



**Government of Bihar**  
**Department of Disaster Management**



# **DISASTER RISK REDUCTION ROADMAP (2015-2030),** **Government of Bihar**

## **ROADMAP DEVELOPMENT PROCESS, STRUCTURE & CONTENT**

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# Presentation Outline:

1. Sendai to Bihar DRR Roadmap 2015-2030
2. Process of Roadmap Development
3. Roadmap Structure
4. Disaster Risk Profile of Bihar
5. Foundational Element of the Roadmap
6. Targets & Milestone
7. Specific Action for Departments
8. Enabling Policy Architecture
9. Roadmap Implementation Arrangements
10. Monitoring and evaluation

# Sendai to Bihar DRR Roadmap 2015-2030



- The third World Conference on Disaster Risk Reduction (WCDRR) held in Sendai on 14-18 March, 2015 adopted the Sendai Framework for Disaster Risk Reduction (SFDRR)
- SFDRR identified 7 Targets and 4 Priorities.
- Decision was taken to convert “**Words into Action**” in the last week of March, 2015 to develop Bihar’s DRR Roadmap through the Bihar Conference on Disaster Risk Reduction (BCDRR)

# Sendai to Bihar DRR Roadmap 2015-2030



- Constitution of an Organising Core Committee (OCC) and preparations for BCDRR
- To ensure that DRR Roadmap provide a clear direction and specific action areas
- SFDRR's 4 Priority Areas and action areas were interpreted and contextualised in accordance with local realities and priorities of Bihar
- The Department of Disaster Management (DMD) co- led the process along with NDMA, NIDM, BSDMA and UNICEF (Convener) in partnership with Save the Children, Oxfam India and Bihar based CSOs

# Process of Roadmap development:



3<sup>rd</sup> World  
Conference on  
Disaster Risk  
Reduction, Sendai

Adaptation of  
*Sendai Framework  
for Disaster Risk  
Reduction*

Decision for  
Bihar  
Conference on  
Disaster Risk  
Reduction  
(BCDRR)

Constitution of  
Organising  
Committee



First  
BCDRR

Drafting of  
DRR  
Roadmap

DRR  
Roadmap  
Validation  
workshop

DRR  
Roadmap  
approved  
by the  
Cabinet,  
GoB

14<sup>th</sup>-18<sup>th</sup> Mar  
2015

Mar-Apr-  
May, 2015

13<sup>th</sup> -14<sup>th</sup>  
May, 2015

May -Dec  
2015

8<sup>th</sup> -9<sup>th</sup> Jan,  
2016

28<sup>th</sup> Apr,  
2016

# Sendai Framework For DRR (2015-30)



Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2006-2015.

Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2006-2015.

Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030.

Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.

Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.

Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030.

Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

**Four targets  
(1-4) has been  
adapted in Bihar  
DRR Roadmap**

## Priority Area 1

**Understanding  
disaster risks**

## Priority Area 2

**Strengthening  
disaster risk  
governance to  
manage disaster risk**

## Priority Area 3

**Investing in  
disaster risk  
reduction for  
resilience**

## Priority Area 4

**Enhancing disaster  
preparedness for  
effective response,  
and to  
“Build Back Better”  
in recovery,  
rehabilitation and  
reconstruction**

# **First Bihar Conference on DRR- 13<sup>th</sup> & 14<sup>th</sup> May, 2015:**



- **Hon. Chief Minister of Bihar inaugurated the conference and released a 'Status Paper' on DM in Bihar**
- **84 panellists and 550 participants discussed the issues and specific actions for Roadmap in 17 thematic sessions, which were anchored by 10 agencies from Bihar**
- **18 papers submitted by experts and compiled as a compendium**
- **'Patna Declaration' released by the Hon. Minister for Disaster Management**

# Political Commitment:



“राज्य के खजाने पर आपदा-प्रभावितों का पहला हक है...”

