

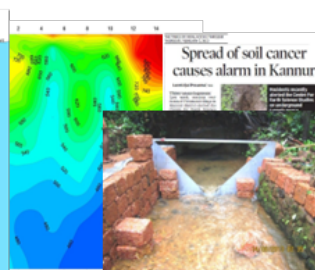


NATIONAL WORKSHOP ON

POLICY FOR MITIGATION MEASURES AND REHABILITATION FOR PEOPLE DISPLACED BY EROSION

17-02-2023

SYMPHONY HALL, MASCOT HOTEL, THIRUVANANTHAPURAM



National Workshop on Policy for Mitigation Measures and Rehabilitation for People Displaced by Erosion

Proceedings

Jointly organized by

***National Disaster Management Authority
NDMA Bhawan, A-1, Safdarjung Enclave, New Delhi – 110029
<https://ndma.gov.in/>***

and

***Kerala State Disaster Management Authority
Observatory Hills, Vikas Bhavan P.O.
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1. INAUGURAL SESSION

One-day national workshop titled "National Workshop on Policy for Mitigation Measures and Rehabilitation for People Displaced by Erosion" was held in Thiruvananthapuram, Kerala on February 17, 2023, jointly by the National Disaster Management Authority (NDMA) and Kerala State Disaster Management Authority (KSDMA). The opening ceremony began with the lighting of the lamp by dignitaries Dr. V.P. Joy, Chief Secretary, Kerala, Mr. K.S. Vasta, Member, NDMA, Dr. A. Jayathilak, Additional Chief Secretary, Disaster Management, Kerala, Mr. Kunal Satyarthi, Advisor, NDMA, and Ms. T.V. Anupama, Commissioner, Disaster Management, Kerala. Senior members of NDMA, SDMAs of various states and UTs and technical delegates attended the workshop.

1.1 Welcome Address & Introduction about the Policy

Mr. Kunal Satyarthi, Advisor, NDMA extended a warm welcome to the delegates. He emphasized that this is the ideal forum for exchanging information on legislation for Rehabilitation for Persons Displaced by Erosion and Mitigation Measures. Mr. Satyarthi provided an update on the implementation of mitigating measures and the rehabilitation of those who have been displaced by erosion. Additionally, he underlined the need of more sophisticated and site-specific mitigation techniques.

1.2 Opening Remarks

The opening remarks were made by Dr. A. Jayathilak, Additional Chief Secretary, Disaster Management, Kerala. He emphasized in his opening remarks that the thickly populated coastal regions are susceptible to erosion and that demands special attention in the national policy. He also told that Kerala has grown more sensitive to coastal erosion, landslides and cyclones. He also mentioned that knowing the perspective of coastal population regarding their exposure to risk and vulnerability are key to risk reduction.

1.3 Presidential Address

In his presidential address, Dr. V.P. Joy, Chief Secretary, Kerala, noted that the workshop would give participants the chance to exchange information and experience regarding erosion and its prevention strategies. He emphasized that catastrophes are happening more frequently and that, in addition to the nationally notified disasters, Kerala has its own State Specific disasters. Additionally, he stated that Kerala is more susceptible to coastal erosion due to its geographic layout, thus it is crucial to develop volunteers within the community by increasing their skills in coastal erosion mitigation techniques. He also talked about the main challenges the State Disaster Management Authority faces when trying to put mitigation plans into place for both man-made and natural disasters.

1.4 Special address

In his Special address, Mr. K.S. Vasta, Member of NDMA, thanked the attendees for traveling to Thiruvananthapuram to help the workshop succeed. He emphasized how long India struggled with the issues of coastline erosion and river erosion. He briefly discussed the effects that coastal erosion had on individuals and families, and their overall progress in life. A key component of risk management, particularly in coastal areas, is knowing how people perceive their risk and susceptibility and the indigenous coping mechanisms. He emphasized the necessity to build up the community through education and training.

1.5 Vote of Thanks

Vote of Thanks was proposed by Ms. T.V Anupama, Commissioner, Disaster Management, Kerala. On behalf of the State of Kerala, she expressed sincere gratitude to Members of NDMA, delegates from various states, professionals, scientists and media representatives for attending the workshop.

