



Building a Resilient India: Modernizing Aapda Mitra Training through Digital Tools and Gamification

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Abstract

India frequently faces natural disasters, necessitating effective community-based disaster response. The Aapda Mitra Scheme trains volunteers to provide immediate assistance during emergencies. To enhance this program, we propose digitizing training materials, aligning with the "Digital India" initiative. This will make training more accessible, efficient, and engaging through interactive eLearning modules, videos, and game-based assessments in multiple regional languages.

The digital approach reduces costs, ensures consistent updates, and includes a user-friendly e-learning portal and mobile app. A pilot phase will precede a full-scale rollout and scaling up. Impact assessment will measure the effectiveness of digital training in improving disaster response.

This initiative aims to empower Aapda Mitras with vital skills, fostering a culture of volunteerism in Disaster Risk Reduction (DRR) and strengthening local disaster management, contributing to a resilient and climate-positive future.

Keywords: Aapda Mitra, Disaster Response, Digital Training, Community Volunteers, Capacity Building, Digital India, Climate Resilience.

BACKGROUND

According to a research from the Geneva-based Internal Displacement Monitoring Centre, natural disasters, particularly heavy floods and cyclones, caused around 2.5 million internal displacements in India in 2022. According to the India Meteorological Department's Annual Statement on Climate of India — 2022, extreme weather events claimed the lives of 2,227 people in India year 2022. India is third in the world in terms of natural disasters, after China and the United States. Extreme weather events such as floods and heatwaves are expected to become more common in India as a result of climate change, according to a paper released by experts at the Indian Institute of Technology, Gandhinagar, in 2022.

In July 2024, Wayanad, a scenic district in Kerala, India, faced a devastating tragedy as relentless monsoon rains caused severe floods and landslides. This disaster led to the tragic loss of lives, widespread displacement, and extensive damage to homes and infrastructure. The Wayanad tragedy of 2024 vividly demonstrated the urgent need for trained community responders. The Aapda Mitra program addresses this need by equipping local volunteers with essential skills for effective disaster response, ensuring quicker, more coordinated rescue efforts, and significantly reducing the impact of such natural calamities.

NEED

Considering the population density of the country, and the negative impact these disasters usually cause, there is a need for a prompt response to save lives and minimize damage. Community involvement and trained professionals can play a crucial role in effective disaster management. They can provide immediate assistance, often before larger-scale external help arrives.

AAPDA MITRA SCHEME

The Aapda Mitra Scheme is a vital program initiated by the Government of India to train community volunteers in disaster response. Aapda Mitras are individuals trained to assist in disaster preparedness, response, and recovery efforts at the local level. They play a crucial role in spreading awareness, providing immediate help during emergencies, and aiding in the overall resilience of communities facing natural or anthropogenic disasters. Their training helps in minimizing the impact of disasters and enhances community preparedness.

PROPOSED SOLUTION

While the scheme has been successful in imparting essential skills to volunteers, there is a need to modernize the training approach.

The purpose of this paper is to outline a comprehensive

plan for converting the analogue training material for Aapda Mitra into a digital format. This aims to streamline and decentralize the training arrangements, making it more accessible, efficient, and effective for State Disaster Management Authorities (DMA) and Aapda Mitras.

The conversion of training material into a digital format will bring several advantages:

The transition to a digital format for Aapda Mitra training holds multiple benefits, including increased accessibility, flexibility, and scalability. This approach will empower Aapda Mitras with the knowledge and skills to respond effectively to natural disasters while making the training process more efficient and decentralized. It aligns with the broader objective of the “Digital India” initiative of the Government of India (Ministry of Electronics and Information Technology (MeitY) and aims at building a culture of volunteerism in Disaster Risk Reduction (DRR) and strengthening local disaster management systems.

Accessibility

- Anywhere, anytime. Digital training material will be accessible online, allowing Aapda Mitras to access the content from anywhere, at any time.
- Wider Reach. This approach ensures that even volunteers in remote areas have access to training resources.

Cost Efficiency

- Reduction in Printing Costs. Digital content eliminates the need for printing, reducing the associated costs.
- No Travel Costs. Aapda Mitras can learn remotely, reducing the expenses related to travel and accommodation.

Standardization

- Consistency. Digital content can be maintained and updated centrally, ensuring uniformity in training material across all districts.
- Real-time Updates. Any changes or updates can be implemented quickly and efficiently.

