



Sphere India

National Coalition of Humanitarian Agencies in India

NATIONAL REPORT ON

Malnutrition Risk Reduction and Nutrition in Emergencies in India



Disclaimer:

The findings, interpretations and conclusions expressed herein are drawn from the secondary information published by different Government and Non-Government sources as quoted in different places, Collation of information from different State Governments and consultation process followed with experts in the field of Nutrition and Emergency Management. Efforts have been made for the accuracy of the data and information reported, however, the users are advised to check with concerned agencies before making decisions based on the information provided in this report.

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It's important to have special initiatives for **NUTRITION IN EMERGENCIES IN INDIA** which is a missing practice in most of disaster response programs in India.



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Foreword



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NDMA's vision is to build a safe and disaster- resilient India by developing a holistic, pro-active, multi-disaster and technology driven strategy for disaster management. Community based management, capacity development, learning from past experiences, cooperation with different actors and coordination in order to bring a multisectoral synergy during disaster response are the five areas focused under the vision for better management and response mechanism.

Food and nutrition security worldwide is recognized as a human right and a critical ingredient for economic, social and human development. We know that during emergency situations, when a disaster affects a region, the reduction in nutrition availability is directly related to number of precious human loss.

Increasingly complex humanitarian crisis situations require emergency preparedness, rapid response, capacity-building of all actors involved and sound partnerships with governments, UN agencies, NGOs and communities. This report are aimed to bring stakeholders (Government and Non-Government), working on Emergencies and Nutrition issues together on a single platform, build a common understanding among them for Malnutrition Risk Reduction and Nutrition in Emergencies in India. The overall aim is to develop a collaborative roadmap of action for timely, coordinated and effective action through improved understanding of food and nutrition needs during emergencies.

Nutrition in emergency has been an important emerging area where all stakeholders have to work jointly. The work initiated by Sphere India and welthungerhilfe is very much appreciated and will help in establishing new mitigation protocols and thus making our country resilient to disasters.

I, therefore urge all the humanitarian and cooperating partners, non-government organizations and civil societies, academicians, political and traditional leaders, and other key stakeholders to rally behind this efforts and foster partnerships with shared value in addressing this concern through concerted action

New Delhi

24th July 2014

(Dr. Mujaffar Ahmad)

Foreword

All Nutrition actors in India gears up to strengthen the implementation of effective nutrition interventions during crisis situations culminating from disasters. Primary objective is to contribute to the reduction of nutrition-related morbidity and mortality during emergencies.

Children, pregnant and lactating are considered to be more at risk when humanitarian assistance is lacking or inadequate during emergency situations. Infant feeding during emergencies, treatment and management of severe acute malnourished children is crucial when these services are not provided to them they are at imminent risk of dying, and of never achieving their full growth and psychomotor potential.

Ideally, a strategy for nutrition in emergencies, detailing when to intervene, and with which responses, should be developed prior to the onset of the emergency as part of emergency preparedness planning.

It is important to assess the situation to understand the severity, scale, and causes of severe malnutrition before the response. Nutrition interventions have to be designed based on the type of nutrition crisis, its severity and causes, as well as an understanding of the context and response capacity.

Climate change, natural disasters, gaps in nutrition and health systems pose serious challenges for under-nutrition especially in high burden states and during emergencies the already existing weak coping mechanisms fails, as a result high morbidity and mortality rates shoots up in the affected areas. Despite many programs and schemes under nutrition is worryingly high, only around 5% of Indian children with severe malnutrition have access to treatment.

Public health nutrition in emergencies is still not well developed and practiced in India. There are not many trained on how to treat and manage children with acute malnutrition in India. Looking at the burden of malnutrition which exacerbates severely during emergencies warrants a unified response from all health and nutrition players to contain the emergency situation: this requires adequate resources both financial as well as trained human resource to address nutrition in emergencies.



Dr. Kamal Raj
Welthungerhilfe

New Delhi
22nd July 2014

Abbreviations

ACF	Action Contra La Faim
BCC	Behavior Change Communication
CASA	Church's Auxiliary for Social Action
CBO	Community Based Organization
CDMASS	Center For Development And Disaster Management Support Services
CMAM	Community Based Management of Acute Malnutrition
CSO	Civil Society Organization
DCA	Dan Church Aid
DLHS	District Level Household and Facility Survey
DRR	Disaster Risk Reduction
EFICOR	Evangelical Fellowship of India Commission on Relief
ENA	Emergency Nutrition Assessment
ERM	Emergency Response Mechanism
FAO	Food and Agriculture Organization
FSL	Food Security and Livelihood
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
HRVA	Hazard Risk Vulnerability Assessment
IDF	Integrated Development Foundation
IEC	Information Education Communication
IFAD	International Fund for Agricultural Development
IGSSS	Indo-Global Social Service Society
IMR	Infant Mortality Rate
IYCF	Infant and Young Child Feeding
KAP	Knowledge Aptitude Practice
MAM	Moderate Acute Malnourishment
MMR	Maternal Mortality Rate
MOHFW	Ministry of Health and Family Welfare

MRR	Malnutrition Risk Reduction
MWCD	Ministry of Women and Child Development
NCA	Nutrition Causal Analysis
NDMA	National Disaster Management Authority
NFHS	National Family Health Survey
NGO	Non Governmental Organization
NIE	Nutrition in Emergencies
NIN	National Institute of Nutrition
NIS	Nutrition Information System
NRC	Nutrition Rehabilitation Center
SAM	Severe Acute Malnutrition
SDMA	State Disaster Management Authority
SHG	Self Help Group
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SOP	Standard Operating Procedure
SQUEAC	Semi-Quantitative Evaluation of Access and Coverage
UN	United Nations
UNICEF	United Nations Children's Fund
WASH	Water Sanitation and Hygiene
WFP	World Food Program
WHH	Welthungerhilfe

Overview

This report on Malnutrition Risk Reduction and Nutrition in Emergencies in India is an outcome of the collaborative advocacy processes of Sphere India, National Coalition of Humanitarian Agencies in India in association with NDMA, Govt. of India, Welthungerhilfe and other members of Food and Nutrition subcommittee of Sphere India. The report is divided into an introduction chapter and three sections:

- The introduction chapter provides information on background, aim and objectives and the process followed for compilation of this report.
- Section A presents the Risk (Hazard, Vulnerability, Capacity Analysis) and Nutrition Status Analysis.
- Section B recommends strategies for collaborative action on the subject.
- Section C suggests the process for developing a collaborative roadmap of action with mapping information from some of the agencies.

The **introduction chapter** presents the analysis developed on the basis of published Government and Non-Government Data on Emergency and Nutrition Management in India. The key emphasis of the analysis is the existing high level of malnutrition especially in the states that are highly prone to different natural and manmade disasters. It presents a serious concern, which needs immediate attention of all concerned and the key purpose of initiating this process and this report. The general objective is to bring stakeholders (Government and Non-Government), working on Emergencies and Nutrition issues together on a single platform, build a common understanding among them and develop a collaborative roadmap of action for Malnutrition Risk Reduction and Nutrition in Emergencies in India. Further, chapter provides the summary of the processes followed as a series of stakeholder consultations steered by Food and Nutrition Subcommittee of Sphere India and expert group for the purpose of development of analysis, report writing and editing.

The **Section A** of the report presents the Hazard Risk and Nutrition Status Analysis in selected states in India. The states were selected through consultation with the Government and Non-Government stakeholders on the basis of the existing information on most disaster prone states and the states with highest levels of malnutrition. This analysis considers different hazard and multi hazard maps published the Nutritional and health surveys (NFHS, DLHS etc) published by different Govt. Institutions. Further a tool was developed with inputs from Nutrition and Emergency management experts to collect information from different State Government Departments on Nutritional Status and Hazard vulnerability capacity analysis of the state. NDMA, facilitated the process for collection of information from targeted State Governments.