2. SESSION – I - NATIONAL POLICY ON RIVER AND COASTAL EROSION

The first session was chaired by Mr. Kunal Satyarthi, Advisor, NDMA. The session had four presentations which were; Policy for Mitigation measures and Rehabilitation for People Displaced by Erosion by Mr. K.S. Vatsa, Member NDMA, XVth Finance Commission's Recommendations on Coastal and River Erosion by Mr. Ravinesh Kumar, Financial Advisor, NDMA, Coastal and River Erosion - Sharing of Experience by Prof. Syed Ainul Hussain (Retd.) Wildlife Institute of India and Hazard Mitigation to Risk Mitigation: Policy for bringing convergence and interdisciplinarity by Prof. Nirmalya Choudhury, TISS, Mumbai.

Policy for Mitigation measures and rehabilitation for people displaced by erosion- Mr. K.S Vatsa, Member, NDMA

The talk addressed the concerns of coastal and river erosion from both mitigation and rehabilitation viewpoints, for the impacted and vulnerable populations. The presentation also highlighted social, economic, structural, and non-structural protection strategies that would help affected and vulnerable communities. The talk also covered “National Policy on River and Coastal Erosion.” He gave the rationale for the national policy on soil erosion being a policy and not a guideline. He explained that the problem of soil erosion has a huge diversity with different kind of population dealing with different types of erosion. At some places villages are wiped off due to erosion and agricultural land is intact and at some places agricultural land is wiped off and villages are intact. The complex nature of the issue affects the livelihood of the affected population. Therefore, it is extremely necessary to take in community's perspective on the issue when drafting a policy. He pressed on the issue of data not being available for soil erosion caused by rivers whereas data on coastal erosion is available. He also added that SDMAs and DDMA's will play a crucial role in implementing the policy as projects have to be done locally and at state levels.

XVth Finance Commission's Recommendations on coastal and River Erosion- Mr Ravinesh Kumar, Financial Advisor for NDMA

The second presentation of the workshop highlighted the recommendations made by the XV Finance Commission in regards with coastal and soil erosion and allocation of funds. The presentation was made by Mr Ravinesh Kumar, Financial Advisor for NDMA. He elucidated on the changes made to disbursement of funds reserved for Disaster Risk Financing in the previous years in comparison to the XV Financial Commission. He expressed the utmost urgency of the issue of soil erosion not only in its impact on people but also financially as there is supposed to be no spill over of funds earmarked for the year to the next year. XV FC recommends that both the Union and State Governments develop a policy to deal with the extensive displacement of people caused by coastal and river erosion. People must be provided with alternative settlements and they should receive some assistance from the government.

Presentation- III

Coastal and River Erosion: Sharing of Experience - Prof. Syed Ainul Hussain (Retd), WRI

Prof. Syed Ainul Hussain (Retd), from WRI presented on the topic Coastal and River Erosion: Sharing of Experiences on nature-based solutions. He presented a case study from Bhitarkanika (Odissa) which was devastated by cyclone (1971) and presented a case study of biodiversity conservation and ganga rejuvenation. Both the case studies gave importance to finding nature based as well as community driven solutions to problems evolving from soil erosion. In case of Bhitarkanika, people realized the importance of Mangroves after the cyclone's effect and decided to plant mangroves to protect their environment in the future. Protection of mangroves is the most important which the local communities realized in Orissa. In case of Ganga River, a community-based action plan was devised to study the erosion patterns and develop community-based systematic conservation plan. Through this plan, data mapping of every 5km of Ganga River is available. Through this study of sand mining, erosion and the communities affected by it directly is also seen. These forms of solution that generate within the affected communities are one of the most important forms of solutions rather than building walls and concretizing of river basins and sea coasts. Therefore, he urged that the funds should rather be spent on nature-based solutions rather than engineering-based solutions.