Interactive Learning

- Engagement. Digital content allows for interactive elements such as quizzes, videos, and simulations, enhancing engagement and comprehension.
- Self-assessment. Aapda Mitras can evaluate their knowledge through self-assessment tools.

SUGGESTED APPROACH

Outsource the conversion of the analogue material to digital to a firm whose expertise lies in designing need-based blended training programs for various cadres, developing customized content in both digital and physical formats, delivering training, performing training impact measurement activity, etc.

The overall suggested approach includes:

Content Digitization

- Conversion of existing analogue training material of Aapda Mitra into digital formats, including interactive eLearning modules, short awareness snippets in the form of GIFs, audio jingles and animated videos, game-based assessments, and scenario-based modules to impart practical skills to the evolving cadre.
- Once the content is digitized in English, it can also be transformed and adjusted into regional languages. This ensures increased engagement and expands the reach and effectiveness of the message we aim to convey through our content.

Provision of an e-Learning Platform (Web and Mobile)

- Create an exclusive e-learning portal accessible to all Aapda Mitras, enabling them to access the digitalized training materials and acquire certificates upon completing courses with the required scores.
- Design a user-friendly interface for seamless navigation, catering to both administrators and end users (Aapda Mitras).
- Develop a multilingual platform, ensuring the system is accessible and comprehensible to users across different language preferences and backgrounds.
- Establish a robust data dashboard for analyzing and strategizing training activities, monitoring staff learning and development cycles, and more.
- Dashboard customization based on factors like geography, gender, age, education, qualifications, and others to effectively monitor Aapda Mitras at various levels and track their performance.
- Developing a multilingual and adaptive mobile application for training material access on smartphones, ensuring flexibility and convenience.
- Hosting and maintenance of the platform for the desired period to ensure the course uptake by the maximum number of Aapda Mitras.

Incentivisation of the Trainees

To further motivate community volunteers, we propose an incentivisation scheme for the Aapda Mitra training program. For every training module completed, individuals will receive a Direct Benefit Transfer (DBT) of a certain amount of incentive money. This financial reward will serve as an immediate and tangible recognition of their efforts, encouraging sustained engagement and participation in the training program. By providing monetary incentives, we aim to make the training more appealing and accessible, especially for volunteers from economically disadvantaged backgrounds.

Gamification of the Training

In addition to monetary incentives, we will incorporate gamification elements into the training modules to enhance engagement and motivation. Volunteers will earn abstract awards, stars, and badges for completing training modules. These virtual rewards can be accumulated and redeemed for tangible goodies such as disaster response kits, protective gear, or other useful items. Gamification not only makes the learning process more enjoyable but also fosters a sense of achievement and progression. By integrating these elements, we aim to create an interactive and rewarding learning environment that encourages continuous participation and skill development.

PILOT TESTING AND ROLLOUT

The digital content and platform should be thoroughly evaluated to identify and rectify any technical issues. Feedback from some sample Aapda Mitras and trainers should be actively sought to make necessary improvements.

TRAINING OF TRAINERS (TOT)

- Capacitate Disaster Management Authority (DMA) officials and Instructors on the utilization of digital training resources.
- They will also be trained in platform accessibility, including user onboarding, enrollment to the courses, responding to their queries using discussion forums or through user chats by experts, generating reports, analyzing data dashboards, etc.

IMPACT ASSESSMENT

It is proposed to be performed to assess the effectiveness of the overall intervention. This data-driven approach ensures that resources are optimized, content is relevant, and learning outcomes align with the program goals. The various parameters of impact assessment include:

- Defining the objectives of the intervention,
- Identifying and creating relevant KPIs,
- Collecting feedback from learners using surveys, interviews, etc.
- Assessing the learner's performance matrix through LMS data such as tracking completion rates, scores, etc.
- Monitoring the user's engagement with the content, in terms of time spent on modules,
- Cost-benefit analysis in terms of improved efficiency, reduced training time, or increased performance.

TECHNOLOGY TRANSFER AND HANDOVER

- Ongoing support and maintenance of the digital platform will be essential to address any technical issues, update content, and aid users.
- A dedicated team should be aligned and trained for these purposes.

- The organisation performing the digitisation should be asked to hand over all the source files, SOPs, manuals, and others for future reference and guidance.
- It should also include user manuals and platform walkthrough videos.

PROPOSED IMPLEMENTATION STRATEGY

The plan to implement the above-outlined activities can be in three phases:

Phase 1: Piloting

A pilot phase is to be initiated in a select specific State(s) / number of districts to gauge the effectiveness of the digital training. Lessons learned during this phase to be used to refine the platform and content.

