



OUR HERITAGE

ISSN: 0474-903- Vol-67, Special Issue-9

“GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities” Organised by
Global Research Conference Forum, Pune, India
November 23rd and 24th, 2019



Concern of food safety in disaster management

Rupesh Bhavsar
Researcher (BAM University)
Principal MGM IHM, Aurangabad, India.
Email - rupeshbhavsar23@gmail.com
M.phil, Management science, BAMU.

Abstract

Situations like disaster happens like earthquake, landslides, Floods, snow storm, drought etc. In following event people are one who suffers from many difficulties after the event. Basic need of food and shelter is to be big challenges in many places in the world. Some places are run out of drinking water and food as well. Clearly, all these contribute to a situation where disasters seriously threaten India's economy, its population and sustainable development.

NDMA National Disaster Management Authority of India is having national guide lines to maintain minimum standard for supply of drinking water and food hygiene and sanitation. Managing these two things is very difficult in disaster situation because there is more risk of spreading food borne illnesses and diseases. Safe, clean and hygienic food is two critical factors to control the any food borne disease outbreak. So There is need of food safety at every level of disaster management by doing work on clear understanding in government, donors and civil society, different organizations and private sectors. In many cases lack of knowledge, lack of information on food safety is the major concern. In most of the cases central government is relying on the policies of central government for supply of the food. Local community or panchayat do not have much information on the response on the following condition. following difficulties can be manage by delivering the training of food safety to all the possible channels like school education , college level, masters level, office staff , public places , small business and other possible channels . Being proactive at every level of life is important. It can be life saving skill to the person in difficult situation.

Key Words: Food safety, disaster management, training, life saving skills, training.

Introduction:

Country like India having population of 130 cr. Every day of life is challenge. With this increasing population we are consuming our natural resources very fast and almost every year we are facing the natural disasters like flood, drought, landslides, cyclones etc. In India total 7,516 km long coastline, out of that 5,700 km is prone to cyclones and tsunamis. 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity. Over 40 million hectares (12 per cent of land) is prone to floods and river erosion. Following figures will give enough idea about events happening in recent days in India. India is vulnerable, in varying degrees, to a large number of disasters. More than 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity; over 40 million hectares (12%) of its land is prone to floods and river erosion; close to 5,700 kms, out of the 7,516 kms long coastline is prone to cyclones and tsunamis; 68% of its cultivable area is vulnerable to droughts; and, its hilly areas are at risk from landslides and avalanches.



OUR HERITAGE

ISSN: 0474-903- Vol-67, Special Issue-9

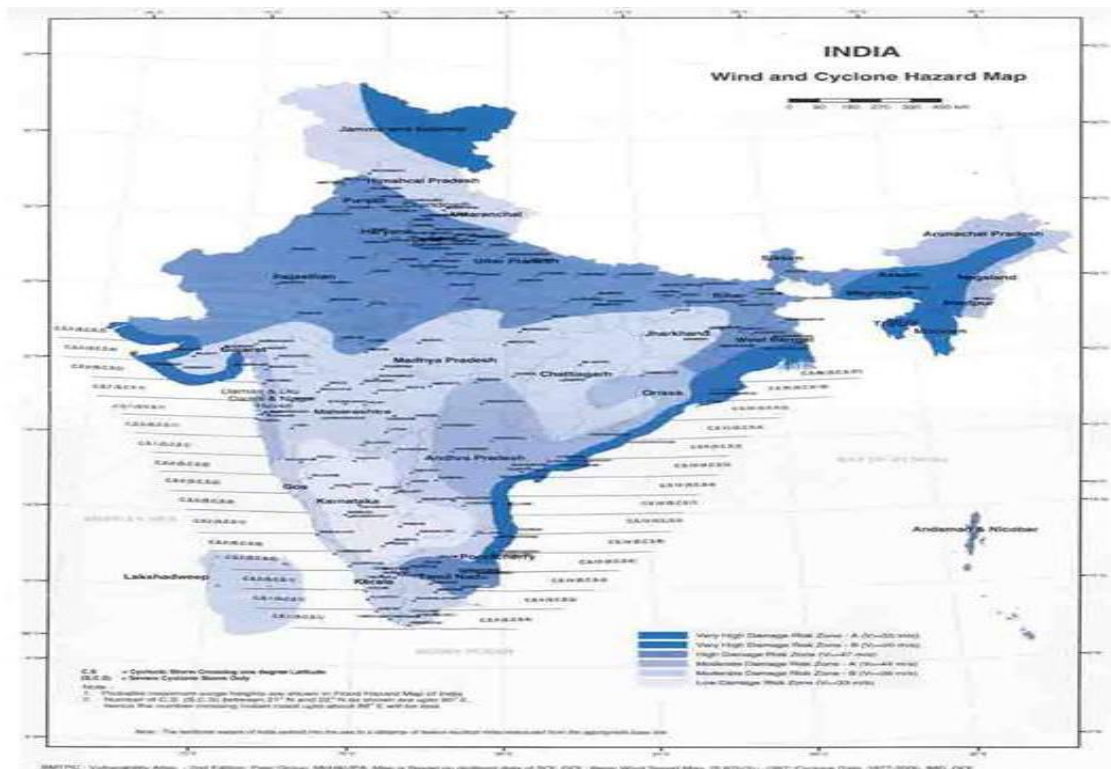
“GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities” Organised by Global Research Conference Forum, Pune, India November 23rd and 24th, 2019



