



# User Manual

## Digital Risk Information Platform (DRIP)



<http://drip.plancomm.gov.bd>

**CEGIS**

Center for Environmental and  
Geographic Information Services

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## Acronyms and Abbreviation

|              |  |
|--------------|--|
| <b>CEGIS</b> | Center for Environmental and Geographic Information Services |
| <b>DIA</b>   | Disaster Impact Assessment                                   |
| <b>DRIP</b>  | Digital Risk Information Platform                            |
| <b>GIS</b>   | Geographic Information System                                |
| <b>IPCC</b>  | Intergovernmental Panel on Climate Change                    |
| <b>UNFCC</b> | United Nations Framework Convention on Climate Change        |
| <b>WARPO</b> | Water Resources Planning Organization                        |

# Chapter One: Overview of DRIP

## 1.1 Introduction

Bangladesh is a country of natural calamity. It always stands at risk of growing loss and damage due to disasters and climate stresses. Limitations are found in incorporating disaster and climate change risks in all stages of development planning. This extensive linkage between disaster and development generates an urgency to establish a risk information platform/interface to access disaster and climate risk information and tools for risk-informed planning and investment. At present, the available databases for managing development project life cycles, and climate risk screening tools are quite fragmented and lacks contextual data and information on disaster and climate change risks. most of the risk screening tools are about physical hazards and risks and do not follow any integrated approach for risk and vulnerability assessment. To resolve the current lack of an integrated digital platform, a Digital Risk Information Platform (DRIP) is introduced.

This platform/interface is designed to provide necessary disaster and climate risk data and information to carry out Disaster Impact Assessment (DIA), a tool proposed by the National Disaster Management Council of Bangladesh headed by the Prime Minister, to ensure disaster resilient development. However, as such, there is no comprehensive database comprising tools and knowledge products to assist the planners to integrate disaster and climate risk data and information into development projects, plans, and programs for decision making and planning for risk-informed public investment

## 1.2 Objective

The Digital Risk Information Platform (DRIP), a specialized software application, aims to strengthen the institutional capacity of the Government of Bangladesh for assessing, understanding, and communicating disaster and climate-related risks, to integrate disaster risk information into development planning & budgeting, policies, and programs. The specific objectives of the project are listed below.

- Integrate disaster and climate risk information into development projects, plans, programs, and policies to ensure risk-informed public investment
- Facilitate access to risk information from a common platform
- Assist the Planning Officials in different ministries with available risk information in different sectors

**(N.B. To get the best user experience from DRIP Web Application please use Google Chrome as the browser for report generation, print and download. Other browsers might have issues with report formatting while the report is downloaded)**

