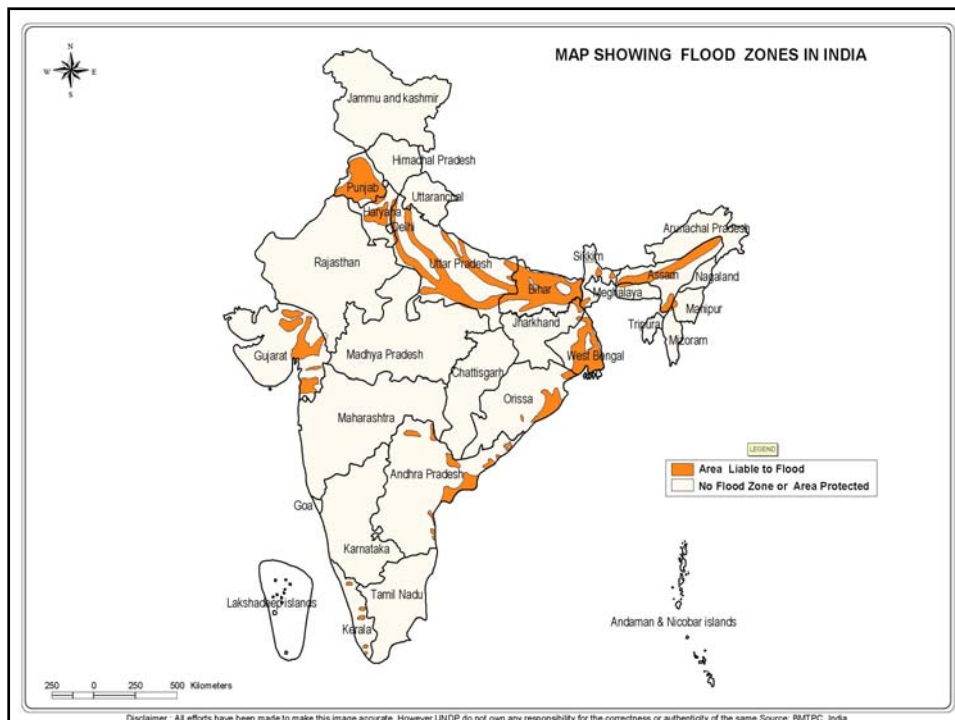
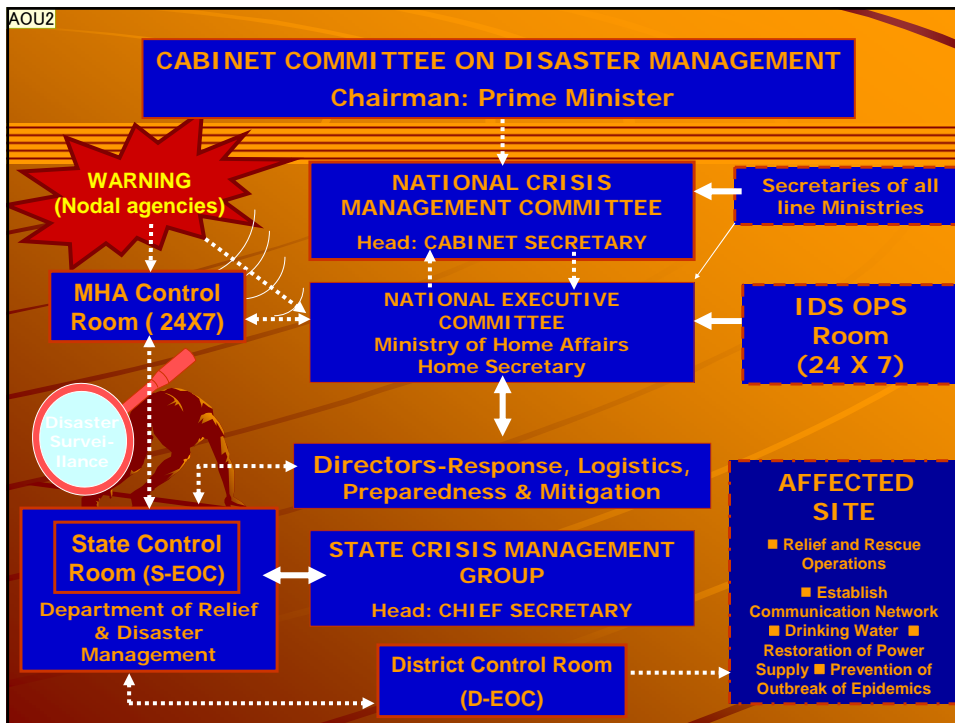