Following are the incidences happen during last year 2019. Out of that 6 incidence were natural disasters and clamed many lives.

- 2019 Assam alcohol poisonings
- 2019 Bandipur forest fires
- 2019 Bihar floods
- 2019 Karnataka floods
- 2019 Kerala floods
- 2019 Mumbai foot over bridge collapse
- 2019 Vadodara flood
- 2019 kolhapur flood

Disaster risks in India are further compounded by increasing vulnerabilities related to changing demographics and socio-economic conditions, unplanned urbanization, and development within high-risk zones, environmental degradation, climate change, geological hazards, epidemics and pandemics. Clearly, all these contribute to a situation where disasters seriously threaten India’s economy, its population and sustainable development. Following are the maps for earthquakes of moderate to very high intensity land .



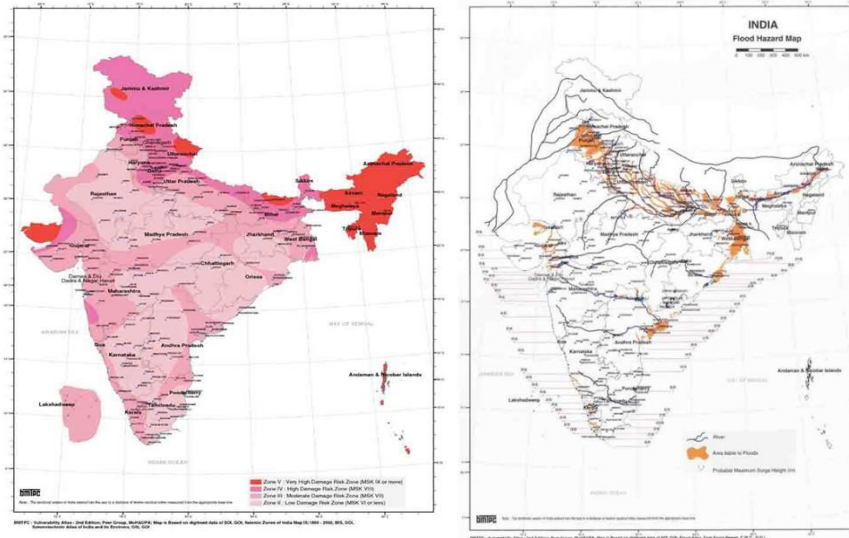
Land is prone to floods and river erosion
5700 Kms long coastline is prone to cyclones and tsunamis.