### 1.3 Structure of DRIP

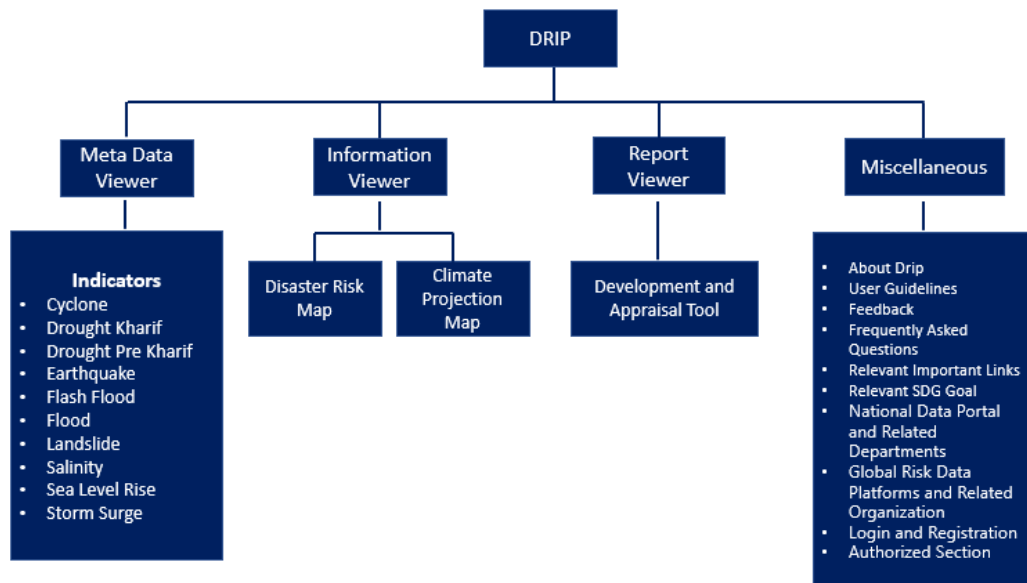


Figure 1. 1 Structure of DRIP

### 1.4 Home Page

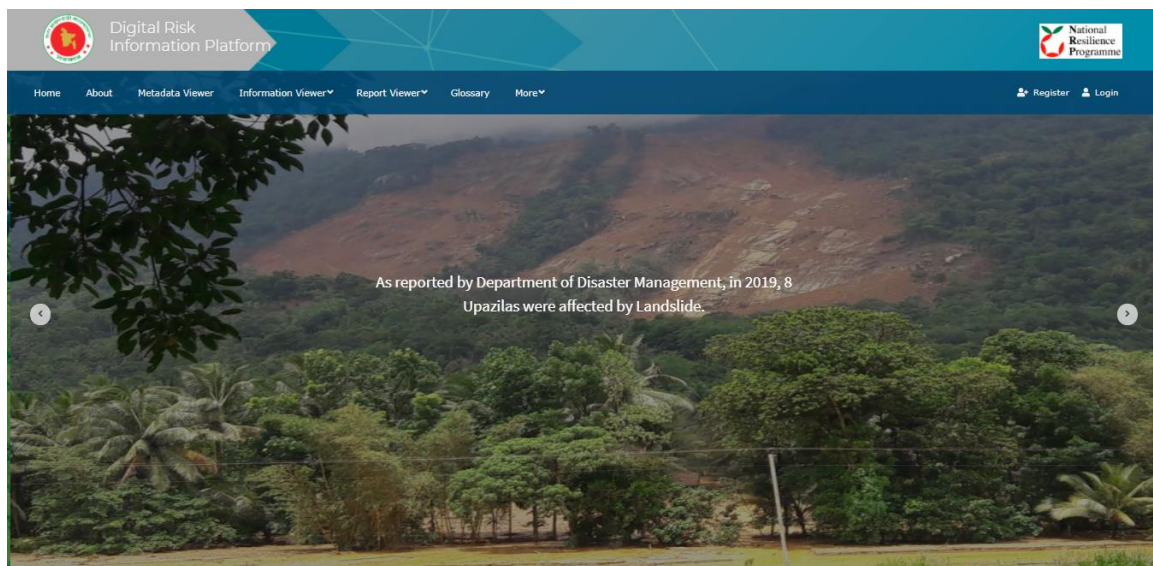


Figure 1. 2 DRIP's Home Page

The home page of DRIP includes several sections they are:

- **Navigation Bar**
- **Slider**
- **Informative Sections**
- **Lower Footer**



Figure 1. 3 Navigation Bar of the DRIP

### 1.4.1 Navigation Bar

The first section in the **Digital Risk Information Platform** is the **navigation bar**. It includes the following options.

- **Home**
- **About**
- **Meta Data Viewer**
  
- **Information Viewer**
  - Disaster Risk Map
  - Climate Projection Map
- **Report Viewer**
  - Development and Appraisal Tool
- **Glossary**
- **More**
  - User Guidelines
    - English
    - Bangla
  - Relevant Important Documents
  - Frequently Asked Questions
  - Feedback
  
- **Register**
- **Login**

### 1.4.2 Slider

Each slider shows information about certain disasters and after effects, a user can easily move forward and backward slides by clicking on the navigation button both right and left.



Figure 1. 4 Slider of the homepage

### 1.4.3 Informative Sections

There are several informative sections like aim, objectives, data sources, etc. in the **DRIP platform** which have been used to describe certain features and the numbers associated with DRIP.