*(The disaster affected people have the first right on the state's treasury...)*

Shri Nitish Kumar, Hon'ble Chief Minister, Bihar in his inaugural address of the Bihar Conference on  
Disaster Risk Reduction  
(BCDRR), Patna, Bihar, 13<sup>th</sup> - 14<sup>th</sup> May 2015.





# Patna Declaration (14 May, 2015):



As endorsed by the delegates at the 1<sup>st</sup> BCDRR, Patna (13-14 May 2015), the Government of Bihar adopts the **Bihar Disaster Risk Reduction Framework (BDRRF)** to achieve the vision of a **Disaster Resilient Bihar**. This framework for the period 2015 to 2030 comprises the following 10 commitments:

1. Disaster Risk Reduction will be institutionalised by launching a state-wide campaign in 2015 through collaborative partnerships by involving all stakeholders.
2. Disaster prone communities and regions will be guaranteed inalienable right to the state's resources for safety, prompt relief and protection.

Cont...

# Patna Declaration (14 May, 2015):



3. Disaster Risk Reduction will be mainstreamed across Government of Bihar's planning processes addressing the requirements for strengthening preparedness, emergency response, rehabilitation, reconstruction and recovery.
4. All development planning initiatives will factor in risk avoidance, risk transfer, risk sharing and residual risk management.
5. Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs) will be empowered with financial and regulatory roles for Disaster Risk Reduction.
6. Community skills, knowledge and capacities will inform decision making about Disaster Risk Reduction at all levels through inclusive and participatory processes, with special emphasis on context-specific differential needs of social groups.

**Cont...**

# Patna Declaration (14 May, 2015):



7. Resilience of critical infrastructure and delivery of essential services will be ensured, including restoration of functionality and continuity, in case of disruptions.
8. Mechanisms for gathering, analysing and disseminating targeted early warning information to key stakeholders will be established in line with the national framework.
9. Lives, livestock and livelihoods will be protected from disruption due to natural and human-induced disasters and extreme events.
10. Requisite financial and human resources will be committed for fulfilling the vision of Disaster Resilient Bihar through the creation of a corpus fund.

# Drafting of DRR Roadmap:



- Drafting Committee, comprising members from DMD, BSDMA, UNICEF and Civil Society, met several times for deliberations on the Roadmap structure, framework and content.
- Contributions were solicited and received from:
  - Panellists and Experts from BCDRR,
  - All the line departments, DMs & other government officers,
  - CSOs working in Bihar,
  - 18 Thematic Papers, and
  - Village Communities
  - Disaster Risk Management Solutions Exchange community,
  - Newspaper advertisements,
- Drawing out learning from BCDRR sessions through analysis of session videos, session notes, and workshop report
- Review of pertinent policy documents of Bihar (MMV, Agriculture and Health Roadmaps, SDMP amongst others) and other relevant documents (such as Sri Lanka DRM Roadmap amongst others)

