MINUTES OF MEETING ON 'DEMONSTRATION OF FULLY OPERATIONAL WEB-DCRA & DSS TOOL, OFFLINE DESKTOP VERSION OF WEB-CRA AND OFFLINE EXPOSURE MANAGEMENT' HELD ON 29.07.2021 AT 11 AM IN OPS. ROOM, NDMA BHAWAN, NDMA.

A meeting on Web based Dynamic Composite Risk Atlas (Web-DCRA) and Decision Support System (DSS) Tool for cyclone and associated impacts was held on 29th July, 2021 at 11AM under the Chairmanship of Joint Secretary & Project Director, NCRMP (PMU), NDMA. The meeting was attended by Officials from NDMA, IMD, INCOIS, NRSC, The World Bank, coastal States/UTs, and Consultant (M/s RMSI). List of participants is attached at **Annexure-I**.

2. The Consultant (RMSI) team made demonstration on fully operational Web-DCRA & DSS Tool and Offline Exposure Management. Different Exposure layers of Web-DCRA, and Technical User Guide for the Web-DCRA & DSS Tool available on the dashboard were demonstrated and discussed.

RMSI team confirmed that the Application on real-time run will pick-up the latest requisite data-sets from IMD [*Cyclone track, Observed & Forecasted rainfall data, wind hazard data*], and INCOIS [*ADCIRC model outputs (maxele & maxvel files), and flood heights at river mouth locations*] from their depositories through FTP. Final flood hazard is generated by the model alongwith surge hazard. Master log keeps all the information of the processed tasks. The Dashboard updates information every 3 hours and this can also be suitably modified manually.

3. Dr. M. Mohapatra, DGM, IMD emphasised that there should be intervention to check dataset during a real-time cyclonic event while keeping the master file/format unchanged, and Web-DCRA & DSS Tool should be capable to automatically generate the necessary return period 'hazard scenario' for a given wind speed to indicate coastal area vulnerability. He suggested for integration of real/actual information from reliable data with the Web-DCRA Tool for comparison of expected damage & loss with actual damage. He further insisted for combined report generation mechanism for dual/multiple states. Mr. Deepak Singh, Lead DRM Specialist, The World Bank suggested that States must ensure that Line Deptt. keep updating data regularly, and RMSI should explore and create mechanism to archive the data of atleast 3 months old to the system. He also stressed that based on the login credential; the reports generated by State should have the respective State's logo/credential.

4. Based on the discussions/demonstration, the action plan/way forward is summarised below:

i. There should be intervention to check dataset during a real-time cyclonic event while keeping the master file/format unchanged.

ii. Web-DCRA & DSS Tool should be capable of automatically generating the necessary return period 'hazard scenario' for a given wind speed to indicate coastal area vulnerability.

iii. The real/actual information from reliable data to be integrated with the Web-DCRA Tool for comparison of expected damage & loss with actual damage.

iv. If any Error is encountered in the model run, the feature of sending error message automatically by the System to the Administrator at IMD through Whatsapp and E-mail be enabled in Web-DCRA & DSS Tool as well as in DCRA Mobile App.

v. The System to be enabled to show time stamp (date/time) on input files from IMD & INCOIS considered for modelling on Real-time page and Reports.

vi. After offline data update by States, the System will send the data notification to state for approval.

vii. The System will keep back up of old exposure for reference and emergency needs.

viii. Mechanism to be created to archive the data log of atleast 3 months old to the system while updation of the Exposure in order to have a reference of the last update.

ix. The Application will have space/library to store the satellite imageries of observed flood extent (from NRSC) and provision to be made in the application to perform validation/comparison with the flood hazard modeling output.

x. The outputs generation should bring the metadata information upfront giving clarity on last update of the exposure information. An annexure of the output report to be generated capturing this information.

xi. Population exposure available in table format should also be made available on Map and population density at risk also to be depicted as output map.

xii. Web-DCRA & DSS Tool should be enabled for combined report generation mechanism for dual/multiple states.

xiii. Return period analysis from climatology point of view should be made available on the system for each identified cyclone. Return periods of wind speed, rainfall & Storm Surge in tabular form should be generated by the system and made available to IMD.

xiv. Based on the login credential; the reports generated by State should have the respective State's logo/credential.

xv. Frequency of exposure data and decision making for the updation should be ensured in the User Guide document.