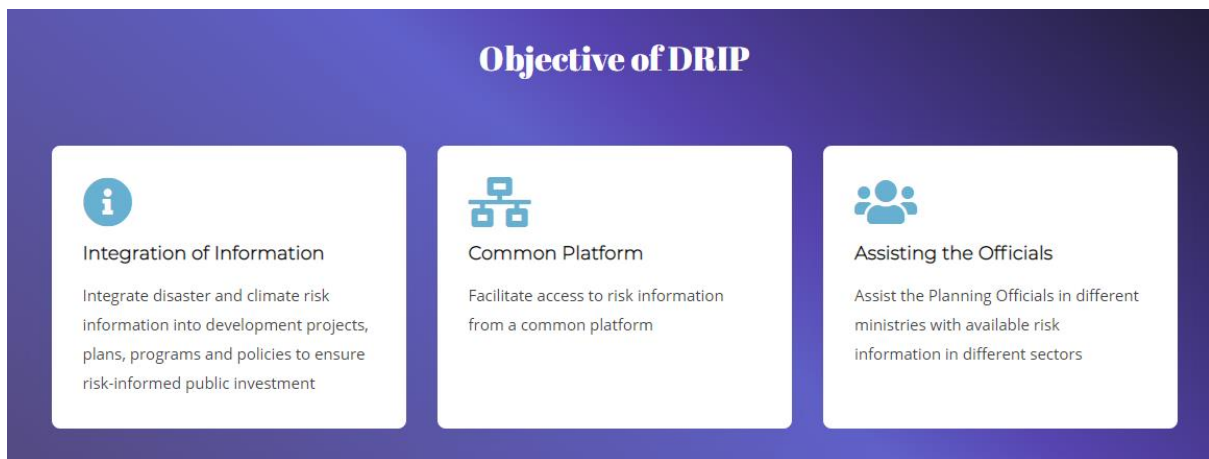
#### Aim

The Digital Risk Information Platform (DRIP), a specialized software application, aims to strengthen the institutional capacity of the Government of Bangladesh for assessing, understanding and communicating disaster and climate related risks, with the goal of integrating disaster risk information into development planning & budgeting, policies and programs