Malnutrition Risk Reduction and Nutrition in Emergencies in India is an outcome of the collaborative advocacy processes of SPHERE INDIA, National Coalition of **Humanitarian Agencies in India**.

The **Section B** of the report presents the recommended strategies for collaborative action for malnutrition risk reduction and nutrition in emergencies in India. These strategies evolved from the ideas and inputs given by experts who participated in a series of consultative workshops organized for the purpose. Each successive workshop followed on the progress being made on collection of data and analysis presented in section A of the report. The section recommends broad strategies in the areas of Knowledge Management, Training and Capacity building, Collaborative Advocacy, Inter Agency Coordination and Response Mechanisms/Interventions for Malnutrition Risk Reduction and nutrition in emergencies in India.

Section C presents the process for development of the collaborative roadmap of action based on the strategies recommended in section B of the report. As initiation of the process, a mapping has been done for some of the agencies on the basis of their mandate, technical capacity and interests in taking on the interventions suggested in above strategic areas.

The Annexures contains the framework, the tool used for collection of data from different state Governments along with the reported data in a tabulated form and Key references used for the purpose of this report.

Introduction

1.1 Background

Hazard Vulnerability of India:

India is highly vulnerable to natural disasters due to its unique geo climatic conditions. The Himalayan ranges – covering the north – lie in an active seismic

zone while the flood-plains in the North and Deccan plateau areas have histories of annual flooding. About 60% of the landmass in India is prone to earthquakes of various intensities; over 49.8 million hectares (> 15% of land mass) is prone to floods; about 8% of the total area is prone to cyclones and 68% of the area is susceptible to drought. On an average, more than 1 million houses get damaged due to different disasters in India every year apart from human, social, economic and other losses.

Socio - Economic vulnerability and malnutrition in India:

Along with this high vulnerability to different types of natural hazards, the socio-economic vulnerability of majority of population is also very high. For example, there is high level of malnutrition in many blocks and districts in India. As per the State of Food Insecurity in the World 2012 (FAO, IFAD and WFP) released (on 09 October 2012), India remains home to the largest number of undernourished people in the world: 217 million (17.5% of its population). About 20 per cent of children under-age five in India are wasted, 43 per cent underweight and 48 per cent stunted. Moreover, hunger and malnutrition have a distinct gender dimension and are widespread among the women/mothers. Every second woman in India is reported anemic. Actually, anemia affects 75% children below 5 years, 51% women in the age group of 15-59 years and 87% pregnant women. **More than 70% women and kids have serious nutritional deficiencies.** So, the Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) is very high² in normal situations and rises further during the disaster situation.



¹Hatwar et.al., Challenges in Tropical Cyclone Forecasting, India Meteorological Department, New Delhi, <http://nidm.gov.in/idmc2/PDF/Abstracts/Cyclone.pdf>

²Hunger And Malnutrition In India: Status, Causes And Cures, National Situation, Association of Voluntary Agencies for Rural Development (AVARD) 2012

Combined impact of high hazard vulnerability and preexisting malnutrition:

Thus, India is highly vulnerable to both natural hazards and socio-economic vulnerabilities like malnutrition. The support mechanisms of the communities also get affected due to direct impact of the hazard event or due to indirect consequences of the situations of deprivation that develops after the main hazard event. Due to this, while there is generally increase in mortality and morbidity post disaster, the small gains made by the development initiatives of the Government, Civil Society Organizations and most importantly community themselves also are very often lost. This makes it important to have special initiatives for nutrition in emergencies in India which is a missing practice in most of disaster response programs in India.



Gap Analysis

DISASTER MANAGEMENT INSTITUTIONS

With the evolution of National Disaster Management Authority (NDMA) and other institutions for effective disaster management in the country, the response capacities and mechanisms has seen a gradual increase over last many years. A lot of humanitarian agencies are also active in India with inter agency coordination and response practices of these agencies continually improving. However, the attention of both the Government and Civil Society Organizations is focused on rapid onset disasters, like floods, cyclones, earth quakes etc only. These disasters are highly visible, gets immediate attention of all stakeholders and accordingly the response. However, the slow onset disasters, like drought and extreme situations of deprivation of basic needs and displacements etc which are silent disasters, are most of the times not even noticed by anyone. The states like Rajasthan, Madhya Pradesh, Jharkhand, Chattisgarh, Western Uttar Pradesh, Maharashtra etc are highly vulnerable to slow onset disasters also have high levels of malnutrition. There is a need to develop special tools and indicators to identify these disaster situations and accordingly the practices for nutritional response and recovery in slow onset disasters which is gap in current system and practice.

Further, analysis of some of the recent response by Government and Civil Society Organizations shows there is a little or no nutritional response even in some of the well managed responses of rapid onset disasters. Thus, nutrition in emergencies remains a systematic gap that needs special attention of all relevant Government and humanitarian agencies.

The National Disaster Management Act, 2005 provided the paradigm shift in disaster management in India with special emphasis on proactive Disaster Risk Reduction interventions and mainstreaming disaster risk reduction in development activities. While special programs are being undertaken for mitigating risks and vulnerabilities due to

natural hazards, the DRR mainstreaming into development initiatives of allied line departments dealing with preexisting nutritional vulnerabilities remains a big gap. There is need to focus on nutritional vulnerabilities and Malnutrition Risk Reduction interventions especially for most vulnerable groups in the areas of higher levels of malnutrition.

NUTRITION MANAGEMENT INSTITUTIONS

There has been significant institutional development for management of nutrition in India. They are also supported by appropriate policies. However, there is little or no understanding of emergency management or disaster risk reduction among nutrition institutions. The concept of Malnutrition Risk Reduction and Nutrition in emergencies is largely absent.

Coordination between Disaster Management and Nutrition management Institutions in India:

The disaster management and Nutrition management systems in India largely work in silos. There is little coordination between the two systems and hardly any networking between Nutrition and Emergency professionals to develop inter disciplinary practice of Nutrition in Emergencies in India. Therefore, data, research, knowledge management, capacity building in the area of Malnutrition Risk Reduction and nutrition in emergencies is lacking in India.

Recognizing the gaps and needs as above, National Disaster Management Authority, Govt. of India in collaboration with Sphere India, National Coalition of Humanitarian Agencies in India and Welthungerhilfe initiated the process of consultation for developing a collaborative road map of action for Malnutrition Risk Reduction and Nutrition in Emergencies in India. The Aim, Specific objectives and the key steps followed in the consultative process are detailed below.

1.2 Aim

To bring stakeholders (Government and Non-Government), working on Emergencies and Nutrition issues together on a single platform, build a common understanding among them and develop a collaborative roadmap of action for Malnutrition Risk Reduction and Nutrition in Emergencies in India.

1.3 Specific Objectives

1. To bring different stakeholders working on nutrition and emergencies issues in country on a single platform.
2. To do the mapping of organizations; who is doing what and where on nutrition and emergency issues in the country.
3. To build a common understanding for Malnutrition Risk Reduction and Nutrition in Emergencies.
4. To develop collaborative strategies and recommendations for Malnutrition Risk Reduction and Nutrition in Emergencies in the country.
5. To develop a collaborative roadmap for action for Malnutrition Risk Reduction and Nutrition in Emergencies in the country.

1.4 Consultation Processes

The consultation processes initiated through the meetings of Sphere India Food and Nutrition Subcommittee of Sphere India. With initial thoughts and broad objectives from these meetings, the process was opened for a series of wider multi stakeholder consultations.