xvi. Exposure data with structural & non-structural attributes to be updated by States on quarterly basis, essentially in March and September every year in coordination with Space Application Centre (SAC) and other relevant Departments/Agencies of State. Accordingly, the SOP needs to capture this information, highlighting State wise agency/institution and person-in-charge for data updation.

xvii. RMSI to provide comprehensive workshop cum hands-on trainings to designated Officers including Nodal Officer for Web-DCRA & DSS Tool of all 13 coastal States/UTs and the concerned Agencies/key stakeholders on operation of Web-DCRA & DSS Tool and Exposure Data updation.

xviii. RMSI to submit revised report on 5th Deliverable, duly complied with all the decision points within 10 days, i.e., by 09th August 2021.

xix. Another meeting to be scheduled to review compliance of the above decisions, wherein, a demonstration of Fully Operational Web-DCRA & DSS Tool, Offline Desktop Version of Web-CRA and Offline Exposure Management will be done by RMSI.

xx. RMSI to ensure that activities related to 5th Deliverable must be completed within the approved time limit.

5. The meeting ended with thanks to the Chair and all the participants.

03.08.2021
(Sanjay K Sharma)
Project Manager
NCRMP, NDMA

Annexure-I

MINUTES OF MEETING ON 'DEMONSTRATION OF FULLY OPERATIONAL WEB-DCRA & DSS TOOL, OFFLINE DESKTOP VERSION OF WEB-CRA AND OFFLINE EXPOSURE MANAGEMENT' HELD ON 29.07.2021 AT 11 AM IN OPS. ROOM, NDMA BHAWAN, NDMA.

Sl. No.	Name of Officials with Designation	Organisation
1	Ms. Sreyasi Chaudhuri Joint Secretary & Project Director, PMU	NDMA
2	Dr. M. Mohapatra Director General of Meteorology	IMD
3	Dr. Sanjay K Sharma Env. Specialist, PMU	NDMA
4	Dr. P Prasad Project Coordinator, PMU	NDMA
5	Mr. Cyriac K J Social management Specialist, PMU	NDMA
6	Mr. Vijay Kumar Sharma Manager (IT), PMU	NDMA
5	Mr. Deepak Singh Lead DRM Specialist	The World Bank
6	Mr. Anup Karanth TTL & Sr. DRM Specialist	The World Bank
7	Dr. Sunitha Devi S. Scientist 'E', Cyclone Warning Division	IMD
8	Dr. D R Pattanaik Scientist 'F'	IMD
9	Dr. Anand Kumar Das Scientist 'E'	IMD
10	Dr. T M Balakrishnan Nair Scientist 'G' & Head (ISG)	INCOIS
11	Dr. E. Pattabhi Rama Rao Scientist 'F', ODG	INCOIS
12	Dr. PLN Murthy Scientist 'D', OMDA	INCOIS
13	Dr. V V Rao Dy. Director , RSA	NRSC
14	Amudha	Meteorological Watch Office (Aviation), Chennai
15	Mr. B Prasad	APSDMA
16	Dr. M. M. Ali	APSDMA
17	Dr. Arabinda Ray	OSDMA
18	Dr. B N Mishra	OSDMA
19		IMD-Goa
20	Sh R K Abhinand Nodal Officer, NCRMP-SPIU	Karnataka
21	Dr. V.K. Mini Scientist 'E'	IMD, Thiruvanathpuram
22	Dr. N.D. Niyas Scientist D	IMD, Thiruvanathpuram
23	Dr. P.S. Biju Scientist E	IMD, Thiruvanathpuram

24	Mr. Nalinachandran. V Procurement Specialist, SPIU-NCRMP	Kerala
25	Dr. G. Vijaykumar Nodal Officer	Puducherry
26	Sh Pushpendra Joahari Team Leader	M/s RMSI
27	Dr. Sushil Gupta, Dy. Team Leader	M/s RMSI
28	Dr. Indu Jain Asst. General Manager	M/s RMSI
29	Mr. Sachin Jalota Sr. Software Developer	M/s RMSI
30	Mr. Lokendra Dixit Project Manager	M/s RMSI
31	Mr. Sanwar Bajiya Senior Technical Specialist	M/s RMSI
32	Rajneesh Kumar Sr. Software Engineer	M/s RMSI
33	Ms Puja Kumari Sr. Engineer (Water Resource)	M/s RMSI