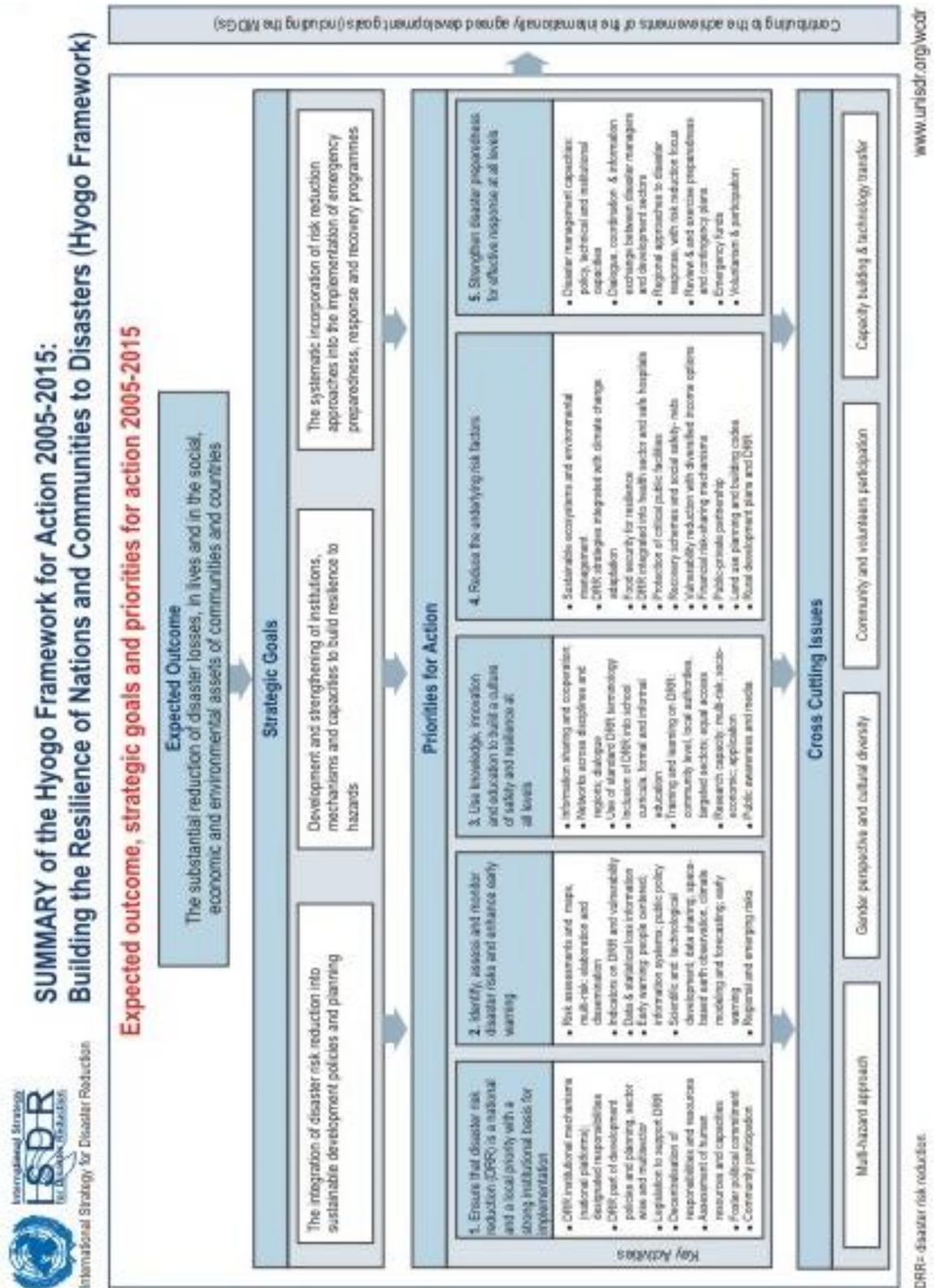
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7.0 Appendices