First National Consultation:

First National Consultation on 'Multi-stakeholder Action to Address Nutrition in Emergencies' was organized on 25th July 2013 at NDC Conference Hall, National Institute of Health and Family Welfare (NIHFW), Baba Ganganath Marg, Munirka, New Delhi. Total 66 participants attended the consultation which comprises of 21 Government officials and 45 participants from NGOs. The workshop was presided by Hon'ble Member, NDMA and attended by Vice Chairman BSDMA (Bihar State Disaster Management Authority) and), Director - National Institute of Health and Family Welfare (NIHFW). The officers from Ministry of Health and Family Welfare, National



Institute of Nutrition (NIN), State Governments of Orissa, Gujarat, Assam, Jharkhand and West Bengal also attended the meeting. The representatives of state IAG's from Andhra Pradesh, Assam, West Bengal, Bihar, Uttarakhand, Rajasthan, Jharkhand and Madhya Pradesh, South Asian Women's Network, The Hunger Project and many other civil society organisations participated. The following points emerged from the workshop:

- The subject of nutrition in emergencies is little understood and there is a need to develop awareness and capacity on the issue.
- Nutrition and extreme malnutrition is a development issue, however nutrition in emergencies and malnutrition risk reduction practices must be developed to prevent development losses due to disasters.
- The focus need to be on most vulnerable groups especially vulnerable in socially excluded communities.
- Indicators and tools needed to be developed for nutrition assessment in emergencies in Indian context.
- Early warning indicator for slow on set disasters needed to be developed.
- The interventions should be people centered and build on local capacities.
- The traditional food or local ways of conserving and preserving food during emergencies shall be promoted and further enriched through nutrition interventions.
- Awareness and capacities be developed for Infant and young children feeding practices during emergencies.

This consultation mobilized diverse stakeholders and an expert group was nominated to develop more information and research on the subject.

First Expert Group Meeting:

Following the first consultation, expert group meeting was conducted on 17th October 2013 at Sphere India office to brainstorm and plan strategies for further action to address this issue. Organizations namely ACF, CDMASS, WHH and DCA were participated and provided valuable suggestions on concept note/framework/explanatory note for 2nd national consultation. In addition, the outline of advocacy paper and national report - 'Malnutrition Risk Reduction and Nutrition in Emergencies in India' was drafted by the expert group. A tool for collection of data on Risk Analysis and Nutrition status analysis from the State Governments was also developed during the meeting which was later sent to targeted state Governments by NDMA.

Second National Consultation:

On 29th October 2013, second multistakeholder consultation was organized at YMCA Tourist Hostel, New Delhi. The draft concept note, framework with explanatory note on Nutrition in Emergencies and draft structure of the report was circulated to the Government and Non-Government participants prior to consultation. The highlights and outcomes of this consultation were:

- **Hazard Risk and Nutrition Status Analysis** for collection of data from the State Government was presented and timeline was developed for next actions.
- There is a need to have a Policy Guideline for Malnutrition Risk Reduction and Nutrition in Emergencies.
- There is a need to develop some workable models of nutrition response and malnutrition risk interventions. This may be initiated as **field pilots** in some of the most vulnerable blocks or districts.
- **Trainings and Capacity Building** initiatives on Nutrition in emergencies for Government and Non-Government Organisations should be planned
- Advocacy for CMAM (community based management of acute malnutrition) approach especially access to health facilities is important.
- **Promotion of IYCF – E** against distribution of breast milk substitute and support micronutrient



supplementation.

- An advocacy paper/strategy paper with key strategic recommendations for collaborative advocacy with Government and Non-Government stakeholders be finalised.

Second Expert Group Meeting was organized on 18th February 2014, at Sphere India office. The representatives from MWCD, UNICEF, ACF, CDMASS, WHH, Save the Children, EFICOR and DCA were present to review the progress on drafting of the report and advocacy paper.

Meetings with Government:

Regular meetings with NDMA and few meetings with Ministry of Women & Child Development, Health Ministry and Planning Commission facilitated collection of data from State Governments and provided inputs to the report and advocacy paper.

State Reports and Trainings in MP, Jharkhand and West Bengal

- Separate reports were developed for the states of Madhya Pradesh, Jharkhand and West Bengal to assess the needs & status of malnutrition in each state.
- This process also followed consultations and trainings on Nutrition in Emergencies in these states.

⁴ IMS act of 1992 for India and international code of conduct for BMS stressing to stop BMS distribution

Madhya Pradesh, Bihar, Jharkhand and Tamil Nadu have a high prevalence of wasting in children under 5 as compared to national average (NFHS III 2005 -06).



Section A Hazard Risk and Nutrition Status Analysis

The initial consultations emphasized that the collaborative strategies being developed through this process should be informed by more informed analysis of the hazards risks and existing nutritional status in different states. While doing the research for the above information, it was found that there is very limited data available especially below state at district or sub district level. Some information can be collated from published Government and Non-Government Surveys and reports but the qualitative compiled information is lacking.

Accordingly, with inputs from the emergency and nutritional experts, a tool was developed to collect information from different state level Government Departments. The data on the tool was collated through research based in secondary information and shared with expert group, NDMA and Ministry of Women and Child Development. The NDMA further facilitated the process of collecting/validating the information from relevant State Govt. Departments and Institutions. Ministry of Women and Child Development also supported through state nutrition council. The State IAGs and State level civil society organizations also liaised with respective State Government departments to collect the information.

At this stage the process focused in selected 14 states initially (namely Himachal Pradesh, Rajasthan, Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, Odisha, West Bengal, Assam, Gujarat, Maharashtra, Andhra Pradesh and Tamil Nadu). These states were selected according to the high level of preexisting malnutrition status and high multi hazard vulnerability.

Key Findings:

Nutritional Status Analysis: Out of above selected 14 states, the state of Madhya Pradesh, Bihar, Jharkhand and Tamil Nadu have a high prevalence of wasting in children under 5 as compared to national average (NFHS III 2005 -06).

The prevalence of stunting in the state of Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand and Gujarat is high as compared to national data. The details are presented in Table in 1

Table 1 Hazard Risk and Nutritional Status in India – State wise data

State Name	Name of Hazard	History/ Description	Probability of occurrence		Risk (Rating)	Capacity to Response	Risk Index	*Nutritional Status in children under 5 (%)				*Nutritional Status in Women (15-49yrs)
			Severity	Likelihood				Stunting	Wasting	Under weight	Anemia	BMI < 18.5
Himachal Pradesh	Earthquake (Zone V)	Kangra -1905 (19,000 deaths)	Catastrophic	Rare (1)	Very High (4)	National & State Disaster Management Authority (NDMA &SDMA), INGOs and Local NGOs actively respond to disasters in the state. Media and community also plays a major role in disaster management	Human Life, Livestock, Kutcha and Pacca Houses, Infrastructure Crops, Drinking Water, Livelihood Options	39	19	20.26	55	30
	Drought	In 1972, 1979 and 1982	Moderate	Occasional (2)	Medium (2)							
	Cyclone		Insignificant	Rare (1)	Low (1)							
	Flood	1973, 1975, 1988, 1991,1993, 1995, 1997, 2000, 2001, 2003, 2005, 2007, 2009, 2010, 2013	Major	Frequently (3)	High (3)							

