

Diminishing Disasters: Phase 1

Jonathan Debell, Dani Amir, Ruchi Bhalani, Anthony Modica, Martin Nguyen

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1 Motivation

We created diminishing Disasters to elevate peoples' consciousness to the international sphere. Most of the population is prone to pay no mind to events that don't affect them personally, while individuals who do make an effort to step out of their filter bubble and seek information about global crises often feel overwhelmed by the overload of news streams. Our website aims to connect people with natural disasters clearly and intuitively, displaying natural disasters worldwide by country and directing users to charitable organizations that allow them to help. By providing this direct pathway to disaster relief, our goal is to encourage people to educate themselves about the crises other countries are currently facing and facilitate the process of providing donations and aid relief.

1. What current disasters are currently going on around the world?
2. What types of disasters most frequently occur in a given country?
3. Where can I donate or help out in these disasters? Which countries suffer from a lack of organized charities?

2 User Stories

2.1 Filter by if a disaster is being attended to by at least one organization

- **Story:** I'm from the American Red Cross, and I believe that we would greatly benefit from this website, especially if we could use it to determine which disasters need more help at a given time and which ones are already being helped by one or many organizations.
- **Solution:** We can add a filter for disasters based on whether or not at least one organization is currently helping out. With this feature, organizations can more easily determine which disasters to prioritize. This functionality will be implemented in Phase 2 when filters will become operational.

2.2 View severity of disasters

- **Story:** As a user of Diminishing Disasters, in addition to sorting by the time of occurrence, I would like to be able to sort disasters by severity. The sooner we can get help to those who need it most, the better!
- **Solution:** The customer wants "persons killed/injured" as one of the filters so that users can sort by which disasters currently have the highest mortality rate and which ones need aid quickest. However, this information is not included in our API. The descriptions of disasters on each disaster instance page will outline the severity of disasters, but there is no metric by which we can quantify disaster severity through our API, so we will not be implementing this functionality in our project.

2.3 Extra Visibility on Landing Page

- **Story:** As a user of Diminishing Disasters, I would like to gain more visibility on causes I can contribute to, specifically those that need it the most. There is potential for difficulty in finding the institutions that could do the most for a particular cause when users must go through the process of searching/filtering themselves.
- **Solution:** We will be including lists of charities that are helping out specific disasters on the instance pages for those disasters. We have implemented this aspect in Phase 1.

2.4 Data Visualization for the Models

- **Story:** As a user of Diminishing Disasters, I would love to be able to see data visualization on the given disasters. Maybe seeing some graphs or charts on how often these disasters occur in a given country, or if a given disaster is more likely to occur near tectonic plate boundaries. Having visible data visualizations would help visual learners interpret what is going on and help those looking at the data prepare for possible future disasters.
- **Solution:** We can include infographics of disaster types in each country on the country pages. Additionally, we can include information on which countries this type of disaster is most prevalent in for each disaster. These graphics allow users to see a visual representation of which disasters countries most frequently face. This functionality will be implemented in Phase 2.

2.5 Interactive Map Visuals of Disaster for a Specific Country

- **Story:** As a user of Diminishing Disasters, I would like to visualize all of the potential disasters for the country I am in. This could potentially help me and other users make proactive decisions about reacting to certain disasters in and around my area. An example of supporting this could be a map of a certain area/country that visualizes and shows all previous or current disasters, so they are all highlighted in a standard place.
- **Solution:** We can provide a map that is constantly updated with information about current and ongoing disasters so that users can visualize how their location is impacted. We will implement this graphic in future phases.

3 RESTful API

We made a RESTful API for the back-end of our website using Postman. We defined paths for our models: countries, disasters, and charitable organizations. The link to documentation for our API is [here](#).

4 Models

The three models for this website are countries, natural disasters, and international charitable organizations. Natural disasters, when they occur, often impact multiple countries. Charitable organizations hosted in certain countries provide relief for these disasters by collecting donations.

4.1 Countries

- Name
- Time Zone
- Capital City

- FIFA Code
- Area
- Filters
 - Population
 - Language
 - Currency
 - Region
 - Subregion
- Type of media to display
 - Country flag
 - Country map
 - Charts and graphs displaying disaster types

4.2 Disasters

- Name
- Descriptionf=
- GLIDE Number
- Primary country
- Latest updates
- Filters
 - Status
 - Disaster type
 - Year
 - Month
 - Affected country
- Type of media to display
 - Infographics
 - Natural disaster maps
 - Charts and graphs displaying countries most frequently affected

4.3 Charitable Organization

- Name
- Website
- Address
- Phone number
- EIN
- Filters
 - Rating
 - Total expenses
 - Category
 - Cause
 - Recieves government support
- Type of media to display
 - Logo
 - Embedded video media

5 Tools

We utilized React for the front-end development of the website and set up Postman for the back-end design, defining GET endpoints for each model and a schema for the returned JSON. We used Git to ensure continuous integration and minimize merge conflicts. Our main challenges for this phase involved familiarizing ourselves with the tools we would be using to build our website. Becoming familiar with React Bootstrap usage was challenging, as was learning how to consume the API. It was tricky figuring out how to organize the many different JavaScript files we had, and piecing together the different React components, but after we planned out our project and began working on it, using the tools came more naturally.

6 Hosting

We are using AWS Amplify for our static website hosting. We used NameCheap to register our domain name and verify ownership with Amazon Web Services to register a TLS/SSL certificate and ensure our website was HTTPS secure.