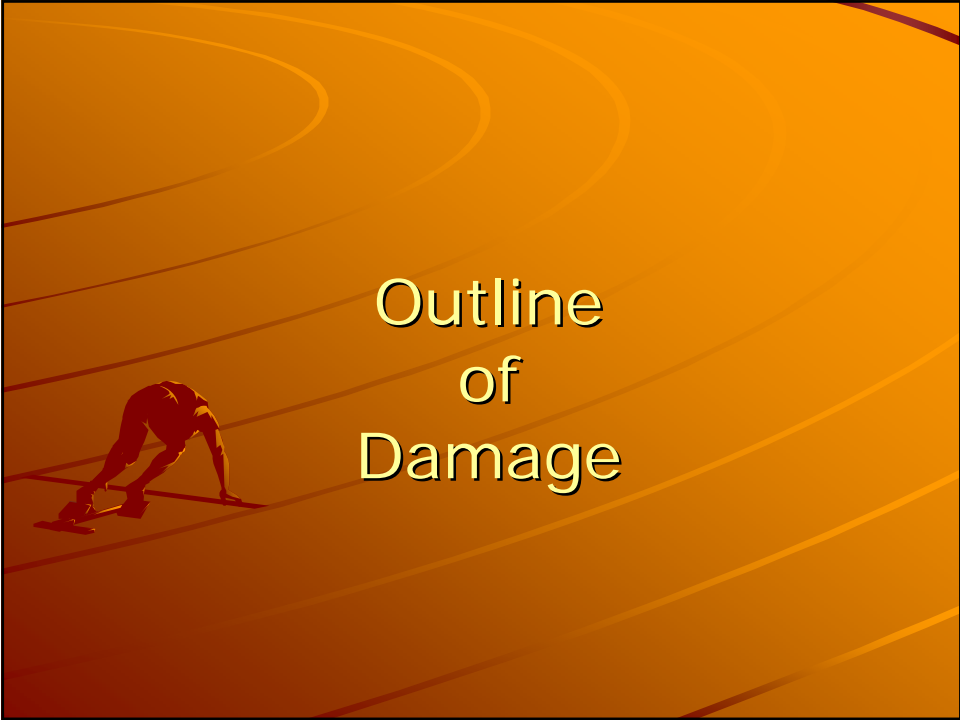
- Outline of Damage
- Outline of Disaster Risk Management implemented
- Issues faced and lessons learnt in Disaster Risk Management
- What were successful in the Disaster Risk Management

Vulnerability

- ✦ 54% of land mass prone to earthquakes
- ✦ 40 million hectares of landmass prone to floods
- ✦ 7500 Km(approx.) long coastline with two cyclone seasons
- ✦ Drought – low and medium rainfall regions which constitute 68% of the total area vulnerable to drought
- ✦ Hilly regions vulnerable to avalanches & landslides/Hailstorms/cloudbursts







Outline of Damage

CAUSE OF FLOODS

- ✦ A low pressure system developed in the west central Bay of Bengal and adjoining areas on 29th Sept. 2009 and persisted till 4th October 2009.
- ✦ Under the influence of the above system the westerly along the west coast strengthened and consequently fairly widespread to widespread rainfall activity with heavy to very heavy rainfall at isolated places occurred over Orissa, Andhra Pradesh, Karnataka, Kerala and along the west coast

Cont'd

- ✦ The combination of torrential and incessant rains and abnormal discharges from the projects /dams in the river basin assumed catastrophic proposition causing huge damage.
- ✦ The huge overland flows resulted in the swelling of not only rivers but also streams and there by causing extensive flooding of agricultural lands and habitations

Damage Caused

- ✦ Two States of Andhra Pradesh and Karnataka severely affected due to floods
- ✦ Population of around 20 million affected due to the floods.
- ✦ State of Andhra Pradesh has estimated a loss of Rs.11707crore(Rs.3166.01crore +Rs.8541.84crore) equivalent to USD 2.6 bn (USD 703 mn)
- ✦ State of Karnataka has estimated a loss of Rs.18568.25crore(Rs.7195.12crore +Rs.11373.13crore) equivalent to USD 4.2 bn (USD 1.5bn)