# Validation Workshop: 8<sup>th</sup> & 9<sup>th</sup> Jan, 2016



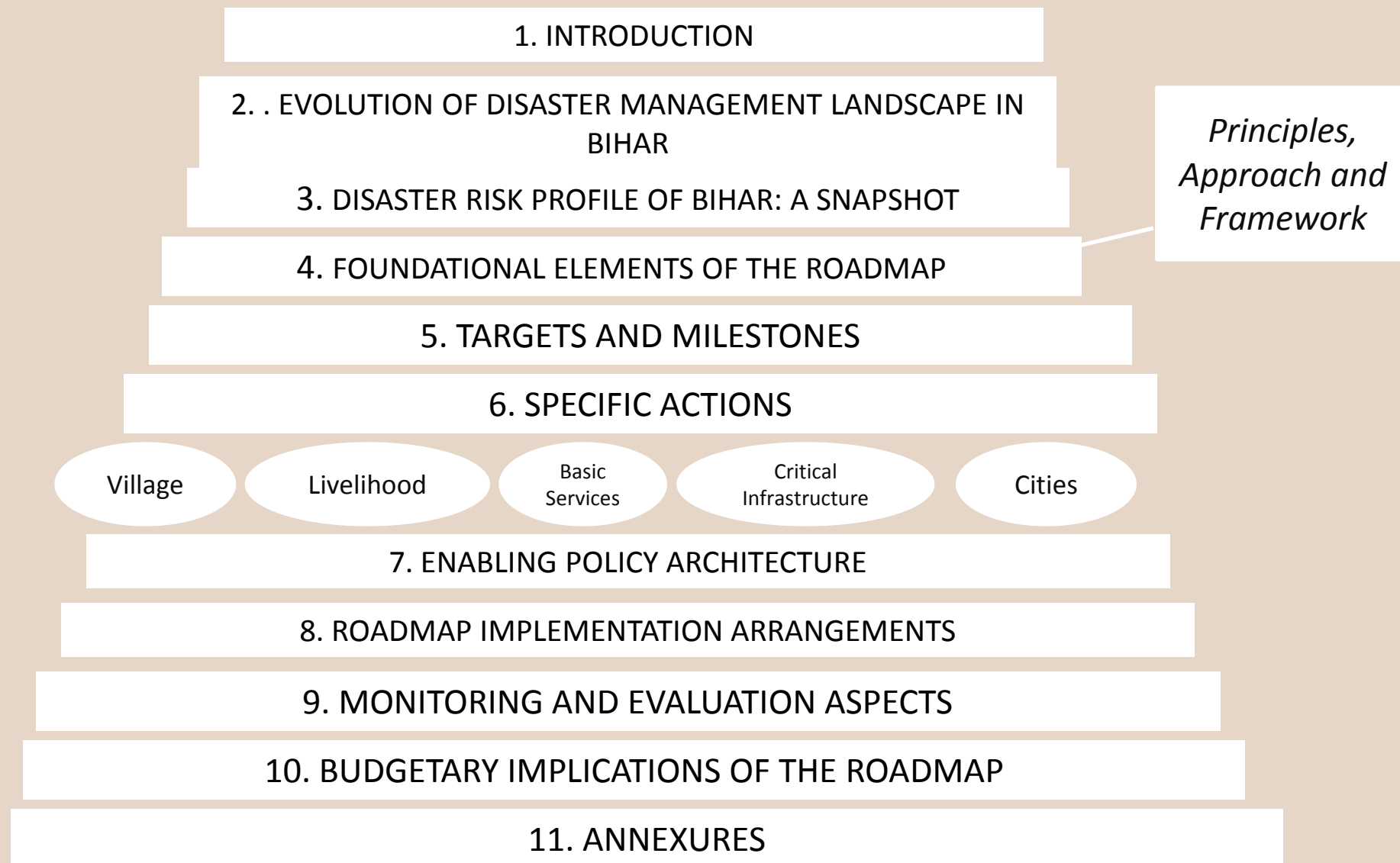
- Inaugurated by Hon'ble Chief Minister.
- All the experts and panellists of BCDRR participated.
- 8 Technical and Plenary session.
- Reviewed and provided specific changes/ recommendations.
- Following chapters were reviewed:
  - Resilient Villages, Resilient Livelihoods, Resilient Basic Services, Resilient Critical Infrastructure, Resilient Cities,
  - Enabling Policy Architecture,
  - Roadmap Implementation Arrangements, and
  - Monitoring and Evaluation Mechanisms.

# Approval of DRR Roadmap:



- Draft DRR Roadmap revised incorporating suggestions/inputs received during the validation workshop
- Revised draft further shared with line departments for their review
- DRR Roadmap presented before Principal Secretaries/Secretaries/senior officers of various line departments in a meeting chaired by the Chief Secretary
- The DRR Roadmap approved by the finance department
- **Finally the State Cabinet approved Bihar DRR Roadmap on 28<sup>th</sup> of April, 2016**

# DRR Roadmap Structure:



# Disaster Profile of Bihar:



***Bihar is prone to multi-hazards like:***

**Recurring Floods:** 28 districts out of 38 are prone to floods, Bihar accounts for 17% of the flood-prone area and 22% of the flood-affected population in India