Hazard Mitigation to Risk Mitigation: Policy for bringing convergence and inter disciplinarity- Prof Nirmalaya Choudhary, Jamshetji Tata School of Disaster Studies, TISS (Mumbai)

Prof Nirmalaya Choudhary from Jamshetji Tata School of Disaster Studies, TISS (Mumbai) presented on Hazard Mitigation to Risk Mitigation: Policy for bringing convergence and interdisciplinary. He briefly explained the opportunities this policy can bring in addressing the under addressed issue of soil erosion in India and the people affected by it. He explained the nature of the disaster which is slow and continuous and how people who are most affected by it are also socially vulnerable groups. Erosion Risk mitigation would need a sustained engagement by multiple agencies through multiple developmental interventions simultaneously implemented to mitigate the hazard and vulnerability. He also discussed the need to go beyond "structural" measures and see disaster management more as a development management. This policy is an opportunity to bring convergence and interdisciplinary in the field of disaster management

3. SESSION II – PROGRAMME ON MITIGATION MEASURES FOR COASTAL EROSION

The second session of the workshop on "Programme on Mitigation Measures for Coastal Erosion" was held from 12:10 to 13:00. The session's chair was Mr. K. S. Vasta, member of the National Disaster Management Authority and co-chair was Dr. K. K. Ramachandran, a former member of KCZMA. There were attendees including 11 NDMA members, delegates from various departments, delegates from states, representatives from civil society organizations and observers.

NDMA Adviser Mr. Kunal Satyarthi gave the opening remarks. Mr. Kunal Satyarthi provided a brief summary of the mitigating strategies for coastal erosion in his welcome speech. He outlined the key discussions that would be covered during session II. He agreed that coastline erosion had become a rising worry in recent years. Mr. Kunal Satyarthi outlined the important strategy that has already been adopted at the national and regional levels. Four presentations were made during the session, 1. Programme for Mitigation measures in Coastal Areas- Mr. Eklavya Prasad, Consultant, UNICEF 2. Strategies for design and implementation of mitigation measures– Climate Change and Inclusive Development - Mr. Satya Kiran Raju Alluri, Scientist, National Center for Coastal Research 3. Prof. R. Ramachandran's presentation on "Mitigation measures on Shoreline management: An integrated approach" 4. State stakeholders spoke on the topic of discussion on the proposed policy – based on previous experience.

Programme for Mitigation measures in Coastal Areas- Mr. Eklavya Prasad, Consultant, UNICEF

The presentation address the issues of coastal and river erosion from both mitigation and rehabilitation perspectives for the affected and vulnerable people. The presentation focused on enhancing resilience of the affected and vulnerable communities through social, economic, structural and non-structural mitigation measures. Presentation recommended district level decentralized planning of interventions for mitigation and rehabilitation, its monitoring and evaluation. The presentation addressed the concerns of coastal and river erosion from both mitigation and rehabilitation viewpoints, for the impacted and vulnerable populations. The presentation also highlighted social, economic, structural, and non-structural protection strategies that would help affected and vulnerable communities. The speaker advocated decentralized district-level planning for interventions in mitigation and rehabilitation, as well as monitoring and assessment of those plans. The presentation provides an overview of the institutional framework and procedures for assessing the impact and vulnerability to coastal and river erosion in various places. National Policy on Mitigation Strategies for People Displaced by Coastal and River Erosion was highlighted in the presentation. In the conclusion of the presentation, special emphasis was placed on the necessity of taking mitigation measures in areas that are vulnerable to coastal erosion.

Members in the audience asked insightful questions, and the presenter answered them with acceptable response.

Strategies for design and implementation of mitigation measures: climate change and inclusive development - Mr.. Satya Kiran Raju Alluri, Scientist, National Center for Coastal Research

Mr. Satya Kiran Raju Alluri, Scientist from the National Center for Coastal Research discussed climate change and inclusive development strategies for designing and implementing mitigating measures. The presentation's primary focus was on potential mitigating measures that have been implemented in several states in a site-specific manner. He emphasized that although India has a variety of coastal systems, they are all prone to degradation. He stated that both natural and artificial coastal areas had seen an increase in cyclone severity. He stressed that the primary cause of coastal erosion is an increase in cyclone frequency. The principal seashore segments that experienced erosion and loss of land mass were recognized from NCCR. The accepted natural-based strategies to reduce coastal erosion were discussed as the presentation came to a close. The talk answered the audience members' thoughtful queries.