7.1 Appendix A: Resilience



Source: UNISDR 2011

## 7.2 Appendix B: Caste

### Appendix B1: Caste and Community profile of ‘below poverty line’ population in India, 1999-2000

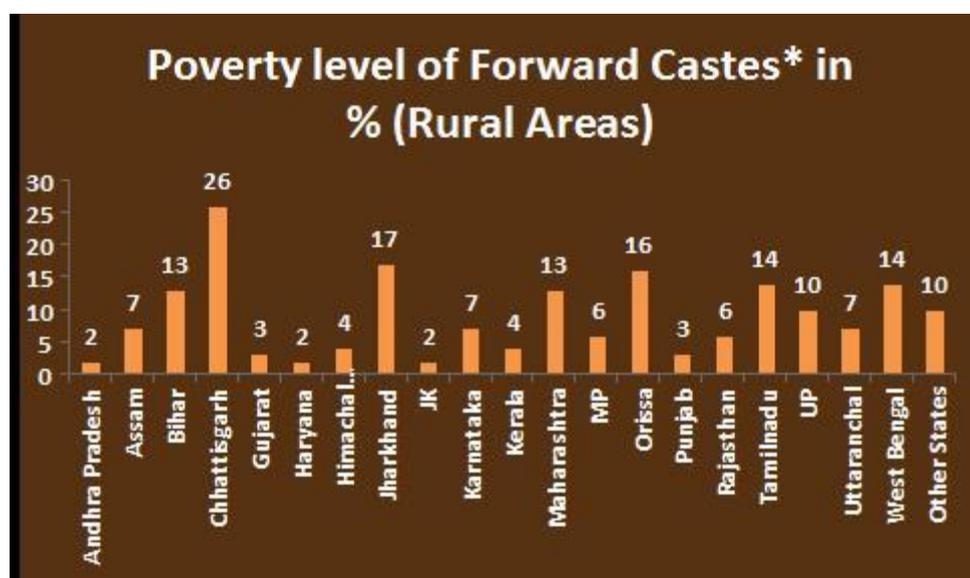
**Caste and Community Profile People below poverty line in India**  
Based on NSSO 1999-2000

Caste & Community Groups	Rural	Urban
Scheduled Tribes	45.8	35.6
Scheduled Castes	35.9	38.3
Other Backward Castes	27.0	29.5
Muslim Upper Castes	26.8	34.2
Hindu Upper Castes	11.7	09.9
Christian Upper Castes	09.6	05.4
Upper Caste Sikhs	00.0	04.9
Other Upper Castes	16.0	02.7
<b>All Group</b>	<b>27.0</b>	<b>23.4</b>

**Note-** NSSO – National Sample Survey Organisation  
**Below poverty line** – A Person who spends below Rs.327 in Rural Areas & Rs.454 in Urban areas Per Month Rs.40 = 1\$  
**Upper Castes** Include all Castes that are not either SC/ST or OBC  
**Scheduled Castes** - SC a term used officially by the Indian Constitution – currently terms like *dalits*, is used by people from these caste groups, Gandhi used *Harijans*  
**Scheduled Tribes** - ST a term used officially by the Indian Constitution– to refer to people of various Indigenous people in India also called *Adivasi*  
**Other Backward Castes** - OBC the term used under Mandal commission report, to refer to caste groups that are also lower strata of Indian society

Source: [http://wapedia.mobi/en/Reservation\\_in\\_India](http://wapedia.mobi/en/Reservation_in_India)