State Name	Name of Hazard	History/ Description	Probability of occurrence		Risk (Rating)	Capacity to Response	Risk Index	*Nutritional Status in children under 5 (%)				*Nutritional Status in Women (15-49 years)
			Severity	Likelihood				Stunting	Wasting	Under weight	Anemia	BMI < 18.5
Rajasthan	Earthquake (Zone IV & III)	-	Moderate	Occasional (2)	Medium (2)	National & State Disaster Management Authority (NDMA &SDMA), INGOs and Local NGOs actively respond to disasters in the state. Media and community also plays a major role in disaster management	Crops, Drinking Water, Livelihood Options	44	20	40	70	37
	Drought	In 1969, 1970, 1972, 1979, 1982, 1983, 1992 & 2000	Moderate	Frequently (3)	High (3)							
	Cyclone	-	Insignificant	Rare (1)	Low (1)							
	Flood	1996	Catastrophic	Occasional (2)	Medium (2)							
Chattisgarh	Earthquake (Zone II)	-	Insignificant	Rare (1)	Low (1)		Crops, Drinking Water, Livelihood Options	53	20	47	71	43
	Drought	In 1969, 1992	Moderate	Occasional(2)	Medium (2)							
	Cyclone	-	Insignificant	Rare (1)	Low (1)							
	Flood	2013	Mild	Rare (1)	Medium (2)							
Madhya Pradesh	Earthquake (Zone II & III)	In 1997 (Jabalpur)	Minor	Occasional (2)	Medium (2)		Crops, Drinking Water, Livelihood Options	48.9	25.8	51.9	75	41.5
	Drought	In 1969, 1992	Moderate	Occasional (2)	Medium (2)							
	Cyclone	-	Insignificant	Rare (1)	Low (1)							
	Flood	1994	Moderate	Occasional (2)	Medium (2)							
Uttar Pradesh	Earthquake (Zone III & IV)	-	Moderate	Occasional (2)	High (3)	National & State Disaster Management Authority (NDMA &SDMA), INGOs and Local NGOs actively respond to disasters in the state. Media and community also plays a major role in disaster management	Crops, Drinking Water, Livelihood Options, Vulnerable groups	57	15	42	74	36
	Drought	In 1969, 1972, 1979	Moderate	Occasional (2)	Medium (2)							
	Cyclone	-	Insignificant	Rare (1)	Low (1)							
	Flood	1995	Moderate	Rare (1)	High (3)							
Bihar	Earthquake (Zone IV & V)	1934	Moderate	Occasional (2)	Very High (4)		Human life, Crops, Drinking Water, Livelihood Options, Vulnerable groups	56	27	56	78	45
	Drought	In 1969, 1972, 1979	Moderate	Occasional (2)	Medium (2)							
	Cyclone	-	Insignificant	Rare (1)	Low (1)							
	Flood	1995, 2008	Major	Frequently (3)	High(3)							
Jharkhand	Earthquake (Zone IV & V)	-	Moderate	Occasional (2)	Very High (4)		Human life, Crops, Drinking Water, Livelihood Options, Vulnerable groups	50	32	57	70	43
	Drought	2010	Moderate	Occasional (2)	Medium (2)							
	Cyclone	-	Insignificant	Rare (1)	Low (1)							
	Flood	2000 -2004 (11 districts affected), Sahebgunj - 2008	Moderate	Occasional (2)	Medium (2)							
Odisha	Earthquake (Zone II)	-	Insignificant	Rare (1)	Low (1)	Human Life, Cattle life, Crops, Drinking Water, Livelihood Options, Vulnerable groups	45	20	41	65	42	
	Drought	1966, 1983, 1992, 2000	Moderate	Occasional (2)	Medium (2)							
	Cyclone	In 1999, strongest storm hit Orissa caused 10,000 deaths followed by Phailin in 2013	Major	Frequently (3)	High (3)							
	Flood	2008, 2009, 2013	Moderate	Frequently (3)	High (3)							

West Bengal	Earthquake (Zone III)	2013	Moderate	Occasional (2)	Medium (2)	National & State Disaster Management Authority (NDMA & SDMA), INGOs and Local NGOs actively respond to disasters in the state. Media and community also plays a major role in disaster management	Human Life, Cattle life, Crops, Drinking Water, Livelihood Options, Vulnerable groups	45	17	39	61	39
	Drought	1983	Moderate	Rare (1)	Medium (2)							
	Cyclone	In 1737, in Calcutta, took 300000 lives	Major	Rare (1)	Medium (2)							
	Flood	2008	Moderate	Frequently (3)	High (3)							
Assam	Earthquake (Zone V)	1897 (1500 deaths), 1950 (530 deaths),	Major	Frequently (3)	Very High (4)	Government, INGOs & local NGOs participate for relief and rehabilitation response to earthquakes	Human Life, Livestock, Kutcha and Pacca Houses, Community Infra-structure	47	14	36	70	37
	Drought	-	Insignificant	Rare (1)	Low (1)							
	Cyclone	-	Insignificant	Rare (1)	Low (1)							
	Flood	2008	Moderate	Frequently (3)	High (3)							
Gujarat	Earthquake (Zone IV & V)	Runn of Kutch -1918 (1500 deaths), Anjar - 1956 (115 deaths), Bharuch -1970 (30 deaths), Bhuj- 2001 (13805 deaths), Gujarat - 2006	Major	Frequently (3)	Very High (4)	Government, INGOs & local NGOs participate for relief and rehabilitation response to earthquakes	Human Life, Livestock, Kutcha and Pacca Houses, Community Infrastructure, Crops, Drinking Water, Livelihood Options	52	19	45	70	36
	Drought	1969, 1992, 2000	Moderate	Frequently (3)	High (3)							
	Cyclone	1996, 1998, 2001, 2004, 2007	Moderate	Frequently (3)	Medium (2)							
	Flood	1994 (138 deaths), 2005	Moderate	Occasional (2)	High (3)							
Maharashtra	Earthquake (Zone II & III)	Koyna - 1967 (200 deaths), Latur -1993 (7928 deaths), Ratnagiri - 2012	Major	Frequently (3)	Medium (2)	Government, INGOs & local NGOs participate for relief and rehabilitation response to earthquakes	Human Life, Livestock, Kutcha and Pacca Houses, Community Infrastructure, Crops, Drinking Water, Livelihood Options	46	17	37	63	36
	Drought	1972, 2013 (11,801 villages affected)	Moderate	Occasional (2)	Medium (2)							
	Cyclone	1994, 2009, 2010	Major	Frequently (3)	Medium (2)							
	Flood	2005, 2008, 2009	Moderate	Frequently (3)	High (3)							
Andhra Pradesh	Earthquake (Zone II & III)	-	Insignificant	Rare (1)	Low (1)	Government, INGOs & local NGOs participate for relief and rehabilitation response to earthquakes	Human Life, Cattle life Crops, Drinking Water, Livelihood Options, Vulnerable groups	46	17	37	63	36
	Drought	1969, 2000	Moderate	Occasional (2)	Medium (2)							
	Cyclone	1990, 1998, 2003, 2007, 2008, 2010, 2012	Major	Frequently (3)	High (3)							
	Flood	1996, 2008, 2009	Moderate	Frequently (3)	High (3)							
Tamil Nadu	Earthquake (Zone II)	Coimbatore (1900)	Minor	Rare (1)	Low (1)	Government, INGOs & local NGOs participate for relief and rehabilitation response to earthquakes	Human Life, Livestock, Kutcha and Pacca Houses, Community Infrastructure, Crops, Drinking Water, Livelihood Options	31	22	30	64	28
	Drought	---	Insignificant	Rare (1)	Low (1)							
	Cyclone	1991, 1992, 1993, 1996, 2000, 2005, 2008, 2010, 2011, 2012	Major	Frequently (3)	High (3)							
	Flood	2005, 2007 2009	Moderate	Frequently (3)	High (3)							

Hazard Risk Data Sources:

- Position paper no. 6, Contingency and Compensatory Agricultural Plans for Droughts and Floods in India – 2012, National Rainfed Area Authority, Planning Commission, Government of India
- G.S.Mandal and M.Mohapatra, Cyclone Hazard Prone Districts of India, National Disaster Management Authority, Govt. of India, New Delhi
- Rajiv Kumar, Director, Ministry of Home Affairs, Govt. of India, Hazard Vulnerability of India, Institutional and Legislative Framework for Disaster Management in India, ACDR 2006 SEOUL
- Sumana Bhattacharya and Aditi Das Winrock International, Vulnerability to Drought, Cyclones and Floods in India, September 2007
- Vulnerability Atlas of India, Building Materials and Technology Promotion Council (BMTPC), Ministry of Housing and Urban Poverty Alleviation, Govt. of India
- SDMA (State Disaster Management Authority) sites