OUR HERITAGE

ISSN: 0474-903- Vol-67, Special Issue-9

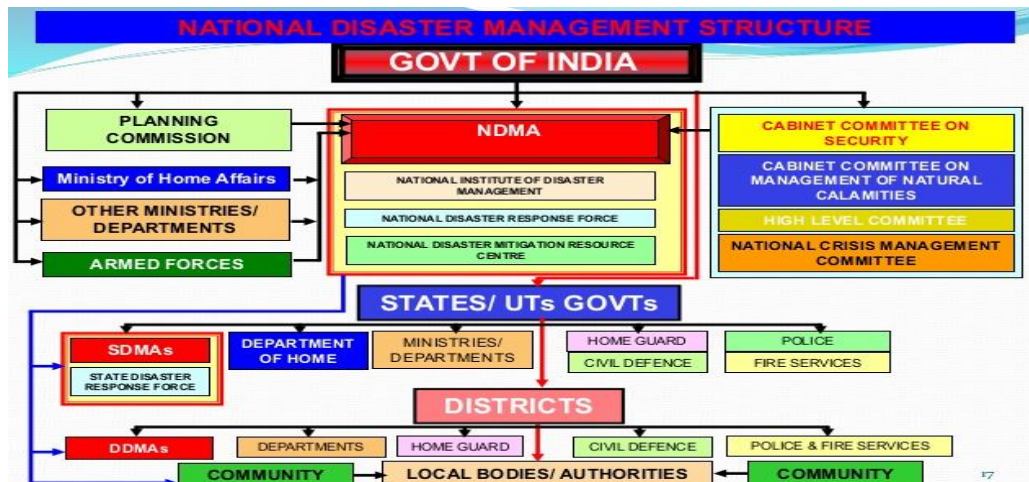
“GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities” Organised by Global Research Conference Forum, Pune, India November 23rd and 24th, 2019



Problem statement: In the situations like disaster first thing after safety of the people is their food and shelter. So there is concern of food safety. Also it is concern of our day to day life and its deals all the aspects of food from farm to plate. Every human being should have access to good and safe hygienic food for his basic need to food consumption. Even in the natural calamity like floods, hurricane, wood fire, snow storm, earthquakes there is need to safe and hygienic food to the peoples in the area.

Disaster Management: Disaster management deals with the all difficulties occur during the natural calamity and manmade disasters. Their main job is to deal with managing the supply of resources, and organizing the supply chain management of the required good most of the time it is food, clothing, medicines and water. In India national disaster management authority is set up in 2005. The primary purpose is to coordinate the team that gives the proper response to the situation. Its helps in disasters like Sikkim earth quick in 2005, cloud burst in 2010, cyclone nisha in 2009.

NDMA National Disaster Management Authority of India





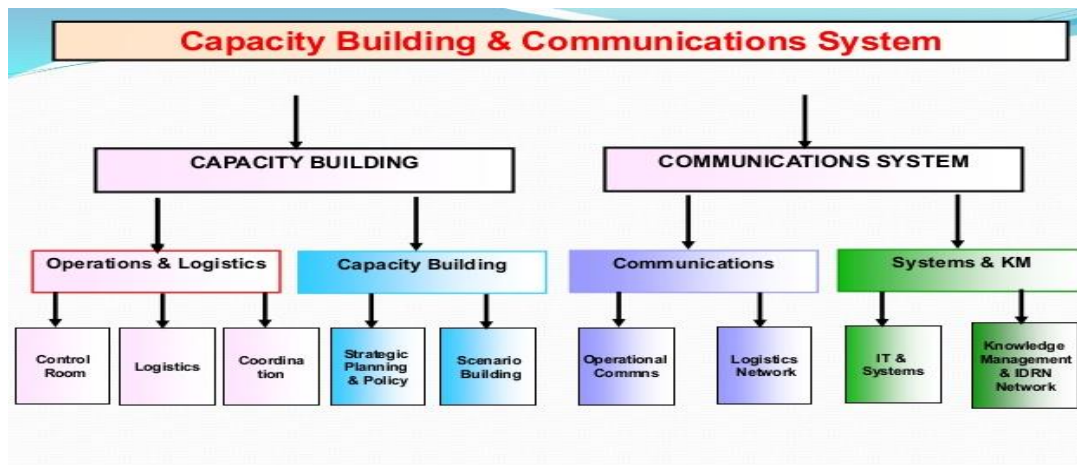
OUR HERITAGE

ISSN: 0474-903- Vol-67, Special Issue-9

“GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities” Organised by
Global Research Conference Forum, Pune, India
November 23rd and 24th, 2019



In the following chart community always involved at the end and need to wait for the responses for the above different authority . Actually they have the better idea if the current situation and can plan better for the responses required . Food safety department can be part of the state government disaster management and work with the local bodies for providing the supply of the safe and hygienic food to the people through their community services . It is also observed that at the level where state government and its various department involves there is no involvement of the food safety department .



This is very new area of the government and the NDMA is also comparatively new body to deal with any kind of disasters. So the capacity building is their main motive near future. Every disaster takes place need to taken as an opportunity the department stronger and capable to serve the nation in any kind of disaster situation.