### Appendix B2: Poverty levels of ‘forward castes’ in rural areas of India, by state

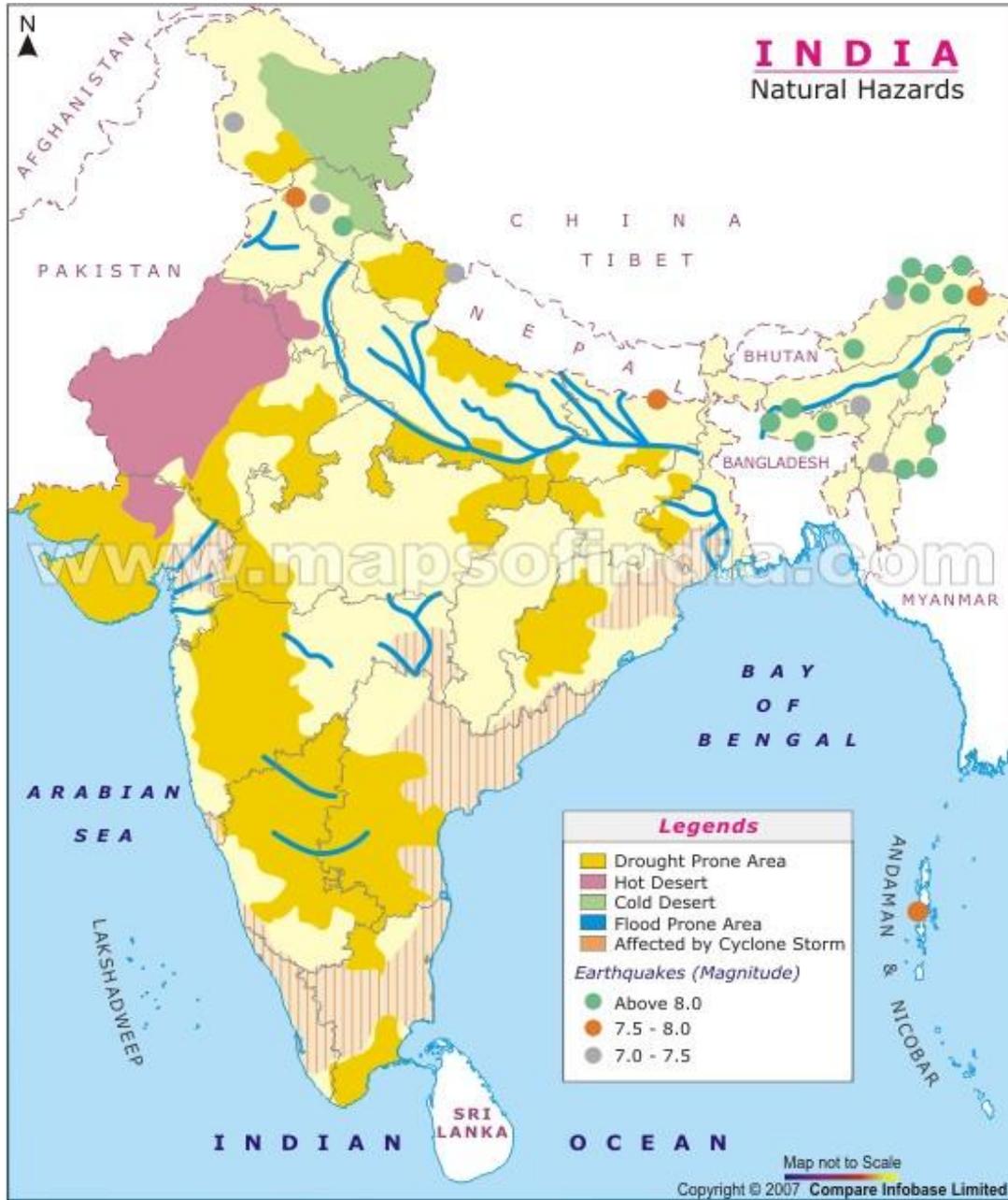


Note: ‘forward castes’ include all except scheduled and backward castes

Source: [http://uk.ask.com/wiki/Forward\\_Castes](http://uk.ask.com/wiki/Forward_Castes)

