

Disaster Recovery and Administration Portal

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Abstract – The past few years have been very cataclysmic for India in case of the number of disasters happening and their impact on its citizens. As the number of disasters is increasing tremendously in India, it's also required to move towards new methods/paths to handle such situations because the traditional techniques to reach out to the people take a lot of time which in turn puts the citizen in more trouble as help to them gets delayed. As there is a significant upsurge in digital information throughout the Government ecosystem, there is an increased need of preparing our digital ecosystems to overcome any disasters, without a considerable impact on public services. The system Disaster Recovery and Recovery Portal provides a solution that offers every individual/citizen to register and explain the condition of the place where the disaster has occurred. This will provide the rescue operation team with more clarity about the situation in the disaster-affected zone and also help them know about the total number of people stuck in that zone.

Key Words: Disaster Management, Emergency, Rescue, Disaster Recovery, Basic help, Rescue Operation, Systematic process.

1. INTRODUCTION

Disaster Recovery and Administration Portal is a place that will not only help the rescue teams to navigate to the disaster location and track people faster but it will also help the people to individually report their problems or about anyone in their contact who is stuck in that zone. Disaster Recovery aims at protecting the department from the effects of significant catastrophic events. It allows the Department to quickly resume rescue operation-critical after a disaster. The adoption of a Disaster Recovery setup is important for all departments to maintain Government operations and resiliency of data/applications.

1.1 LITERATURE SURVEY

Before The number of cyclones and severe cyclones in the Arabian Sea and the Bay of Bengal has risen by nearly 11% in the last decade, with an alarming 32% increase recorded in the last five years data from India Meteorological Department reveals.

Normally four to five cyclones form over the North Indian Ocean region (includes both Bay of Bengal and the Arabian Sea) in a year, with the majority -- about three-four of them - - developing over the Bay of Bengal. But this is fast changing.

For instance, 209 witnessed eight cyclones in the north Indian Ocean, out of which five formed in the Arabian Sea. The total figure was seven for 2018, including three over the Arabian Sea.

Not just the frequency, the intensity and duration of the cyclones over the Arabian Sea too are changing, according to the paper in Springer's Climate Dynamics Journal.

As a lot of changes are been observed in the frequency and intensity of disasters occurring in India, it's also important for us to change the approach to solving these issues.

The Disaster Recovery and Administration Portal has the potential to speed up the process of tracking people and migrating them faster to a safer place.

1.2 MOTIVATION AND SCOPE

Sample As the number of disasters in India is increasing at a very faster rate there is a need for a platform for solving these issues. When Cyclone Nisarg hit the West Coast of India; some places needed help urgently but the help from rescue teams reached them after 3-4 days. In these 3-4 days the affected people were not even informed about how long it will take for the rescue team to reach them, this is where we found our motivation to build such a project where affected people will be able to know according to the severeness of the damage, How long will it take for the Rescue team to reach to them.

As mentioned in the Literature Survey, the cyclones occurring every year are increasing at an alarming rate of 32%. So this explains that this is a never-ending problem and will keep increasing with time and the thing we can do is be prepared for the upcoming problem.

2. EXISTING SYSTEM

A Disaster Management Plan in India includes the following:-

1. Institutional and policy framework,
2. Early warning system,
3. Disaster prevention and mitigation,
4. Preparedness.

Indian Meteorological Department (IMD) is mandated to monitor and give warnings regarding Tropical Cyclone (TC). The monitoring process has been revolutionized by the advent of remote sensing techniques. The Government of India has adopted mitigation and prevention as essential components of its development strategy. The Tenth Five Year Plan document has a detailed chapter on Disaster Management.



Fig -1: Phases Of Disaster Management

Mitigation and preparedness measures go hand-in-hand with vulnerability reduction and rapid professional response to disasters.

As India has a huge population, even after taking the required steps and following the plans/protocols provided by the government, it is difficult for the rescue team of any public services to perform it on time.

The examples of what happens when the help to the people reaches late were seen in the past few cyclones and landslides caused due to Cyclone Nisarga, Cyclone Amphan, Vidharba Floods, and many more.

So the proposed system will not only help the rescue team to carry out the operation faster and efficiently but it will also provide an advantage to the team of having all the data of the people stuck in the disaster zone digitally. This data will help them keep a good track of both pre and post-operation activity.

3. PROPOSED SYSTEM

Disaster Recovery Plan is considered tactical rather than strategic and provides a means for immediate response to disasters. DRAP consists of three modules for the proposed system:-

1. ADMIN MODULE
2. USER MODULE
3. RESCUE TEAM MODULE

4. IMPLEMENTATION

1. ADMIN MODULE

This module is an online application that consists of a superuser/admin who has access to the overall system function areas. Admins can approve the complaints registered by the users and also they can edit the complaint about the benefits of the situation and also can delete the complaint if find inappropriate. Admins are the core of the system, as they access the data and forward it to the rescue team with proper methodology.

