

**PROCEEDINGS/MINUTES OF THE MEETING HELD ON 02.07.2020 AT 2:30 PM TO DISCUSS INITIAL PROJECT SCOPING REPORT & RVS/RETROFITTING MATTERS OF NATIONAL SEISMIC RISK MITIGATION PROGRAMME (NSRMP).**

A meeting was held on 02<sup>nd</sup> July, 2020 at 2:30 PM under the Chairmanship of Sh. Samir Kumar, Dy. Project Director, PMU, NDMA to discuss Initial Project Scoping Report of National Seismic Risk Mitigation Programme (NSRMP) and also various aspects of RVS/Retrofitting. The meeting was attended by Officials from NDMA, and the Consultant (M/s DDF-AKDN JV). List of participants is attached at Annexure-I.

2. The meeting started with a welcome note from the Dy. Project Director, PMU, NDMA. A presentation on Initial Project Scoping Report was made by Consultant's Team Leader. A detailed discussion was held on different chapters of the report. It was observed that the Initial Project Scoping Report does not fulfil the requirements of ToR and hence, the report needs further revision. Accordingly, the same is unacceptable in the present form.
3. After deliberation involving views/ suggestions of participants, the following action plan/way forward was agreed to:
  - I. The initial Project Scoping Report submitted is very sketchy. Hence, unacceptable in the present form. It needs comprehensive revision addressing inter-alia the following points:
    - (a) Component 'A1' Scoping should include, inter-alia,
      - (i) State/UT wise details on On-site and Regional EEWDS with comprehensive approach and methodology for designing EEWDS should be provided in the report. State/UT wise location of sensors to be specified, including Location details of On-site sensors. Also description of integration of On-site sensors with regional EEWDS is required to be incorporated.
      - (ii) Multi-parameter based EEW algorithm for On-site as well as Regional warning approaches, clearly bringing out that both Depth and Magnitude of earthquake are taken into account for designing EEW.
      - (iii) Basis of issuing warning, whether Magnitude or Intensity or a combination of both to be clearly explained with rationale.
      - (iv) Estimation of location and magnitude of earthquake to be detailed out.
      - (v) Strong ground motion at the point of observation and Lead Time accompanying the warning to be described. Scoping to include available lead time at every target city..



- (vi) Mechanism of integration EEWDS under NSRMP with already existing national network is to be described, taking in to account compatibility issues.
  - (vii) Scoping for the Request for Proposals (RFPs) and investments in terms of concept plan, physical work, detailed engineering plan and bidding documents are required to be mentioned.
- (b) Component 'A2' Scoping should include, inter-alia,
- (i) State/UT specific existing Emergency Response Capacity to be detailed out in terms of existing status of data/information, gap analysis and final recommendations.
  - (ii) State/UT specific existing inventory of Search & Rescue equipment to be specified.
  - (iii) Upgradation requirements (human resources, equipment, training needs) of SDRF, and the State/City level Fire & Emergency Services to meet search and rescue standards to be detailed out with its benefits/impacts on disaster management.
  - (iv) Brief description on training and capacity building programme for emergency/first responders.
  - (v) Brief description on augmentation of disaster risk management capacities of the communities.
  - (vi) Brief description on scoping for the Request for Proposals (RFPs) and investments in terms of concept plan, physical work, detailed engineering plan and bidding documents.
- (c) Component 'B' Scoping should include, inter-alia,
- (i) State/UT wise details on identification of critical buildings/infrastructure to be retrofitted. Priority list of critical infrastructure of each State must be verified & signed by the concerned Nodal Officer of the State, and Consultant's Team Leader and Concerned State Co-ordinator. Critical infrastructure as mentioned above have to be included in the Initial Scoping Report.
  - (ii) The performance level of the retrofitted structures to be ensured based on the utilization/importance factor of the structures and needs of the concerned State Governments.
  - (iii) Retrofitting to be adhered to the National Building Codes/BIS/NDMA Guidelines and consistent with the international best practices.
  - (iv) State/UT wise proposal for small Technical Demonstration Units.