**Earthquake:** 07 dist. in Seismic zone V (Highest), 21 dist in zone IV (High). Faced EQ in 1934, 1988 & 2015. 63 people lost their life in April, 2015 EQ in Bihar

**Drought:** Southern part of the state (13 dist.) suffer from drought, Bihar faced moderate to severe drought in 2002, 2007, 2008, 2009, 2010, 2011 & 2013

**High Speed Winds/ Cyclonic storms:** 27 dists out of 38 are fully affected by high speed winds of 47 m/s intensity. Tornado killed 59 people in April, 2015 in Bihar

**Severe Cold wave, Heat Wave, Lightning, Hailstorm**

**Road Accidents:** Annual deaths 5500+

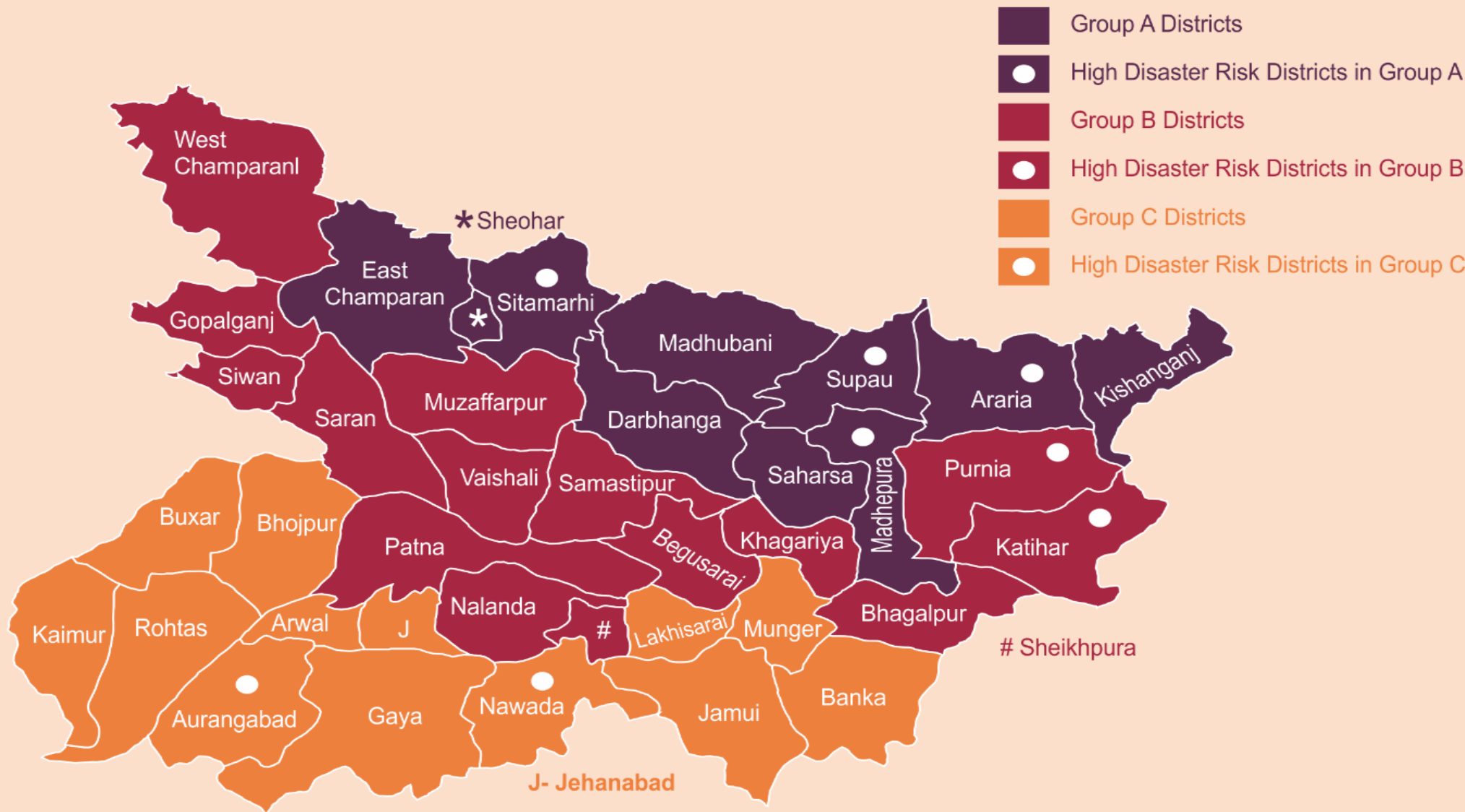
**Village fires in summer:** fire hazard of varying Intensity covers all the 38 districts of Bihar