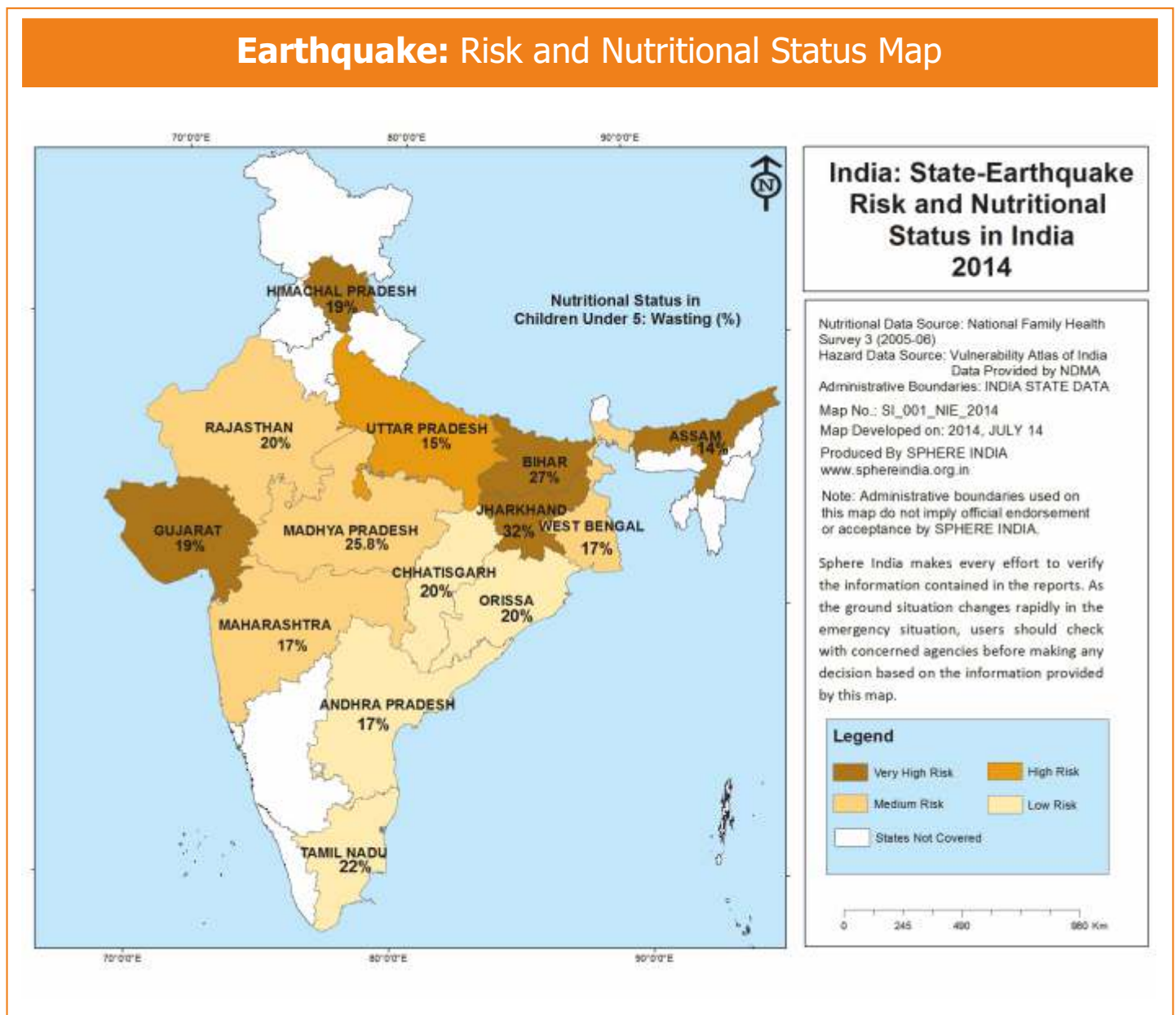
***Nutritional Status Data Source:**

- National Family Health Survey 3 (2005-2006) : WHO reference; Moderate and Severe (below -2 SD)
- M.P Data Source: NIN (2009 -2010)

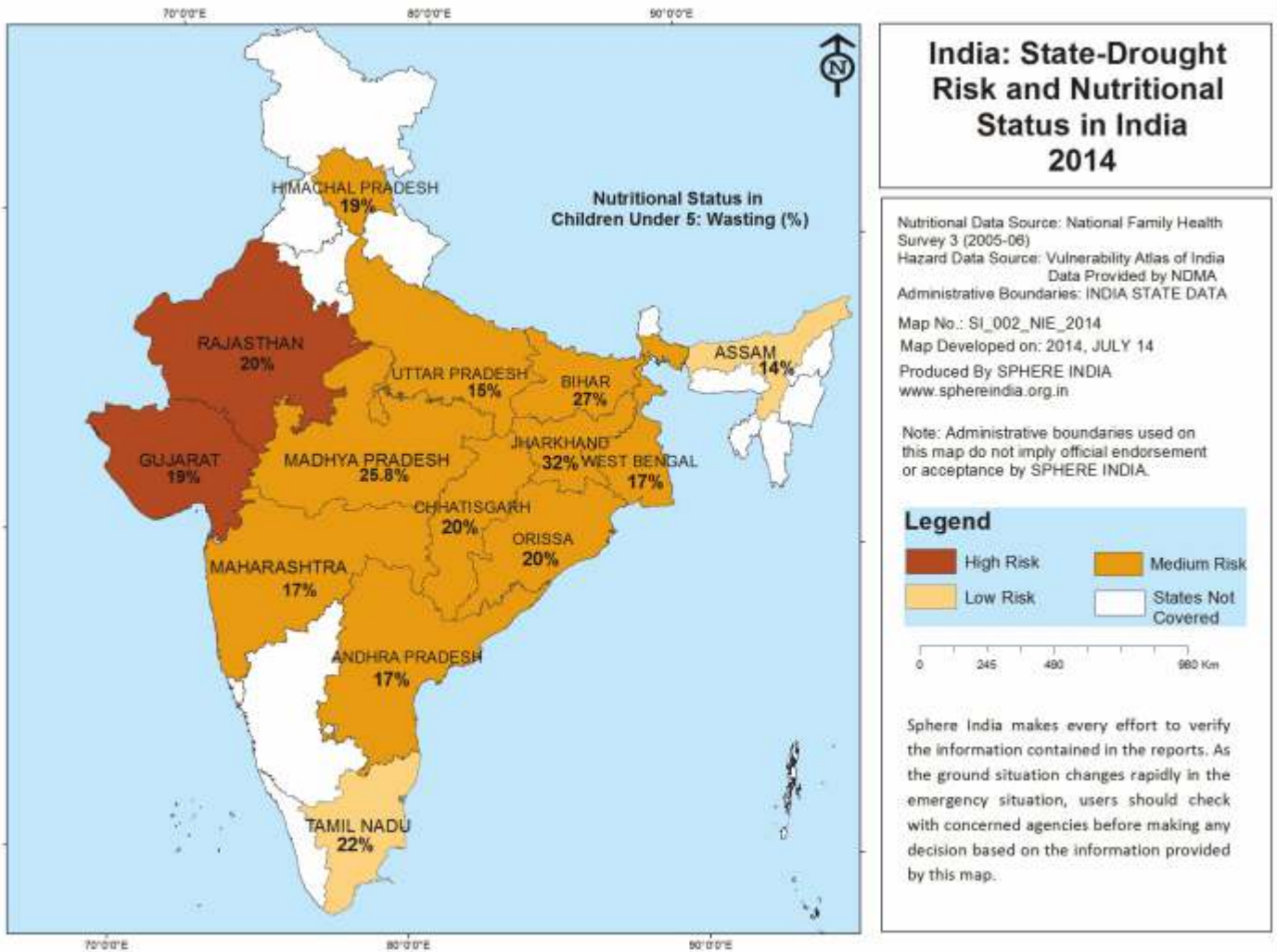
Hazard Risk Analysis:

- The state of Himachal Pradesh, Uttar Pradesh, Bihar, Jharkhand, Assam and Gujarat are highly prone to Earthquakes.
- States highly vulnerable to floods are Himachal Pradesh, Uttar Pradesh, Bihar, Odisha, West Bengal, Assam, Gujarat, Maharashtra, Andhra Pradesh and Tamil Nadu.
- States which are highly prone to cyclone are Odisha, West Bengal, Andhra Pradesh and Tamil Nadu.
- States vulnerable to slow onset disaster i.e. drought are Rajasthan, Madhya Pradesh, Gujarat.