There is also need to logistics and control room set up type at various levels for better capacity building.

New about truck stranded due to flood water in various areas:

NDTV NEWS: Potatoes Rot in Trucks Stranded At Maharashtra's Flooded Kolhapur

The heavy rain and flooding that has devastated large parts of Maharashtra and killed 30 people so far, has now also destroyed hundreds of tons of potatoes being transported to Belgaum district in Karnataka.

The Times of India: 7 Aug 2019 Supply of essential commodities hit: Gokul, the largest co-operative dairy, claimed that since the highway got shut on Tuesday afternoon, supply of around 15,000 liter of milk has totally stopped. However, efforts are being made to supply milk pouches in the in the city, especially for children and people-affected by the flood.

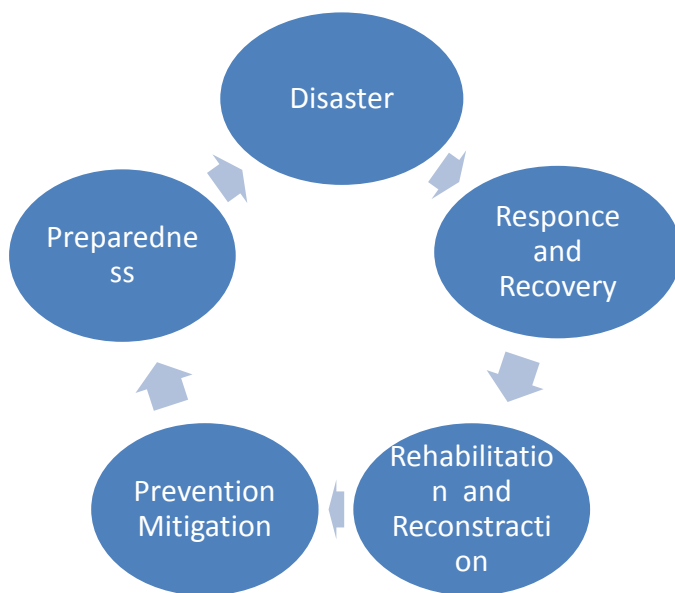
Component of Disaster Management:



OUR HERITAGE

ISSN: 0474-903- Vol-67, Special Issue-9

“GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities” Organised by
Global Research Conference Forum, Pune, India
November 23rd and 24th, 2019



Food Distribution logistics System in current Disaster areas:

Bihar

Storing of Food Items Prior to the Floods (from Pravin Bhardwaj, GOI- UNDP Disaster Risk Reduction Programme, Delhi)

In Bihar, people store food items like flattened rice (churva), murmure, makhana and roasted gram flour before the floods. These food items being dry are stored and used for many months in the areas vulnerable to floods. They prepare ladoos made of wheat, rice flour, churva and gram flour, high in protein, which forms a useful food supplement. This has helped the community in various situations to sustain till the aid from the government comes.

Maharashtra

Food Supply in Relief Camps, Kolhapur(from Prasad Sankpal, Convergence of Agriculture Interventions in Maharashtra (CAIM), Collector Office, Wardha)

During the 2006 floods in Kolahpur, there was special emphasis on health and hygiene. The community arranged a kitchen under the supervision of district administration. Proper menus was decided for each day. The food supplied was regularly monitored including special arrangement for providing milk to the children. All food related donations were inspected by the district administrators thus ensuring better management and distribution of food.

Logistic of food, the national logistics for food supply should be considered. In some occasions it is seen that few of the area having flood should not receive the daily food supply. It is also seen that many trucks are loaded with the various food articles are sucked in the same area for few days and lot of food got spoiled during the same time and wasted.

Finding:



OUR HERITAGE

ISSN: 0474-903- Vol-67, Special Issue-9

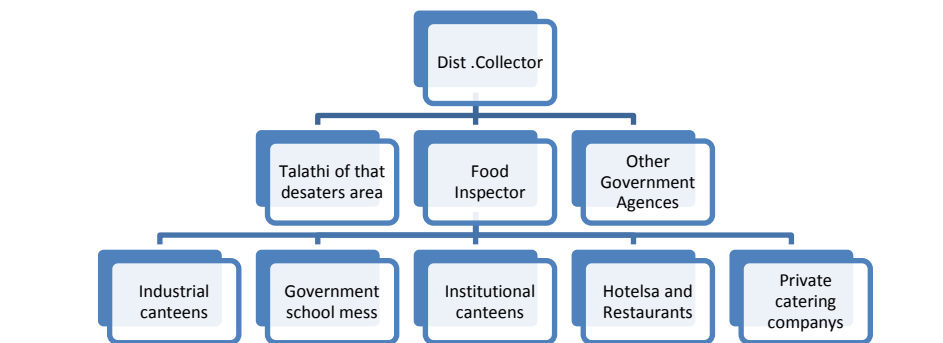
“GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities” Organised by
Global Research Conference Forum, Pune, India
November 23rd and 24th, 2019