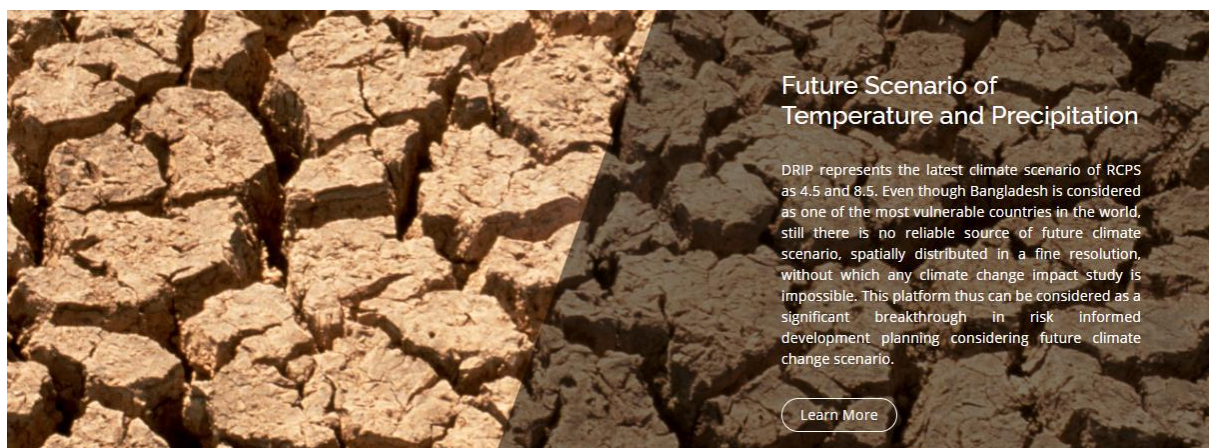
Figure 1. 5 Aim Section



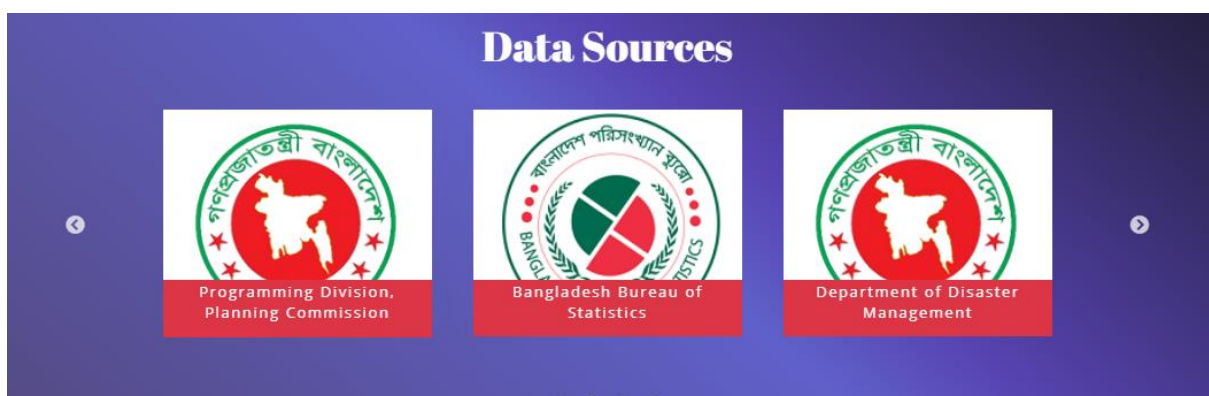
Figure 1. 6 DRIP Resources



**Figure 1. 7 DRIP Objective**



**Figure 1. 8 Future Scenario of Temperature and Precipitation related information**



**Figure 1. 9 Data Sources of DRIP**

The Data Source section views the name of data-providing agencies of the DRIP system. A user will be able to see the link of each organization on the mouse hover to individual cards. By clicking on the link, the user will be redirected to the corresponding organization’s website.

## 1.4.4 Lower Footer

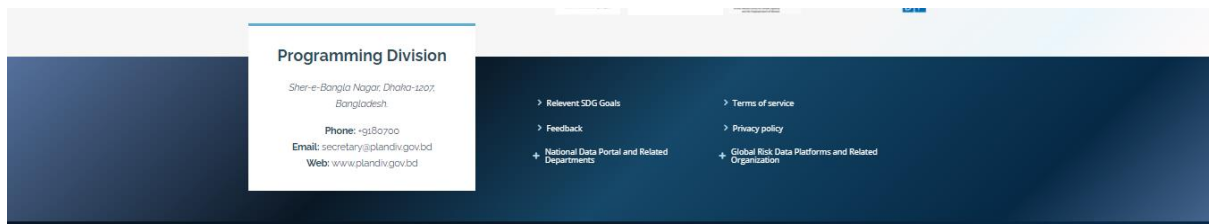


Figure 1. 10 Lower Footer

In the lower footer there are several important links:

- Global Risk Data Platforms and Related Organizations
  - **Global Risk Data Platform**
  - **Aqueduct Global Flood Analyzer**
  - **The Global Integrated Drought Monitoring and Prediction System**
  - **Global Risk Data Platform: Preview**
  - **UNDRR**
  - **IPCC**
  - **UNFCC**
- National Data Portal and Related Departments
  - **Planning Commission**
  - **Department of Disaster Management**
  - **Department of Environment**
  - **Bangladesh Bureau of Statistics**
  - **Bangladesh Water Development Board**
  - **Local Government Engineering Department: GIS Section**
  - **Bangladesh Agricultural Research Council: Maps**
  - **Water Research Planning Organization**
  - **GEODASH**

To select a national data portal or global risk data platforms and organizations:

- Click on the link **National Data Portal and Related Departments/ Global Risk Data Platforms and Related Organizations**
- Select the desired item from the dropdown.
- Click on the **National Data Portal and Related Departments/ Global Risk Data Platforms and Related Organizations** again or press **ESC**.

## 1.5 User Guidelines

To visit user guidelines, follow the following steps:

- Click the more button.
- Hover on the **User Guidelines**.
- Select **English or Bangla** for guideline language.

Finally, a page will be visible like below.