**Health emergencies i.e. Acute Encephalitis Syndrome (AES)**

***Boat Capsizing and Deaths by Drowning are very common***  
***Climate Change Changing Climate- showing signs***



# Disaster Risk Profile of Bihar: A Snapshot



# District grouping as per hazard profile:



Group	Profile	Constituent Districts
<b>Group A Districts (10)</b>	Mainly Flood Prone and Earthquake Zone V	Araria, Drabhanga, East Champaran, Kishanhanj, Madhepura, Madhubani, Saharsa, Sheohar, Sitamarhi, and Supaul
<b>Group B Districts (18)</b>	Mainly Flood Prone and Earthquake Zone IV	Banka, Begusarai, Bhagalpur, Bhojpur, Gopalganj, Katihar, Khagariya, Lakhisarai, Muzaffarpur, Nalanda, Patna, Purnia, Saran, Samastipur, Sheikhpura, Siwan, Vaishali, and West Champaran
<b>Group C Districts (10)</b>	Mainly Drought Prone and Earthquake Zone III	Arwal, Aurangabad, Buxar, Gaya, Jamui, Jehanabad, Kaimur, Munger, Nawada, and Rohtas

**All Districts in Groups A, B and C prone to fire, hail storm, heat wave, cold wave, lightning, road accidents and stampede etc.**

# Foundational Elements of the Roadmap:



## 1. 15 Guiding Principles:

- Primacy of rights of at-risk communities
- Partnerships
- Participation, Inclusion
- Resilience in Development

## 2. Approach of Implementation:

- Multi-hazard focus
- Phasing

## 3. Framework:

- Resilience as the organising principle, goal and means
- FIVE components – communities and systems



**Vision**  
**Disaster Resilient  
Bihar**

**Targets and Milestones**

**Foundation Elements – Principles, Approach and Organising Framework**

**Resilient  
Villages**

**Resilient  
Livelihoods**

**Resilient  
Basic Services**

**Resilient  
Critical  
Infra-structure**

**Resilient  
Cities**

**Specific  
Actions,  
Responsible  
Actor And  
Timeline**

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**Specific  
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**Enabling Policy Environment**

**Implementation Arrangements**

**Monitoring and Evaluation Aspects**

**Budgetary Implications**

# Bihar DRR targets:



- 1. Lives lost due to natural disasters in Bihar would be reduced by 75% of the baseline level by 2030.**
- 2. Lives lost due to transportation related disasters (viz. road, rail and boat accidents) in Bihar would be substantially reduced over baseline level by 2030.**
- 3. People affected by disasters in Bihar would be reduced by 50% of the baseline level by 2030.**
- 4. Economic loss due to disasters in Bihar would be reduced by 50% of the baseline level by 2030.**

# Bihar DRR milestones:



## BY 2020:

- 1. Baseline status for each of the four targets is developed.**
- 2. Training of Engineers, Architects, Masons etc. for safe construction of projects and buildings completed.**
- 3. Structural safety audits of all government offices/ buildings and infrastructure (such as Secretariat, Collectorates, SDO/Block/Anchal Offices, Police Offices and Stations, Schools, Hospitals, Panchayat Bhawans, Anganwadi centres etc.) is completed and corrective measures initiated.**
- 4. Safe construction of all major Government projects and building is initiated.**
- 5. Emergency Support Functions are notified and made operational with fully-functional Emergency Operations Centres (EOCs) at state and district levels.**
- 6. Structural safety of all commercial buildings (such as malls, cinema halls and other public places of mass gathering) is ensured.**
- 7. Comprehensive multi-hazard risk analysis (current and emerging disaster risks) and incorporating in annual plans and PIPs of all line departments and annual plans of PRIs and ULBs.**