Mitigation measures on Shoreline management: An integrated approach - Prof. R. Ramachandran, Former Director, NCSCM, GOI

Prof. R. Ramachandran addressed the third session and explained the major aspects of mitigation measures on shoreline management. The major objectives of presentation were risk planning: climate risk planning for development, mitigation blue assets: Enhance blue carbon sinks, adaptation blue growth: Promote blue economy. Under climate risk reduction, presenter detailed the topics on protect highly eroding shorelines with natural based erosion control measures, accelerate mitigation actions to reduce GHG emission, implement adaptation measures to build climate resilient infrastructure, protect small islands and communities from vulnerability and erosion. Under the objective of mitigation blue assets included protect and conserve blue carbon ecosystem, increase MPAs and restore degraded ecosystems, enhance and create new blue carbon habitats to achieve NDC and determine impacts of ocean acidification, SST, freshwater inputs and SLR. Under blue growth objective, covered major themes of develop marine spatial planning ensuring inter departmental governance mechanism, enhance blue economy in unexplored ecologically and economically important coastal and oceanic regions and build sustainable economic blue growth, development and coastal community well beings. The presentation covered well the hazard line mapping as well case studies of risk zones. The presentation satisfied the audience members' intelligent queries. It was further suggested in the discussion that hazard line mapping need to be incorporated in DM plans through the direction of NDMA

Discussion on the proposed policy – based on previous experience

The speaker gave a summary of the policies implemented in coastal areas. He took in the population and coastal regions. The presentation's main themes were coastal risk management,

climate change, and extreme events. The speaker then switched to topics related to coastal risk areas and sea level rise, then concentrated on the mitigation strategies required in the coastal risk zones. The speaker listed the necessary policies for both short-term and long-term danger zones. The conclusion included mitigation strategies. Participants in the audience had thoughtful questions, which the speaker answered.

4. SESSION III – POLICY ON REHABILITATION MEASURES FOR COASTAL EROSION

The third session was chaired by Mr. D P Mathuria, Executive Director, (NMCG), Ministry of Jal Shakthi and the session was Co-chaired by Dr. Sekhar L. Kuriakose, Member Secretary, KSDMA. The session consisted of three presentations. The first presentation was on policy for Rehabilitation measure in Coastal Areas presented by Mr. Eklavya Prasad, Consultant, UNICEF. The second presentation was on Convergence of Programs in mitigating coastal erosion by Mr. Vijay Kumar, Deputy Secretary, Ministry of Panchayati Raj and the third presentation was by Mr. Harsh Gupta on Climate change displacement and Management of River and Coastal Erosion

Policy for Rehabilitation measure in Coastal Areas

Policy for rehabilitation measures was covered by Mr. Eklavya Prasad consultant, UNICEF. He started his presentation by highlighting the critical points of the policy for rehabilitation measures. He discussed further the rehabilitation measure for coastal erosion affected communities which included habitat related services and providing basic services. Instituting basic needs like clean drinking water, safe sanitation, drainage system, interconnecting roads, health facilities, education etc., in the relocated site is obligatory prior to initiating the rehabilitation process. While identifying areas for relocation, areas closer to the prior location should be given priority. Preparing the panchayat- and district-level relocation plans in which the social and economic networks of the Internally Displaced Persons (IDPs), especially the most vulnerable, must be included.

Convergence of Programmes in mitigating coastal erosion

Mr. Vijay Kumar, Deputy Secretary, Ministry of Panchayat Raj, GoI presented on convergence of programmes in mitigating coastal erosion. He mentioned the departments such as Ministries mapped against the LSDG, Rural Development, Land Resources, Drinking Water and Sanitation, Agriculture & Farmers welfare, Animal Husbandry, New & Renewable Energy, Environment, Forest & Climate Change, Skill Development, National Remote Sensing Agency, NIC (GIS) which will be helpful in understanding effects of erosion in much detail as its already been done in the departments. He mentioned disbursement of grants that central government gives to panchayat in the form of tied and untied grants. These are huge funds that can be mapped for rehabilitation and mitigation. He also threw light on the power given to panchayat in Disaster Management. He described various pools and funds available that can be used for capacity building measures.

Climate change displacement and Management of River and Coastal Erosion

This presentation was given by Mr. Harsh Gupta, who discussed the rehabilitation measure present in the policy document. He gave an example of Kendrapada (Orissa) where people are already in the process of relocation. The critical challenge faced is lack of any kind of mapping i.e.,

where are people moving to and how many times, they move from one location to the other. The profile of people affected in this is also missing. Therefore, it is necessary to include these measures for better understanding of the problems. He mentioned that rehabilitation of people should ensure a better standard of living for people affected by the disaster. We should also look at housing and habitat together. Each aspect required by a community for healthy living such as safe drinking water, sanitation, schools, panchayat etc must be incorporated into the resettlement plan. Its important to also understand that rehabilitation is not only relocation but various measures to make the living in a disaster-prone area easy.