Phase 2: Full-Scale Rollout

After successful testing and refinement, the digital training platform is to be rolled out across all the targeted districts/ State(s). This should be done progressively to ensure a smooth transition.

Phase 3: Scaling Up

Once the digital training has been successfully implemented in the initially selected districts, there should be a plan to scale up further, potentially covering more districts and states/union territories.

CONCLUSION

The digitization of Aapda Mitra training material, coupled with incentivisation and gamification, represents a significant step towards enhancing disaster response preparedness in India. This initiative aligns with the Government of India's (Ministry of Electronics and Information Technology (MeitY)) "Digital India" vision, promoting a culture of volunteerism in Disaster Risk Reduction (DRR). By making training more accessible, engaging, and rewarding, we aim to empower Aapda Mitras with the knowledge and skills necessary to effectively respond to natural disasters, contributing to a resilient and climate-positive future. The benefits of accessibility, cost-efficiency, standardization, and interactive learning will empower Aapda Mitras to play a more substantial role as first responders in their communities. It is a forward-looking and essential endeavour in the journey of disaster management in India.

REFERENCES

1. Chakrabarti, P. G. D. (2012). Challenges of disaster management in India: Implications for the economic, political, and security environments. In *Nontraditional Security Challenges in South Asia* (pp. 77–85).
2. Dayashankar Maurya, R. (2020). A Review on Natural Disaster Management in India using Advance Technology. *International Journal of Advanced Research in Science, Communication and Technology (IJAR SCT)*, 9(1). www.ijarsct.co.in

3. Government of India. (2011). Disaster Management in India. In *Management* (Issue August). <http://www.preventionweb.net/english/professional/publications/v.php?id=31020>
4. Government of India. (2015). National Disaster Management Guidelines. In *Role of NGO's (Draft)* (Issue February).
5. Government of India : Ministry of Home Affairs. (2005). The Disaster Management Bill. *Government of India, 2005*(LV-F of 2005), 35.
6. Gupta, A. K., Chopde, S., Singh, S., Wajih, S. A., & Katyal, S. (n.d.). *Prime minister's Agenda 10: India's Disaster Risk Management Roadmap to Climate Resilient and Sustainable Development*. Retrieved January 3, 2018, from <http://geagindia.org/pdf/PM-Agenda-10-Paper.pdf>
7. *India's Failures In Disaster Management | Sonia Jaspal's RiskBoard on WordPress.com*. (n.d.). Retrieved February 13, 2016, from <https://soniajaspal.wordpress.com/2013/06/22/indias-failure-in-disaster-recovery-management/>
8. Jha, A. (2011). *Disaster Management in India - A Report*.
9. Kaul, D., Ayaz, M., & Lohitkumar, S. (2005). Disaster Management in India. *Catastrophic Risks and Insurance*, 381–392. <https://doi.org/http://dx.doi.org/10.1787/9789264009950-22-en>
10. Kumar, G., & Dimri, R. (2018). Armed Forces and Disaster Management in India. *Economic Affairs*, 63(3), 753–760. <https://doi.org/10.30954/0424-2513.3.2018.22>
11. National Disaster Management Authority. (2008). *Disaster Risk Management and the Role of Corporate Sector: The Indian Perspective*.
12. National Executive Council (NEC) - Ministry of Home Affairs: Government of India. (2013). *National Disaster Management Plan*. http://ndmindia.nic.in/NDMP_2300216.pdf
13. National Institute of Disaster Management. (2012). *Disaster Management in India: Emerging Issues and Responses*.
14. NDMA. (2017). Aapda Mitra. In *NDMA* (Issue 00, pp. 1–24). https://www.ndma.gov.in/Capacity_Building/Admin_Coordination/Aapda-Mitra
15. Shrivastava, S., Shrivastava, P., & Ramasamy, J. (2013). Disaster management: Fallacies and solutions: An Indian perspective. *Annals of Medical and Health Sciences Research*, 3(3), 468. <https://doi.org/10.4103/2141-9248.117940>
16. Surjan, A., & Shaw, R. (2009). Enhancing disaster resilience through local environment management: Case of Mumbai, India. *Disaster Prevention and Management: An International Journal*, 18(4), 418–433. <https://doi.org/10.1108/09653560910984474>
17. THE DISASTER MANAGEMENT ACT, 2005, 1 (2005). <http://lawmin.nic.in/ld/P-ACT/2005/The%20Disaster%20Management%20Act,%202005.pdf>

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