- (v) Identification of Technology Demonstration Unit and finalization of size and location and other relevant requirements of TDUs in consultation with State authorities. Development of design (new/retrofit) and construction drawings, preparation of DPR and Bid Documents for the investment to be described.
  - (vi) Brief description on scoping for retrofitting of critical buildings/infrastructure in terms of Structural Design Based Report (SDBR) based on detailed survey, conditional assessment, and Non-destructive testing along with detailed analysis.
  - (vii) Scoping report must include details of the Technology (Base Isolation, dampeners, Splint & Bandages, Jacketting, etc.) to be used for retrofitting for different types of critical infrastructure (Masonry structures, RCC structures, RCC bridge, Steel bridge, etc.) in its methodology with cost analysis (i.e., cost of different retrofitting technology per square meter).
  - (viii) Brief description on scoping for developing TDU design (new/retrofit) and construction drawings, DPR and Bid Documents for the investment.
- (d) Component 'C' Scoping should include, inter-alia,
- (i) Studying the existing materials/draft NCPE Bill from the perspective of seismic risk mitigation/ disaster risk reduction and providing inputs/suggestions for incorporation in the draft Bill.
  - (ii) Strengthening/Establishing Seismic research and development program across country including setting up a centre of excellence.
    - State/UT wise assessment of present status, gap analysis, documenting key findings of assessment, way forward and outputs, viz.; Detailed Project Report and Action Plan with recommendations highlighting benefits for implementation.
    - Design aspects of "Centre of Excellence".
    - Contours of DPR for setting up Centre of Excellence.
  - (iii) Curriculum revision for introduction of Earthquake Engineering topics in Engineering, and Architecture education.
    - State/UT wise assessment of present status, gap analysis, documenting key findings of assessment, way forward and outputs, viz.; Detailed Project Report and Action Plan with recommendations highlighting benefits for implementation.
  - (iv) Formulation and implementation of Techno-legal Regime for structural design reviews, implementation monitoring and licensing of professionals.



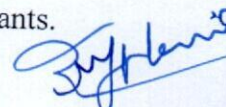
- State/UT wise assessment of present status, gap analysis, documenting key findings of assessment, way forward and outputs, viz.; Detailed Project Report and Action Plan with recommendations highlighting benefits for implementation.
- (v) Documenting, improving and encouraging Traditional Earthquake Resistant Construction.
- State/UT wise assessment of present status, gap analysis, documenting key findings of assessment, way forward and outputs, viz.; Detailed Project Report and Action Plan with recommendations highlighting benefits for implementation.
- (vi) Development of large scale standardized information, education and communication (IEC) material including audio-visual and print materials.
- State/UT wise assessment of existing IEC materials, gap analysis documenting key findings of assessment, way forward and outputs, viz.; Detailed Project Report and Action Plan with recommendations highlighting benefits for implementation.
  - Preparation of new material wherever not available for sensitization programmes of communities.
- (vii) Preparing ToRs for Consulting Services for formulation of training modules.
- State/UT wise assessment of existing modules, if any, for training and capacity building of engineers, architects, masons, State & Municipal bodies.
  - Suggesting approach/modalities for implementation.
- (viii) Consultant to describe the impact/benefit of their recommendation/action plan on each sub-components of Component C.
- (ix) Consultant to make assessment and carry out review of the National and State level Seismic Policy formulation and National Seismic Hazard mapping.
- (e) Component 'D' Scoping:
- (i) Detailed description and methodology for followings to be brought out in the Scoping Report:
- Programme Implementation and Monitoring & Evaluation.
  - Staff Capacity Building and Training including preparation of training materials and manuals.
  - Project manuals, Documentation and quality monitoring.



- Project Management support including Environmental & Social monitoring to the participating States and PMU.
- Procurement management, Financial management, Environmental & Social Management, and development of Management Information System.

RVS/Retrofitting Matter

- II.
- (i) Model RVS report to be shared.
  - (ii) Consultant will disclose about the other companies/firms engaged for different activities pertaining to NSRMP.
  - (iii) Actual videos/photographs with proper caption and brief on activities carried out at sites to be shared in real-time.
  - (iv) The RVS should be carried out in the physical presence of Structural Engineering Specialist, State Coordinator and Associate State Coordinator. Comprehensive report on RVS signed by the State Nodal Officer, and State Coordinator & Structural Engineer of the State/UT will be shared on weekly basis with NDMA and the State/UT. The report should also mention details on RVS team, activities performed and structure/building wise analysis details with outcomes.
  - (v) State-wise final list of prioritized critical facilities to be retrofitted, duly signed by the Consultant's Team Leader and State Coordinator, and State Nodal Officer, to be submitted to NDMA at the earliest.
  - (vi) State specific concept note on TDU detailing on size and other relevant requirements will be shared with States/UTs. Site for TDU will be finalized by the Consultant in coordination with the States/UTs.
4. The meeting ended with thanks to the Chair and all the participants.



(Rajendra Piplonia)  
Project Manager  
NCRMP, NDMA



**Annexure-I**

**PROCEEDINGS/MINUTES OF THE MEETING HELD ON 02.07.2020 AT 2:30 PM  
TO DISCUSS INITIAL PROJECT SCOPING REPORT & RVS/RETROFITTING  
MATTERS OF NATIONAL SEISMIC RISK MITIGATION PROGRAMME (NSRMP).**

<b>Sl. No.</b>	<b>Name of Officials with Designation</b>	<b>Organisation</b>
1	Sh. Rajendra Piplonia Project Manager, PMU	NDMA
2	Dr. Sanjay K Sharma Env. Specialist, PMU	NDMA
2	Dr. Mudit Kapoor Project Coordinator, PMU	NDMA
3	Mr. Vijay K. Sharma Manager (IT), PMU	NDMA
4	Mr. Shaurabh Chandra Director	DDF
5	Dr. Amit Kumar, Team Leader	DDF-AKDN JV