5. SESSION IV – PROGRAMME ON MITIGATION MEASURES FOR RIVER EROSION

The workshop's fourth session, titled "Program on Mitigation Strategies for River Erosion," took place from 14:50 to 15:40. The session's co-chair was Prof. Syed Ainul Hussain (Retd), WII, and its chair was Mr. Keshav Hingonia, special secretary of revenue. Participants included delegates from NDMA, delegates from several departments, delegates from numerous states, representatives from civil society organizations.

The session's opening remarks were made by Mr. Keshav Hingonia, special secretary of revenue. In his welcome address, Mr. Kunal Satyarthi gave a quick summary of the session on informal linkages on mitigating strategies for river erosion. He provided an overview of the major topics at session IV. He acknowledged that river erosion had recently raised more and more issues. At the national and regional levels, a significant strategy, according to Mr. Keshav Hingonia, had already been adopted. The session's format consisted of three presentations.

1. Plan for Mitigation Measures in River Erosion Prone Areas by Mr. Eklavya Prasad, UNICEF 2. Dr. A.V Suresh babu's paper on "Hotspot identification using satellite remote sensing for river bank erosion and deposition" 3. Soil piping-sub surface tunnel erosion and its mitigation measures by Dr. Sekhar L. Kuriakose, Member Secretary, KSDMA.

Programme for Mitigation Measures in River erosion prone areas

Mr. Eklavya Prasad organised an educational workshop on river erosion prevention strategies for sensitive locations. The workshop separated the mitigation strategies into different categories. Classification of mitigation measures included specific strategies, socio economic strategies, basic service requirements in temporary settlement, innovative mitigation measures and structural and unstructured measures. The goal of mitigation measures is to lessen or eliminate the possible consequences of coastal erosion. In the talk, resilience and resistance were discussed. Discussion was held on exploring distributive energy and problems of affected islands on which it was said all factors related to islands will be addressed in the policy.

Satellite Remote Sensing for identification of hotspots - River bank erosion and deposition

Dr. Suresh Babu in his presentation emphasized the importance of remote sensing as a tool for identifying the hotspots of river bank erosion and deposition. He said that the different elements like satellite data, information and methods used are important elements in the use of remote sensing. Analyzing the erosion and deposition using a strategy of previous against present can be used through satellite data and inclusion of public data sources are useful in the process. The process has 6 elements which are Planning of Satellite data Acquisition, screening of Multi-Date Data, Visual Interpretation of Images, Report Preparation & Dissemination to Concerned authorities for validation, Report Preparation Dissemination to Concerned authorities for validation and finally Comparison of River Bank Lines. He also depicted some examples of changes in river courses in Bihar.

Soil piping-sub surface tunnel erosion and its mitigation measures

The discussion gave attendees the chance to learn more about Kerala's erosion vulnerabilities. Also, the speaker made his own approach to the soil piping topic. Without a doubt, the presentation included information on the soil piping phenomena, a soil piping data base, Kerala's efforts to mitigate soil piping and a vulnerability-related relocation plan. The presenter's ideas and his explorations on the stage came to a conclusion with a discussion of the potential concerns of soil piping. Audience members offered thoughtful questions and the presenter provided satisfactory answers.

The following suggestions were put forward by Dr. Sekhar in his presentation, which are:

- While displacement is considered in the policy, there is also displacement owing to deposition of eroded materials. Deposition also leads to significant crop loss, sanitation needs and physical losses. Frameworks to address this needs to be explicitly included in the policy
- Soil Piping (Tunnel Erosion) shall also be considered in the policy
- Current financial approach of relief will not suffice addressing displacement. A risk-transfer centric, 'build forward better' approach is essential to adequately address and facilitate climate change linked erosion and consequent displacement
- Vulnerability linked relocation plan require financial assistance from NDMF
- When financial support for addressing erosion linked displacement is considered, population density shall be a factor considered

6. SESSION VI – POLICY ON REHABILITATION MEASURES FOR RIVER EROSION

The session was Chaired by Mr. K.S. Vatsa, Member NDMA and Co-chaired by Prof. Nirmalya Choudhury, TISS, Mumbai. The session covered different aspects of rehabilitation measures and the presentations were made by Mr. Eklavya, Mr. P K Abdul kareem and Mr. Sarangi.