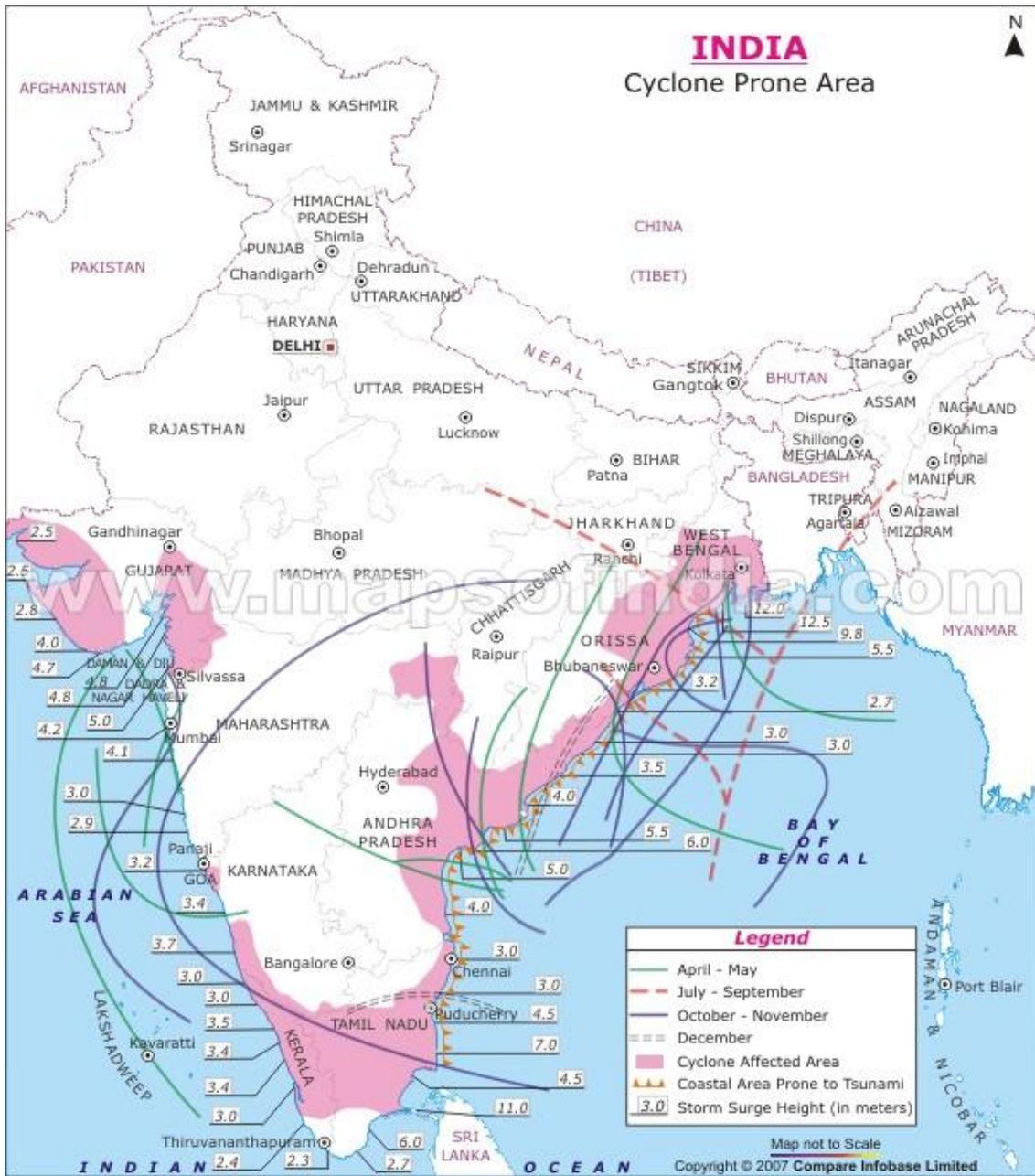
7.3 Appendix C: Orissa

Appendix C1: India Natural Hazards Map



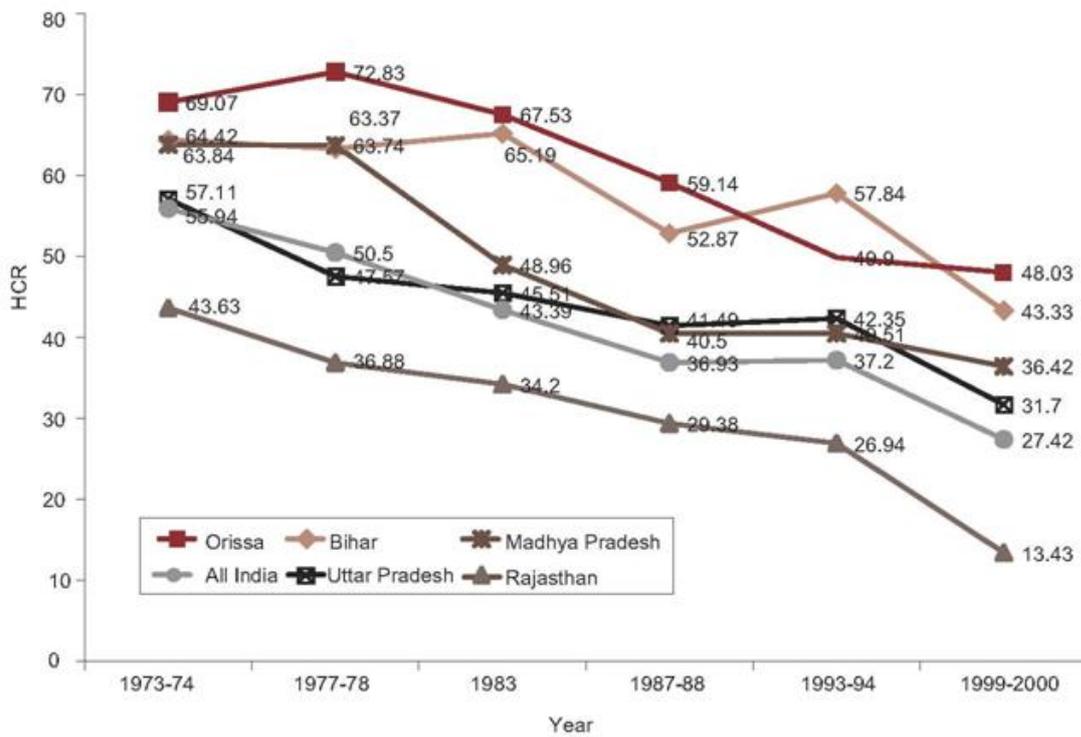
Source: <http://mapsofindia.com/maps/india/natural-hazard.htm>

Appendix C2: India Cyclone Prone Areas Map