Extent of Damage cont'd

Areas	Andhra Pradesh	Karnataka	Total
No. of Districts affected	13	15	28
No. of Villages affected	525	4292	4817
Population affected	1.8 mn	18 mn	19.8 mn
No. of Human lives lost	90	229	319
No. of Houses damaged	259095	655484	914898
Damage to crops	0.24 mn ha	2.19 mn ha	2.43 mn ha
No. of livestock	16149	7882	24031

Extent of Damage

Areas	Andhra Pradesh	Karnataka	Total
Roads (kms)	4594	29613	34207
Bridges/Culverts (no.)	384	5240	5624
Irrigation tanks(nos)	1795	449	1844
Major irrigation structures (no.)	16	2014	2030
Water supply system (no.)	6291	8525	14816
Power supply (no.)	179340	115320	294660
Health infrastructure(no.)	101	404	505





DRM Implemented Cont'd

- ✦ Activation and Monitoring of the situation through Emergency Operation Centre on 24*7basis and generation of SITREPS at regular intervals.
- ✦ Issue of alert/advisories to the State Governments prior to the event.
- ✦ All nodal agencies informed in advance for the response preparedness.
- ✦ Continuous monitoring of the situation at the highest level both at the States and National level.

DRM Implemented cont'd..

- Constitution of teams for rescue and relief at the district level
- Logistic support for rescue and relief by providing Aircraft, helicopters, boats, manpower etc.at the National level.
- Setting up of Relief camps ,shelters, medical camps, etc. for the flood affected people.
- Providing food and drinking water to the stranded population.

DRM Implemented

- ✦ The State Governments launched massive rescue and relief operations immediately after 29th September 2009.
- ✦ The State police ,Home Guard, Civil Defence, Fire Personnel,NGOs and Local community played vital role.
- ✦ The assistance of National Disaster Response Force, Army, Navy and Airforce provided from 1st October 2009 onwards for Relief and Rescue.

Rescue & Relief

	Andhra Pradesh	Karnataka	Total
Persons rescued/evacuated	.54 mn	5197	.54 mn
Food packet distributed	5.44 mn	2.5 mn	7.94 mn
Relief camps (nos.) (people accommodated)	403 (440123)	1715 (765623)	2118 (1.06 mn.)
Medical camps (nos.)	378	-	378
Veterinary camp	131	-	131
Water sachet	3.65 mn	-	3.65mn



Logistic Support

	Andhra Pradesh	Karnataka	Total
Personnel	1269	629	1898
Motorized boats	627	402	1029
Life buoys	310	352	662
Life Jackets	655	260	915
BAUTs	23	12	35
Aircraft	5	4	9
Helicopters	10	10	20
Swimmers	1186	-	1186





Financial Support

✦ **Andhra Pradesh**

Advance release of 2nd installment of Central Government share of Rs.156.83 crore (USD 34 mn) released from Calamity Relief Fund and Rs.500 crore (USD 110 mn) as advance from National Calamity Contingency Fund

✦ **Karnataka**

Advance release of 2nd installment of Central Government share of Rs.52.26 crore (USD 11.55 mn) released from Calamity Relief Fund and Rs. 5 0 0 crore(USD 110 mn) as advance from National Calamity Contingency Fund



Issues faced and lessons learnt

Issues Faced

- ✦ Volume and magnitude of the flood
- ✦ Absence of proper communication between the States.
- ✦ To assess the requirement of logistic support.
- ✦ Evacuation of the flood affected people
- ✦ Distribution of food and water.
- ✦ Maintenance of close coordination between different agencies

Lessons Learnt

- ✦ To undertake flood mitigation structural measures like construction of embankments, raising the villages, flood proof structures etc.
- ✦ Need to have proper drainage system.
- ✦ More Community awareness generation programmes and Community based DRM projects
- ✦ Better coordination between States with regard to water management.
- ✦ More coordination at the ground level in providing relief to the affected people.
- ✦ To strengthen communication with last mile connectivity.
- ✦ Well trained and equipped management Team.

Success in the Disaster Risk Management

- ✦ Prompt action at the National level for providing logistic support.
- ✦ As result of DM set up at National and State level a close coordination could be maintained with Relief commissioners and nodal officers of the supporting Central ministries/ Departments.
- ✦ Timely evacuation of the people to the safer places.
- ✦ Effective use of the communication system in the Control rooms of both State and National level.
- ✦ Prompt setting up of Relief camps and shelters for the flood affected people.
- ✦ Immediate restoration of damaged infrastructure such as roads, communication, water supply etc