Policy for Rehabilitation Measures in Coastal Areas

The presentation address the issues of coastal and river erosion from both mitigation and rehabilitation perspectives for the affected and vulnerable people. The presentation focused on enhancing resilience of the affected and vulnerable communities through social, economic, structural and non-structural mitigation measures. Presentation recommended district level decentralized planning of interventions for mitigation and rehabilitation, and its monitoring and evaluation. The presentation addressed the concerns of coastal and river erosion from both mitigation and rehabilitation viewpoints, for the impacted and vulnerable populations. The presentation also highlighted social, economic, structural, and non-structural protection strategies that would help affected and vulnerable communities. The speaker advocated decentralized district-level planning for interventions in mitigation and rehabilitation, as well as monitoring and assessment of those plans. The presentation provides an overview of the institutional framework and procedures for assessing the impact and vulnerability to coastal and river erosion in various places. National Policy on Mitigation Strategies for People Displaced by Coastal and River Erosion was highlighted in the presentation. In the conclusion of the presentation, special emphasis was placed on the necessity of taking mitigation measures in areas that are vulnerable to coastal erosion. Members in the audience asked insightful questions, and the presenter answered them with acceptable response.

Rehabilitation and resettlement of people affected by Erosion

Mr. P K Abdul Kareem in his presentation spoke briefly about the land acquisition act and emphasized the social and economical protection strategies of the act. He highlighted the major aspects of the act in order to align the act with the policy. The major aspects of the act as he mentioned are compensation and rehabilitation of all whose land is taken, settlement and rehabilitation in 18 months, compensation and rehabilitation covers all whose livelihood is affected and public participation throughout the process for transparency. The act he said is people oriented and is aligned well with the policy.

Protection measures for River-bank Erosion

Mr. D. Sarangi from Ministry of Road Transport and Highways dealing with National Highways presented the last presentation for the 5th session. He started the presentation by explaining a general understanding of rivers and it interference with roads. As far as the

department's dealings with the rivers it is the culverts and the bridges that are important. But there are times when roads run parallel to a river. When it comes to erosion, wherever a structural interference is required to mitigate the risk there should be a very sound study report of the area. He also highlighted the river bank protection measures that are followed by the ministry of Road and Transport. He also highlighted the need for looking at areas holistically and not just in small pockets as projects in one area can destabilize adjacent areas. There have been instances for faulty development despite doing proper researches in the past. Therefore, study of adjacent area study should be taken. Examples of best practices and other good study should be made available for the people and those using the policy.

7. SESSION VII – PROCESS OF PLANNING & FORMULATING MITIGATION AND REHABILITATION PLAN

The Sixth session, of the workshop titled “PROCESS OF PLANNING & FORMULATING MITIGATION AND REHABILITATION PLAN” took place from 17.00 to 17:50.

Components of Mitigation and Rehabilitation Plan

Mr. Eklavya Prasad focused on the planning process with emphasis on information. The mitigation and rehabilitation process are based on the extent of information acquired said the speaker. He also stated that relocation and community involvement are integral elements of the rehabilitation plan. Relocation in the context of the situation with specific reference to the community requirements and cultural situations is important. The Planning process has been shaped in different steps which are mapping of the potential impact of changing climate and human-induced interventions on coastal and river erosion, creating a database of the diverse challenges confronted by communities affected and vulnerable to coastal and river erosion, preparing a panchayat-specific plan of action for unanticipated coastal and river erosion, Undertaking assessment of the coastal and river erosion affected, and vulnerable areas must be undertaken by involving the local communities, academic and research institutions, thematic experts, NGOs, CSOs, CBOs and other key stakeholders, adopting Panchayat-centric approach for implementing mitigation and rehabilitation corresponding to the social, cultural, and economic needs of the affected and vulnerable communities, linking mitigation and rehabilitation with government developmental schemes for overcoming marginalization of the affected communities and relocation of both temporary and permanent displacement has to be planned in consultation with the local affected and vulnerable communities.