# Bihar DRR milestones:



## **BY 2020:**

- 8. Service Delivery Continuity Plans (SDCPs) and Infrastructure Continuity Plans (ICPs) for all basic services & critical infrastructures - to ensure department functions return to 'business as usual' in the quickest time.**
- 9. An effective Early Warning System (EWS) is established, wherein all villages and cities in Bihar have systems for early warning information reception, dissemination and taking up immediate good enough pertinent action.**
- 10. DDMAAs strengthened with resources, mandates and capacities for playing an integral role in disaster risk reduction decision making at the district level.**
- 11. Communities understand and practice 'do's and don'ts' during disaster situations as a result of a state-wide public awareness and education campaign launched at all levels.**
- 12. Building bye-laws incorporating safe construction in all urban areas are approved.**
- 13. Communities are encouraged and a policy regime is developed to enforce safe construction in rural areas.**

# Bihar DRR milestones:



## BY 2025:

- 1. Corrective measures, including retrofitting, for ensuring structural resilience of all government offices and social infrastructure are completed.**
- 2. A system for Risk Informed Development Planning (RIDP) is adopted and operational in the state at all levels of planning.**
- 3. All PRIs and ULBs are adequately empowered through funds, functions and functionaries to ensure resilience.**
- 4. Communities in all villages and cities regularly monitor current and emerging disaster risks, including underlying risks, and assert for measures to be taken to address the same.**
- 5. Platforms and mechanisms are institutionalized across Bihar for effective learning and sharing on DRR planning, implementing and drawing learning.**



# Bihar DRR milestones:



## BY 2030:

- 1. Policies and practices for agriculture and other livelihood related risk transfer, sharing, and compensation are adopted by agriculture and small industry based livelihoods systems in Bihar.**
- 2. Rural and urban habitat planning processes like land zoning, town and city development planning take into account existing and emerging disaster risks.**
- 3. All existing and new public and private buildings in Bihar are structurally safe from a multi-hazard perspective.**



# **SPECIFIC ACTIONS FOR DEPARTMENTS**



# General points for all departments/ agencies:



- Specific Actions has been arranged department/ agency wise.
- Nodal department/ agency will lead the activities whereas supporting departments would provide requisite support to nodal department
- Level of action (State, District, Block, and Gram Panchayat or Urban area) and the timeline (short-term, medium term and long- term) for each specific activity has been identified.
- Each department/ agency has to make budgetary provisions for the assigned activities in their annual budget; DMD can supplement funds if some of the activities can't be budgeted by the departments/ agency.

# Line Departments listed for DRR actions:



1. Disaster Management Department
2. Bihar State Disaster Management Authority
3. District Disaster Management Authority
4. Health Department
5. Agriculture Department
6. Animal Husbandry & Fisheries Department
7. Cooperative Department
8. Food & Consumer Protection Department
9. Education Department
10. Public Health Engineering Department
11. Bihar Institute of Public Administration
12. Industries Department
13. Labour Resource Department
14. Building Construction Department
15. Water Resource Department
16. Department of Environment & Forest
17. Finance Department
18. Information & Public Relation Department
19. Urban Development Department
20. Rural Development Department
21. Jeevika
22. Panchayati Raj Department
23. Home Department (Fire Services & Traffic)
24. Transport Department
25. Road Construction & Rural Works Department
26. Social Welfare Department
27. Energy Department