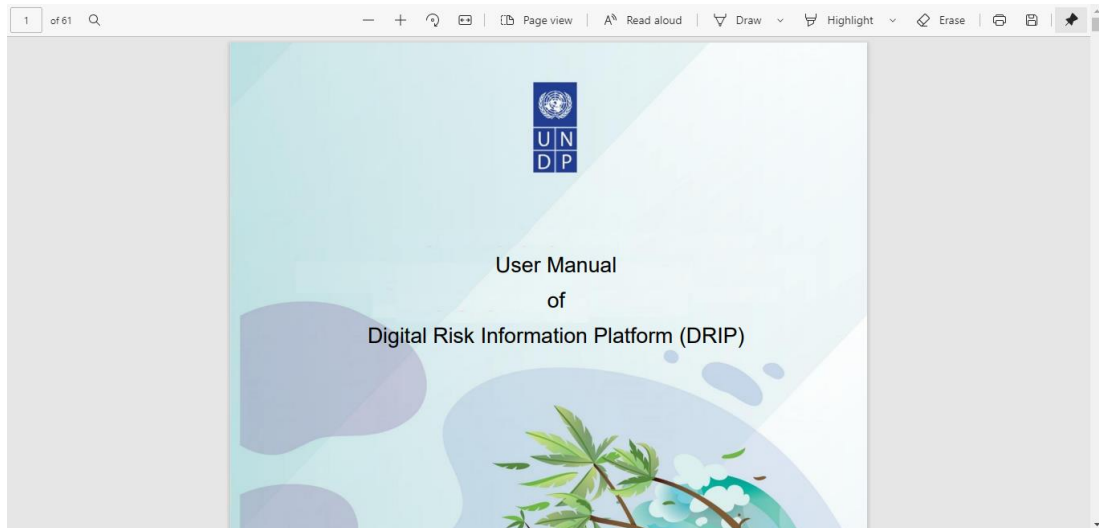


Figure 1. 11 User Guideline

One of the important sections on DRIP's home page is the **Important links** section.

- **Feedback**
- **Terms of Conditions**
- **Privacy Policy**
- **Global Risk Data platforms and Related Organizations**
- **National Data Portal and Related Organizations**

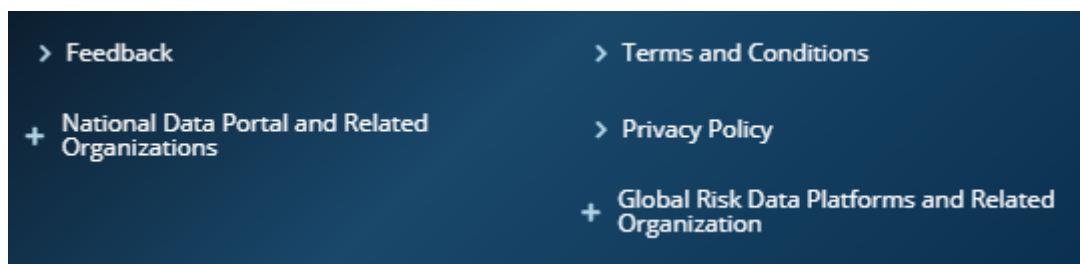


Figure 1. 12 Important Links

## Chapter Two: Meta Data Viewer

### 2.1 Overview

DRIP system includes overall summary data of possible risk based on DRIP system. The Metadata Information includes vital information like -

- Indicator
- Component
- Sub-Component
- Title
- Abstract
- General
- Quality
- Completeness
- History of the dataset
- Purpose of the production
- Process description
- Type of dataset
- Dataset Language
- Additional information source for the dataset