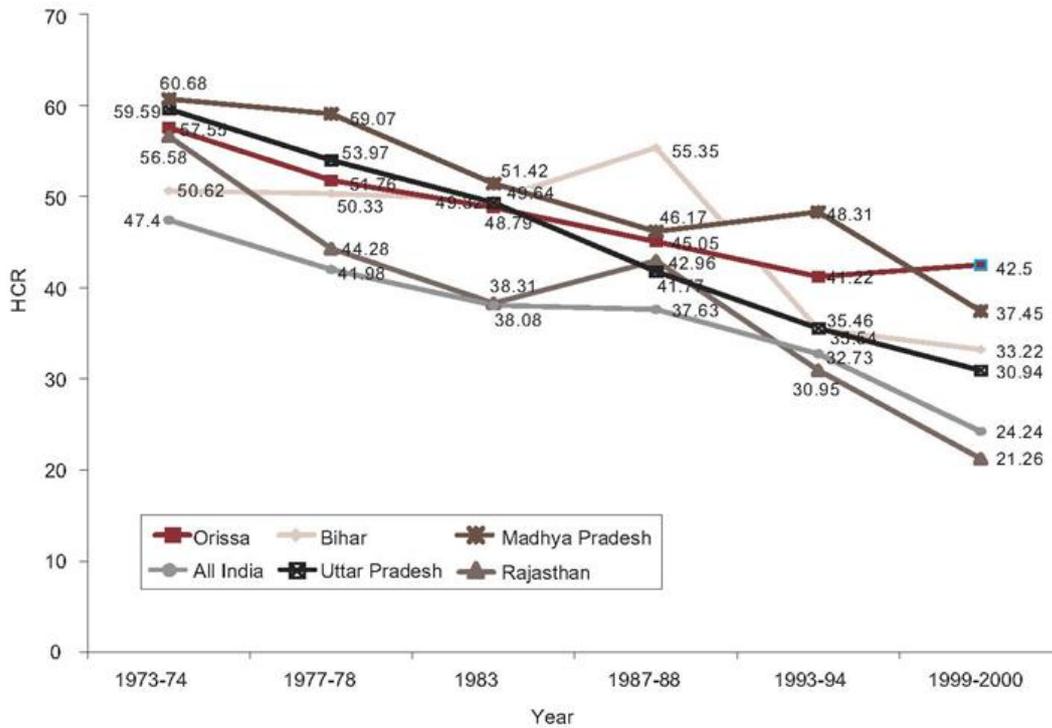
Source: <http://mapsfindia.com/maps/india/cyclone-prone-areas.html>

Appendix C3: Trends in rural poverty in Orissa



Source: Orissa HDI Report 2004

Appendix C4: Trends in urban poverty in Orissa



Source: Orissa HDI Report 2004