Planned an Emergency Food Supply can be a better solution to face the problems like hunger, malnutrition etc. Always need to store the non perishable food and having stock for 15 days is better. There is no surety of refrigeration so fresh food cannot be store for long time due to it short life. That will also help to keep safe from food contamination away. Keeping on hand a three-day supply of food and water per person. Stock foods that require no refrigeration. Store foods your family normally eats, plus favorite treats. A crisis is not the time to learn to eat new foods. Avoid too many foods high in salt, as this will increase thirst. Store single servings or one-meal size to avoid leftovers, as refrigeration may not be available. Canned foods keep almost indefinitely as long as cans are undamaged. The can also will work as the cooking and serving dish. Open the can and remove the label before heating. Do not place metal cans in the microwave.

Capacity Building: In the capacity building there is missing link of supply of daily food to the disasters area which can be filled by food inspector with collaboration of the local government that is collector of the specific district and talathi (revenue officer) followed by the food inspector .

Proposed hierarchy of food supply chain to the disasters area:



Above hierarchy is suggested to involvement of food inspector in the current system of the disaster management. This will provide the ease in supply chain of food to the needed area. Food inspector is government authority and can acquire the any food premises in case of emergency for the better sully and production of food.

Community kitchen: Main purpose is to provide clean and hygienic nutritious food to all the members of community at the affordable cost. Common example is mid day meal for the schools. Community kitchen is extension to that serving food to the busy and needy people. Aannanmitra foundation of ISCON is also running mass kitchen for the mid day meal program and serving ford to the almost 50000 children’s around Aurangabad city, Maharashtra.

Foods recommended for storage in emergency:

- Water – one gallon per person per day for drinking, cooking and personal hygiene.
- Ready-to-eat canned foods – vegetables, fruit, beans, meat, fish, poultry, meat mixtures, pasta.
- Soups – canned or dried soups in a cup.



OUR HERITAGE

ISSN: 0474-903- Vol-67, Special Issue-9

“GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities” Organised by
Global Research Conference Forum, Pune, India
November 23rd and 24th, 2019



Smoked or dried meats

Dried fruits and vegetables – raisins, fruit leather.

Juices (vegetable and fruit) – bottled, canned or powdered.

Milk – powdered, canned, evaporated.

Staples – sugar, salt, pepper, instant potatoes and rice, coffee, tea, cocoa mix.

Ready-to-eat cereals, instant hot cereals, crackers, hard taco shells.

High-energy foods – peanut butter, jelly, nuts, granola bars.

Cookies, hard candy, chocolate bars, soft drinks, other snacks.

Food Storage: Store one can openers with your emergency food supply. Canned foods can be heated indoors with Canned Heat, Charcoal grills, hibachis, and camp stoves must be used outside. There are many canned products available around in the market, few of them available in some of the areas like high hills, for army supply etc. Few examples of such products are as follows. Ex. Fish, canned, canned potatoes, dehydrated potatoes, canned fruits and vegetables, Canned fruit juice, Pickles, James and jellies, Rice, dried, Cornmeal Pasta, dried, Cold breakfast cereal, Prepared flour mixes, Packaged dry beans, peas, and lentils, Canned evaporated milk, Dry milk products.

Water Storage: Store one gallon of water per person per day, for drinking, cooking and personal hygiene. Options for safe water in an emergency include, bottled water, tap water stored in sterilized containers, uncontaminated water drained from your hot water heater/plumbing system, or water you purify after an emergency.

References:

<https://www.who.int/>

<https://www.slideshare.net/aminvalley/ppt-on-disaster-risk-management-and-j-k-floods-2014-41959556>

<https://ndma.gov.in/en/>

Food Safety in Disaster Situations: Gopi Ghosh, Resource Persons and Nupur Arora, Shweta Tyagi and T N Anuradha.