Preparation of Mitigation and Rehabilitation Plan

Mr. K.S. Vatsa during his presentation said that it is important to have a specific and detailed content and process which are the important elements of a policy. It has been a long process of 8 years to reach this stage from concept note to this stage with a number of consultations with NGOs, people, departments, community members and experts etc and what was gained through these

discussions and what is received from grass root level has come up as a policy. He further stated that it is important to implement and institutionalize the policy in order to make changes in the lives of people.

Summary of discussion and way forward

Mr. Kunal Satyarthi said that the whole sessions were presented very well serving the purpose of the workshop and he congratulated the presenters for their valuable contribution. He also appreciated Mr. Eklavya Prasad, Consultant, UNICEF for his marvelous job of addressing concerns over coastal and river erosion, two complex matters in a brief and remarkable manner. He said that the policy would contribute to addressing the ground realities. Mitigation with resettlement as an option is emphasized by the speaker. He stated that erosion is a slow disaster but is a fact. The policy would enable the people to face the bad days expected to be coming in the future. He mentioned that re settlement is only a last option and collaboration of different departments and technology is a necessity for achieving success in mitigating the disaster. The document, he said is a good starting point and is to be localized in its implementation. Test models need to be locally implemented and successful ones need to be taken forward. The funding from two sources is a matter of concern and a method to synchronize them need to be considered and the fund distribution mechanism too. He stated that it is the responsibility of the district disaster management authorities to carry out the program locally and emphasis on non-structural elements is very important in this regard. He concluded that the watts app group formed with all stakeholders shall be the platform for further discussions.

The workshop was concluded with Vote of Thanks proposed by Dr. S.K. Jena, Joint Advisor, NDMA.

8. RECOMMENDATIONS

- It is the utmost importance that implementation and inception of proactive projects be started immediately for the effective and speedy disbursement for funds associated with the policy. This will also help the adoption of the policy further.
- There should be concurrent evaluation of the project and disbursement of funds instead of an annual or quarterly expenditure bill.
- The policies for rehabilitation and relocation should look at the community's holistic well-being, therefore aspects that involves community's overall standard of living (e.g., sanitation, water sources, schools, roads burial grounds etc.) should be accounted into the plan for the community to be resettled.
- The guidelines for relocation and resettlement should be localized and should take local and regional factors instead of using a one size fits all policy.
- While displacement is considered in the policy, there is also displacement owing to deposition of eroded materials. Deposition also leads to significant crop loss, sanitation needs and physical losses. Frameworks to address this needs to be explicitly included in the policy
- Soil Piping (Tunnel Erosion) shall also be considered in the policy
- Current financial approach of relief will not suffice addressing displacement. A risk-transfer centric, 'build forward better' approach is essential to adequately address and facilitate climate change linked erosion and consequent displacement
- Vulnerability linked relocation plan require financial assistance from NDMF
- When financial support for addressing erosion linked displacement is considered, population density shall be a factor considered
- Funding must be sustainable. Funding shall not be depended purely on a single window. States shall find resources for funding from different streams integrating multiple institutions.
- capacity building measures need to be taken and funding shall be through different projects and pools
- Emphasis shall be given to nature based solutions rather than engineering based solution with focus on sustainability.
- Policy shall be used as an opportunity for interdisciplinary collaboration in disaster management
- Rehabilitation in the context of the policy shall be understood more as making the disaster prone areas livable rather than relocating
- Hazard line mapping is suggested to be a part of the DM plan with guidelines from NDMA

- Localizations of the policy are very much emphasized as per the regional differences and requirements. Because concern in different states vary. Strategies also should be different and specific based on the regional differences. Every affected community in every state will have their unique ways of navigating the issues related to River and coastal erosion. These practices should be considered while making the community adopt the policies.
- Promotion of participatory approach in social, cultural, economical and livelihood enhancement and temporary and permanent displacement in disaster prone regions
- Linking mitigation and rehabilitation with government developmental schemes for overcoming marginalization of the affected communities.
- Setup green belt/buffer zone to mitigate hazards, and addressing the socio-economic challenges for ecological sustainability
- Post-disaster recovery plan for the vulnerable areas would contribute to the fast recovery of the victims
- Developing public awareness campaigns, training and education, mapping of coastal erosion affected and vulnerable areas, development of coastal erosion information distribution system, coastal erosion prevention education, legal and land-use regulations etc.

9. GALLERY





National workshop on policy for mitigation measures & rehabilitation for people displaced by erosion

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