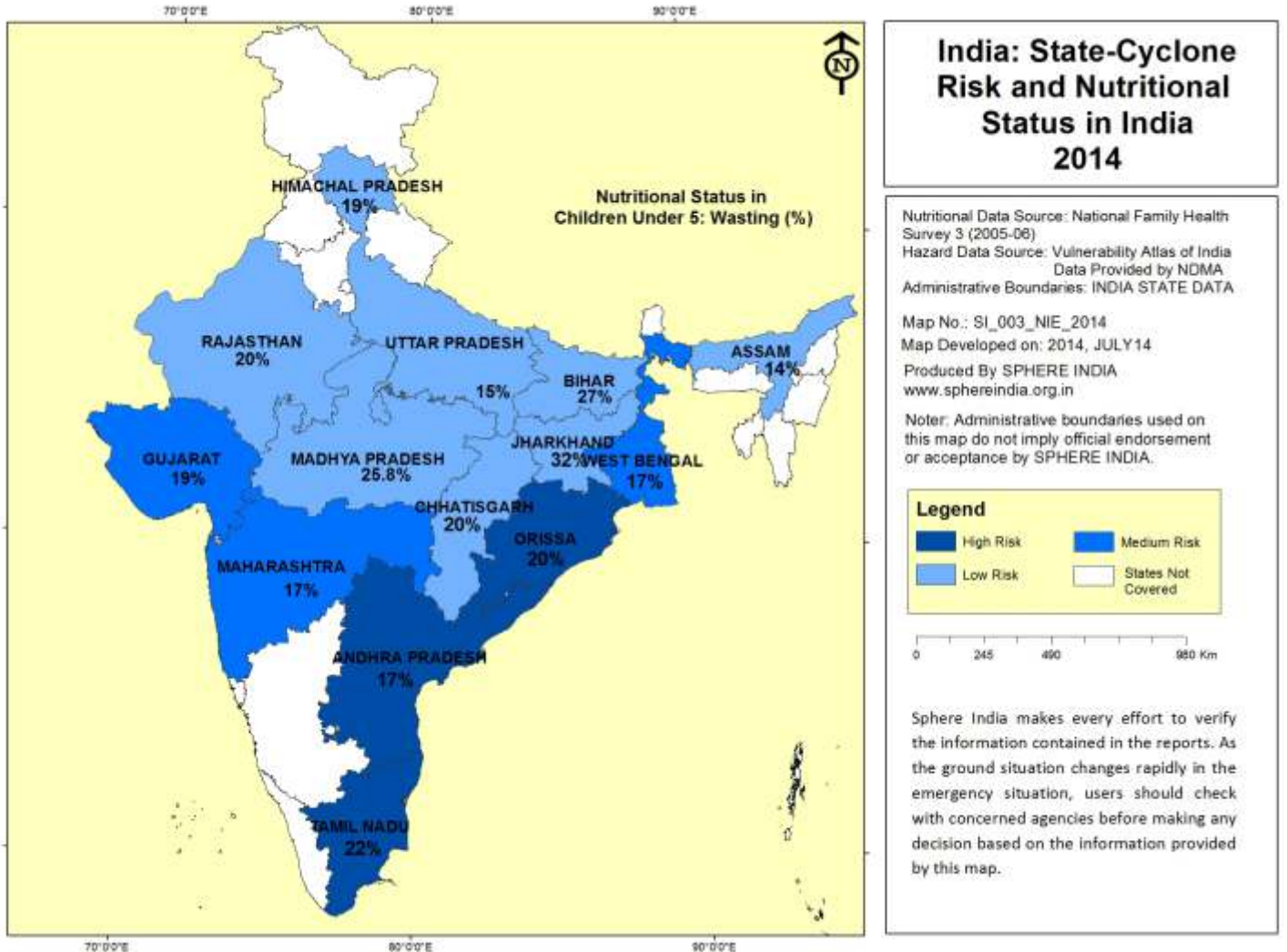
The information given in Table 1 is also illustrated through hazard map given here:



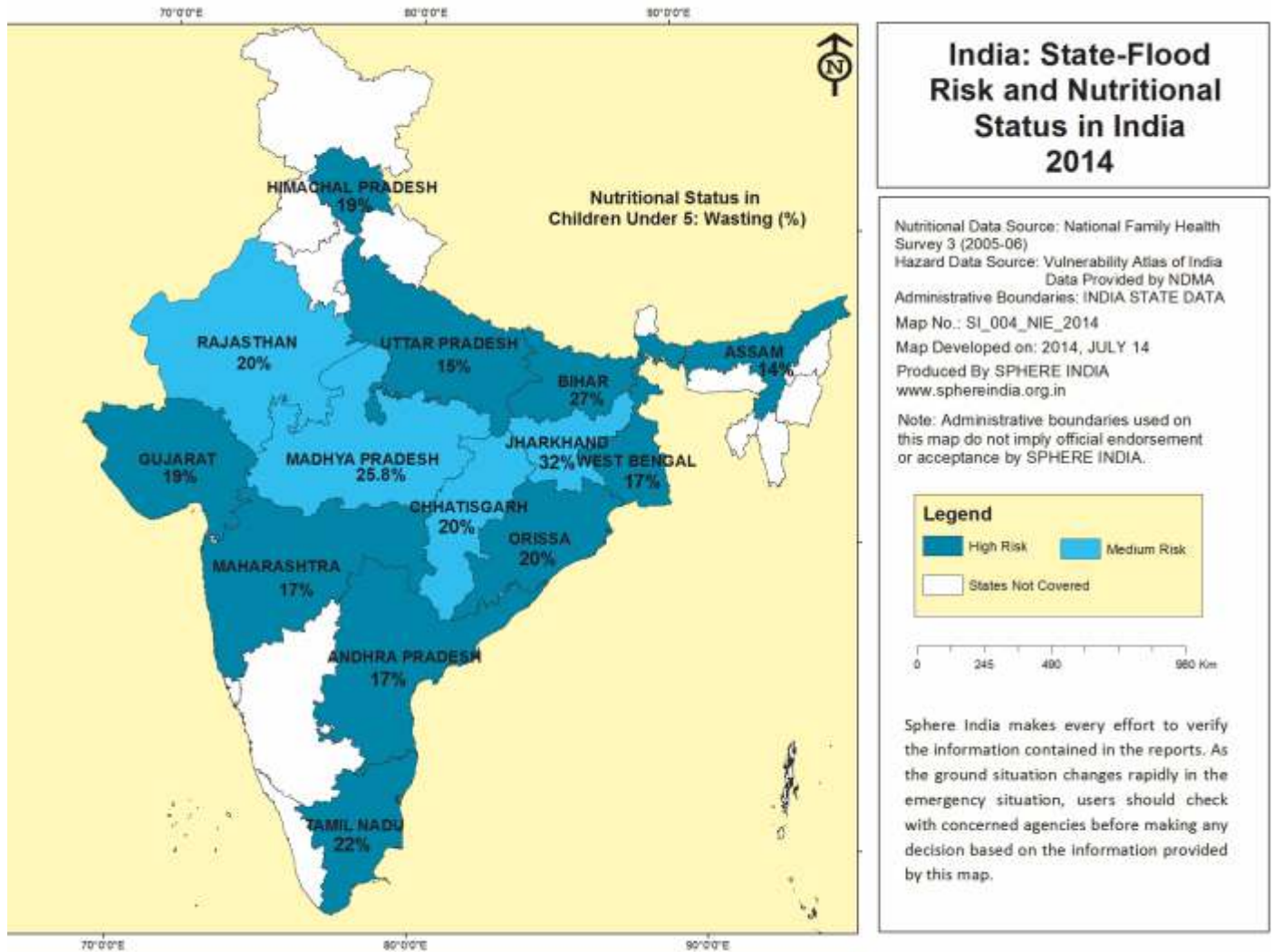
Drought: Risk and Nutritional Status Map