# Enabling Policy Architecture



# Enabling Policy Architecture:



- 1. Review of disaster management related policy architecture of Bihar,**
- 2. Legal Amendments required:** PRI act & ULB Act (by Urban Development and Housing Department)
- 3. Develop policies:** Disaster Recovery Policy, Livelihood Recovery Policy, Water Management Policy, Waste (Solid and Liquid) Management Policy, Climate Change Adaptation Policy
- 4. Notify the Emergency Support Functions (ESF)**
- 5. Guidelines/ manuals/ directives**
- 6. SOPs on** Earthquakes, Cyclonic Storms, Crowd Management, Debris clearance, dignified disposal of dead bodies and animal carcasses, Functioning of State and District Emergency Operation Centres (EOCs)
- 7. Programmes:** Resilient Village programme, Resilient City programme and Chief Minister School Safety programme.



# ROADMAP IMPLEMENTATION ARRANGEMENTS



# Roadmap implementation arrangements:



1. Review of disaster management institutional framework of Bihar,
2. Proposed institutional arrangement
  - **Roadmap Implementation Support Unit (RISU)** will be established in DMD, with a dedicated full-time team of technical experts and appropriate supportive staff. The RISU will support the planning, implementation and monitoring functions of the DRR Roadmap.
  - **State Institute for Disaster Management (SIDM)** will be established to function as the nodal state level capacity building, research, study cum resource centre on disaster management and risk reduction.
  - **State Platform for DRR (SPDRR)** –on the lines of NPDRR. For stocktaking on the implementation of the DRR Roadmap.
  - **State Level Task Force**





# Monitoring and Evaluation:

Institution	Focus and means of monitoring	Frequency
<b>BSDMA (in annual meetings headed by Hon'ble CM)</b>	Strategic Review (Presentation by DMD)	Annual
<b>CMG/SEC</b>	Review (Line Departments' presentations)	6 monthly
<b>State Task Force, headed by Hon'ble Minister-DMD</b>	<ul style="list-style-type: none"> <li>• Coordination among line departments/ agencies</li> <li>• Support to line departments and agencies</li> <li>• Stocktaking of implementation of Roadmap</li> </ul>	Quarterly
<b>Line Departments, headed by respective PS</b>	<ul style="list-style-type: none"> <li>• Review of action plan for implementation</li> <li>• Internal Review of status of implementation of specific tasks assigned to them</li> </ul>	Bi-monthly
<b>Divisional Commissioners</b>	<ul style="list-style-type: none"> <li>• Review of department's plan for risk analysis, risk-informed actions and actions taken to perform the specific tasks at the district level</li> <li>• (All DMs and divisional level heads of line departments to participate. Chairmen of District Boards and Mayors of ULBs as special invitees)</li> </ul>	Group A & B dist.: Bi-Monthly Group C dist.: Quarterly



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<b>DDMA, headed by DMs</b>	<ul style="list-style-type: none"> <li>Review of departmental plans and actions taken Review of DDMP</li> <li>Review of Resilient Village and City Programmes</li> <li>All SDOs/BDOs/Cos/Pramukhs of Panchayat Samitis/ Ward Commissioners of ULBs and CSOs shall participate. Chairman of District Board and Mayor of ULB shall be special invitee)</li> </ul>	Group A & B dist.: Bi-Monthly Group C dist.: Quarterly
<b>SDOs</b>	Review of Resilient Village and City Programmes/DDMP/VDMP (All BDOs/COs/Mukhiyas of GPs and CSOs shall participate)	Group A & B dist.: Bi-Monthly Group C dist.: Quarterly
<b>BDOs</b>	<b>Review of Resilient Village programmes VDMP (All COs/Mukhiyas of GPs and CSOs shall participate and 20 Sutriya Officer will lead the review)</b>	<b>Group A &amp; B dist.: Bi-Monthly</b> <b>Group C dist.: Quarterly</b>
<b>GP / ULB</b>	GPs may be invited in review meetings at SDO level	
<b>CSOs</b>	Participation of CSOs in all the above mentioned monitoring and evaluation activities.	
<b>Experts / Agencies</b>	Participation in the periodic review and evaluations of this DRR Roadmap	



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Thank you