2. USER MODULE

This module is also an online application for every individual who is in an emergency. Any user can fill in simple online situation details in no time. Users can also upload the photo so the admins can get an overall idea and can exceed the help in a way that the situation can be under control. After providing the details, users will immediately get a call from the rescue team and help will be provided in no time.

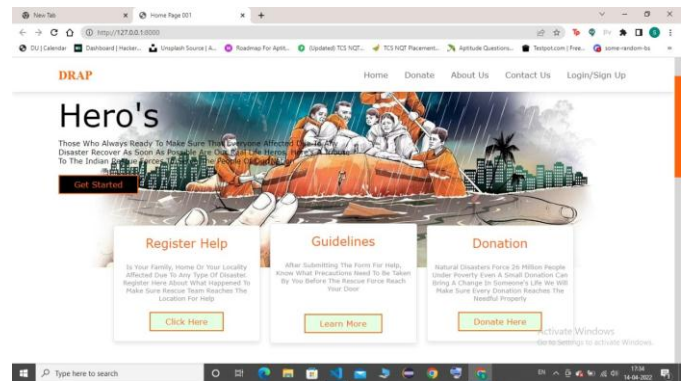


Fig -2: Home Page

The Home Page will allow the user to register for help, read the guidelines and make a donation. The Guidelines page will provide the user of precautions and steps to be carried before the rescue team arrives.

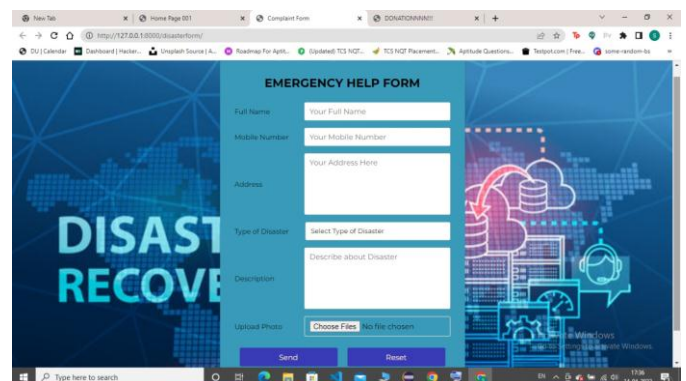


Fig -3: Register Page

The Emergency Help Form will allow the user to register about the disaster nearby them so that the rescue team can reach the exact location faster.

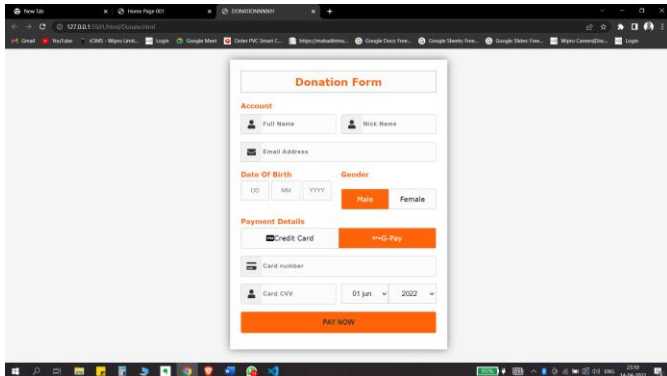


Fig -4: Donation Page

The Donation page is made for the people who can financially help the people affected due to any disaster. The Admin team will make sure that all the transactions carried out are transparent.

3. RESCUE TEAM

This module consists of a lot of teams which could be helpful. The main objective of a Rescue team is to rescue trapped survivors of a disaster. Then first-aid should be provided to the injured people. The Rescue team consists of Ambulance, civil defense, earthmoving machines, cranes, etc. Admins analyze the situation and call the team according to the situation in no amount of time.

5. CONCLUSIONS

We have presented a Disaster Recovery project model IT for organization communities under disaster/crises. The model identifies the key components for disaster preparation, and recovery while stressing the need for better and improved tools and technologies for rapid recovery.

The methodology used in this project will allow modularity and speed up the work, if properly implemented and coordinated. It is a fairly straightforward design and the material procurement increased the primary determinant. Completion of this project will enable the creation of DRAP. As DRAP we have created a simple online application where we can help the people who are in danger as soon as possible considering that saving people is the priority. In a future project and larger power will create an organization or adapt what is the game for the entire company.

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