Cyclone: Risk and Nutritional Status Map



Flood: Risk and Nutritional Status Map



Section B Recommended Collaborative Strategies:

The final review of the analysis as presented in Section A of the report and the key points from the consultation process by the expert group, summarized following gaps and challenges:

Gaps and Challenges:

- There is an unmet need of nutrition especially in most vulnerable groups in India.
- There is lack of commonly agreed classification system for nutritional situation analysis in India. Further, there is little awareness on International classification followed by practitioners worldwide.
- Existing guidelines for the Management of Acute Malnutrition need to be updated.
- The linkages of Nutrition with other sectors like WASH, Protection etc remain a big gap in planning and implementation levels.
- There is a need to have a Policy guideline for Malnutrition risk reduction and nutrition in emergencies in India.
- Though, there has been good mobilization of Govt. and Non Govt. agencies with some of the rapid and visible disasters in recent past, Nutritional response is largely missing in both Govt. and Non Govt. Response.
- Organised response to slow onset disasters like drought is a big gap among Govt. and Non Govt. Response / Recovery Organisations.
- Inadequate skills and expertise in nutrition in emergencies at among both emergency and nutrition professionals.
- Disaster Management and Nutrition management Systems works in silos with almost no coordination and collaboration.

The Collaborative Strategies recommended here further evolved from the above challenges and gap analysis. The Strategies have been classified under Knowledge Management, Training and Capacity Building, Collaborative Advocacy, Response Mechanisms and Coordination

Knowledge Management:

- **Operational Research:** A lot of information is available at state level through research facilitated by different Government and civil society organizations; however, qualitative and quantitative information at district and sub district levels is a big gap. Further, there is often lack of consensus on the processes and research facilitated by Government and NGOs separately.

A collaborative process led Government and NGOs together and specially focusing on grass roots level (district and sub district level) research is recommended.

- **Assessments and Evaluation:** It is important to learn from current programs and challenges. For this, it is recommended that all organizations must document their learning and have periodic independent evaluations and lessons learnt exercises. Apart from organization level, it is important to evaluate the systems periodically

as a collaboration of all stakeholders and organize inter agency lesson learnt exercises. This should also update the collaborative road map of action periodically.

- **Innovations and Good practice:** The collaboration shall encourage innovations and good practice development at different levels. The practices that have yielded good results in similar contexts in different parts of the world shall be adopted and tested. The successful practices may be replicated and scaled for quick results.
- **Common platform for information sharing:** A common platform shall be developed for sharing of information, database management and knowledge resources by all collaborating stakeholders.
- **Development of SOPs and Standard IEC materials:** It is recommended that agencies subscribe to agreed SOPs and Standards IEC materials developed through the collaborative process.

Training and Capacity Building:

- **Training and Capacity Building Need Analysis:** A periodic training and capacity building need analysis for Malnutrition Risk Reduction and Nutrition in Emergencies be facilitated through collaborative processes.
- **Mapping of training and education institutions:** The institutions with capacities to provide training and education on Malnutrition risk reduction and Nutrition in emergencies be mapped and the information of their programs be available through common platform.
- **Development of Standard modules and curriculum:** The existing modules and curriculum on Nutrition in emergencies be contextualized and standardized for all agencies involved with training and capacity building activities.
- **Development of Master Trainers and Resource Persons:** The training of trainers be organized at different levels to build a cadre of master trainers and trained resource persons for Nutrition in emergencies in India.

Collaborative Advocacy:

- **Policy Advocacy:** Development of appropriate evidence based policy for Malnutrition Risk Reduction and Nutrition in Emergencies at all levels.
- **Media Advocacy:** Engagement of media as a change agent for building mass awareness on the issues.
- **Stakeholder Group Targeted Advocacy:** Identification of key stakeholders and plan targeted advocacy messages and interventions for each group.
- **Issue Based Advocacy:** Identification of top issues to be addressed and appropriate advocacy methods

Nutrition Response Mechanisms and Inter Agency Coordination

Section C Process for Collaborative Road Map of Action

There is a need to bring all stakeholders (Government and Non-Government), working on disaster management and nutrition issues together on a single platform, build a common understanding among them and develop a collaborative roadmap of action for Malnutrition Risk Reduction and Nutrition in Emergencies in India.

Initial efforts has been put together to collate agency information as below to map existing resources. This is not the complete list of the stakeholders or organisations working on the issue, however, a small beginning. The process initiated here should continue to build collaborative roadmap of action on this important issue.

S. No.	Collaborative Result Area	Organization	States Covered Currently	Mandate/Capacity Currently	Possible Roles on MRR& NiE	Indicative Plans (What, When and Where)
1.	Training and Capacity Building	World Vision India	18 states	Training curriculum and job aids developed on reducing malnutrition and trained the frontline workers	Technical support	
		WHH	M.P,Jharkhand, Odisha, West Bengal, Karnataka	Training modules developed on CMAM, plan LANN (Linking Agriculture, Natural resource Management and Nutrition)	Technical Support in organizing trainings	Continuous
		ACF	MP, Rajasthan, Odisha, Delhi	1.Prevention of SAM (IYCF/WASH components), 2. Detection, referral and follow up of SAM children 3. SAM treatment at NRCs level 4. NiE, CMAM, SMART and NCA training at Delhi level + SAM management workshop	In term of preparedness:-on NiE trainings -on Nutritional surveillance (NIS) where existing consortium response already set up In term of response: Capacity building for setting up nutrition surveillance	To be fine tune but part of our 2014/2015 strategic plan to develop NiE&CMAM trainings at state level
		Save the Children	Rajasthan, West Bengal, Maharashtra, Jharkhand, Uttar Pradesh, Bihar, Odisha, Tamil Nadu,	1.Prevention of acute malnutrition (SAM and MAM) through focus on 1000 days approach. Focus on maternal nutrition IYCF / WASH components), 2. Detection, referral and follow up of SAM children 3.SAM treatment at NRCs level 4. Integrating RMNCH+ A in nutrition programmes 5. Capacity building of frontline health workers on identification, referral and management of SAM children and also on BCC, developing job aids to facilitate counseling.		
		DCA	Orissa (LWSIT, SPREAD, DISHA, CASA), Rajasthan (ASTHA, Ekta Parishad), Assam (IGSSS, CASA), Bihar (IDF), Andhra Pradesh (Sahani Basa)	1. CASA/ LWSIT/ IGSSS/ IDF have capacity in Wash/ Nutrition/ Health and Psychosocial components during emergency 2. Spread/ Disha/ Astha and Sahani Basa have capacity of Right based food security schemes and land schemes	1.Capacity Building of partners on MRR and NiE during Response/ relief, Recovery and Preparedness as ToT 2.Community Awareness programs through IEC for change KAP and BCC 3.Convergence activity with ICDS & Mid-day meal monitoring committees in schools/ICDScenters	Activities can be planned after having discussion with DCA core team members and implementing partners for 2014-17

S. No.	Collaborative Result Area	Organization	States Covered Currently	Mandate/Capacity Currently	Possible Roles on MRR& NiE	Indicative Plans (What, When and Where)
2.	Operational Research					
3.	Nutritional Assessment and Surveys	World Vision India	18 states	Developed tools and assessment methodologies and collected information	We can share the tools and share the data with other partners	
		WHH	M.P, Odisha, Jharkhand, West Bengal, Karnataka	Nutrition, education and Household Economy surveys. SMART Survey in Panna/Khargone –M.P	Sharing of tools and data/Reports	
		ACF	MP, Rajasthan, Odisha, Delhi	1. SMART surveys in Burhanpur (MP), Baran (Rajasthan), Ganjam & Balasore (Odisha) 2. NCA in Burhanpur	In term of preparedness: SMART training In term of emergency response: -carrying out Rapid nutritional assessment and SMART surveys -Technical support for inclusion of nutritional outcome in the rapid assessment tool in development	Will be part of our strategic plan 2014-2015
		Save the Children	Maharashtra, UP & Jharkhand	1. SMART survey in Maharashtra 2. SQUEAC UP & Jharkhand		
		DCA	Orissa	Participated SMART- ENA training	1. Rapid Nutritional Assessment during emergency (for supporting basic essential food/ baby food to survive) 2. Framing good nutrition, Wash and Health integrated programmes	Activities can be planned after having discussion with DCA core team members and implementing partners for 2014/15/16/17
4.	Innovations and Good Practice	ACF			In term of response: Technical support for inclusion of nutritional inputs into FSL, Health & WASH project developed by others	
		WHH	Odisha, M.P, West Bengal, Karnataka, Jharkhand	CMAM, Nutrition Gardens, PLA, LANN (Linking Agriculture, Natural Resource Management and Nutrition), Nutrition Melas	Sharing of process documents, results	
		Save the Children	Rajasthan	Tracking SAM children using IT		
		DCA	Orissa, Rajasthan, Assam, Bihar, Andhra Pradesh		1. Collection of Best practices can be done along with success stories	Strategy to be finalized along with the implementing partners

S. No.	Collaborative Result Area	Organization	States Covered Currently	Mandate/Capacity Currently	Possible Roles on MRR& NIE	Indicative Plans (What, When and Where)
5.	Advocacy	ACF	MP, Rajasthan, Delhi	For model of SAM management that achieve effectiveness and coverage	Advocac for nutrition component inputs in DRR and ERM	To be define
		WHH	M.P, Odisha, West Bengal, Karnataka, Jharkhand	CMAM model, PLA, LANN	Process documents for upscaling	
		DCA	Orissa (LWSIT, SPREAD, DISHA, CASA), Rajasthan (ASTHA, Ekta Parishad), Assam (IGSSS, CASA), Bihar (IDF), Andhra Pradesh (Sahani Basa)	<ol style="list-style-type: none"> 1. CASA/ LWSIT/ IGSSS/ IDF have capacity in Wash/ Nutrition/ Health & Psychosocial components during emergency 2. Spread/ Disha/ Astha and Sahani Basa have capacity of Right based food security schemes and land schemes 	<ol style="list-style-type: none"> 1. Advocacy to access food security schemes for the vulnerable community through peer pressure group like CBO/SHG 2. Advocacy programs for line departments coordination during emergency for stock piling of nutritious food and baby food) 	Advocacy strategy to be finalized along with the implementing partners

Annex I Framework for State level Situation Analysis

1. Current Status of Nutrition in the State:

- a. Prevalence of undernutrition in the different age group (children under 3, preschool children (3 -6 years), school going children (6 -10 years), adolescent boys and girls (10- 19 years), pregnant women and lactating mothers)
- b. Vitamin A deficiency in high risk group i.e. infant and children, pregnant women
- c. Iron deficiency anemia in children under 6, adolescent girls and pregnant women
- d. Iodine deficiency/goiter prevalence in children and other vulnerable population

2. Hazard Risk Analysis of the state: The hazard analysis can be illustrated using the probability matrix for the distribution systems

Name of Hazard	History/ Description	*Probability of occurrence		Nutritional Status					Capacity to response	Risk Index
		Severity	Likelihood	Children under 3	Preschool Children (3- 6 yrs)	School Going Children (6-10 yrs)	Adole scents	Pregnant and lactating women		

Severity	Description, probability/frequency
Insignificant	Negligible impact in terms of severity of disease or numbers of people affected
Minor	Potentially harmful to a small population, morbidity but no mortality
Moderate	Potentially harmful to a large population, morbidity but no mortality
Major	Potentially lethal to a small population, likely to be also significant morbidity
Catastrophic	Potentially lethal to a large population, likely to be also very significant morbidity
Likelihood	
Rare	Hazard event is likely to occur less than once every 30 years
Occasional	Hazard event is likely to occur less than once every 5 years, but more often that once every 30 years
Frequently	Hazard event is likely to occur more than once every 5 years

3. Institutional mechanism:

a.Nutrition: Brief description on various strategies adopted by the state to combat malnutrition and micronutrient deficiencies (Vitamin A, Iron and Iodine) like establishment of Nutrition Rehabilitation Centre (NRC), Vitamin A and Iron Folic Acid supplementation etc.

b.Disaster management: Brief description on possible strategies adopted to cope with disasters/emergencies like nutrition surveillance, screening, mitigation or reduction of risk, capacity-building, preparedness, prompt response, evacuation, rescue, relief, rehabilitation and reconstruction

- 4. Other Capacities:** Brief description on other resources including manpower, services, materials and provisions can be included
- 5. Current Gaps and Challenges:** Bullet points on the various gaps identified and challenges faced while coping up with disasters/emergencies
- 6. Recommendations:** Suggestive actions/solutions that can be adopted for the better management of nutrition in emergencies in India



"This is a good document which enables us to consider nutrition in programming and prevent malnutrition among women and children during disasters. It will be ideal to focus on the recommendations which has emerged through the consultation meetings and on the recommended strategies to bring in collaborative action on nutrition and emergencies in India. Nutrition during emergencies are less explored in India and this report enables similar organizations working in the field of maternal and child health nutrition to work together".

Grana Pu Selvi, Program Manager,
Integrated Programming –Child Health, World Vision India

"India is vulnerable to many disaster situations like floods, drought, cyclones, earthquake... While both government and non-government agencies launch relief and rehabilitation efforts, focus on nutrition is generally not included in such responses. In order to cater health and nutrition issues of vulnerable population at the time of emergencies, it is important to have trained professional who can prepare, plan and focus on nutrition during the time of emergencies. Currently there is a large scope to develop such an expertise in India, which is one of ACF's priorities".

Thomas Gonnet, Executive Director,
Action Contre La Faim - Inde ACF-India

"Nutrition in Humanitarian Crises has been ambivalent agenda for practitioners as being synonymous with feeding hungry bellies. Little did we associate under nutrition with inter-generational poverty which leaves **more than 48% of children stunted with least intellectual growth opportunities**. While natural hazard based humanitarian crises exacerbate the nutritional status of children, women (specially pregnant and lactating), disabled and other vulnerable to abysmal levels, conflict related humanitarian crises imposes deeper risks of survival. **Prioritizing nutrition of the severely vulnerable children and communities is to be foremost on the humanitarian reformation agenda! This is no longer an option: but the essence of humanitarian compassion"**

Ray Kancharla,
Ex-Vice Chair - Sphere India,
National Humanitarian Manager - Save the Children

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