### 2.2 View Meta Data

Click Meta Data Viewer

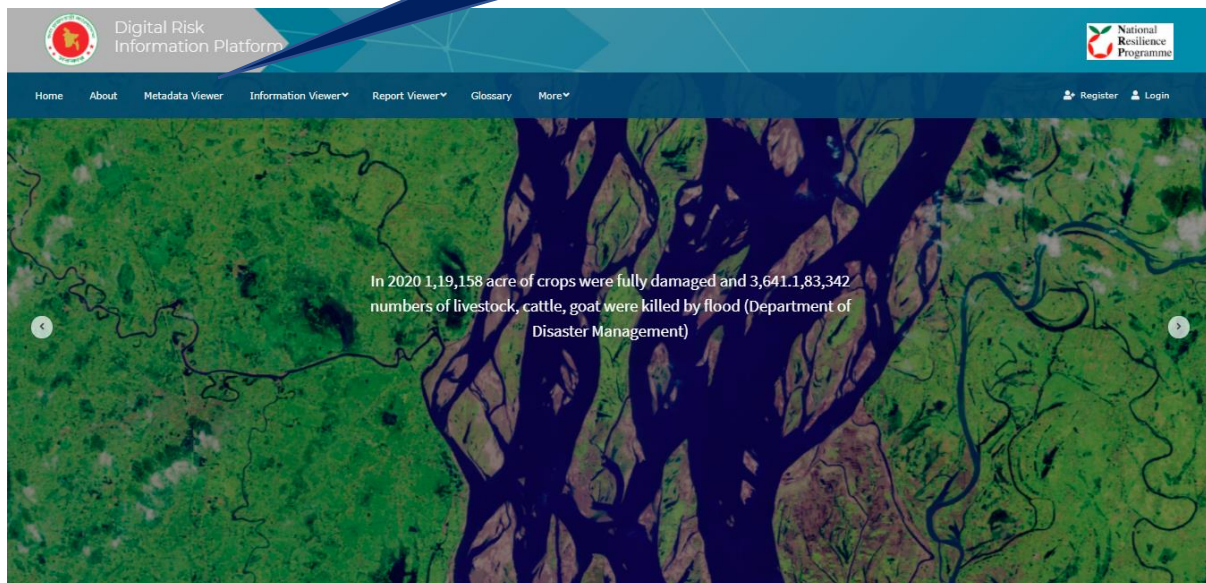
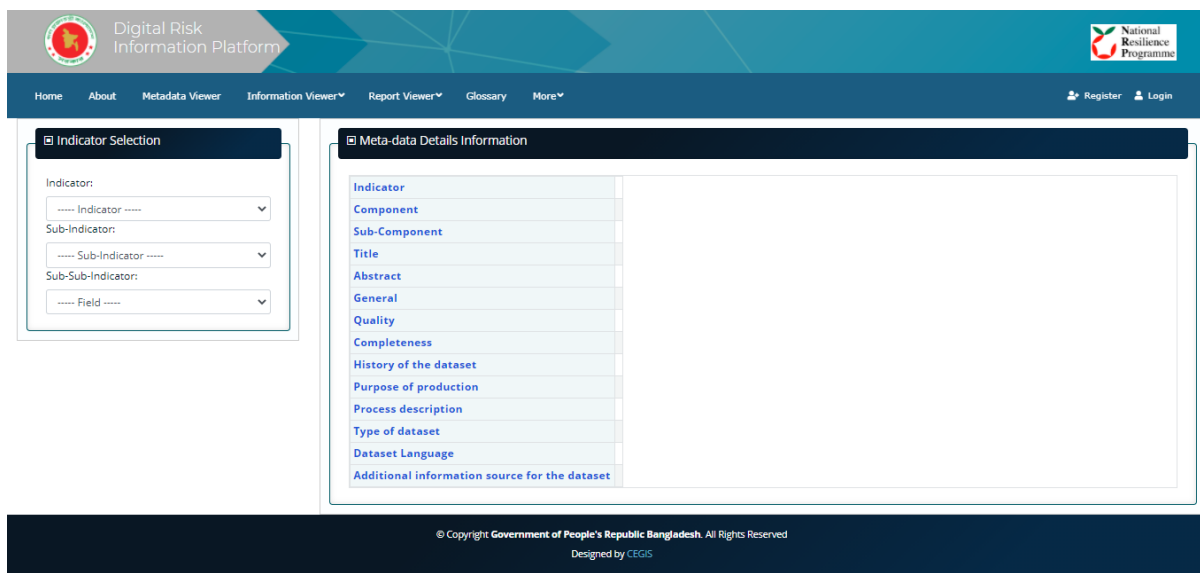


Figure 2. 1 Home page

To go to **Meta Data Viewer**, Click on the **Meta Data Viewer** from the navigation bar. A webpage like below (Figure-2.2) will be rendered.



**Figure 2. 2 Meta Data View page**

To view individual information, select the **Indicator** and **Sub-indicator** from the dropdown. Select the **Sub-Sub-Indicator** if it is available in the dropdown.

### 2.2.1 Indicator Selection

To view the metadata:

- Select the **Indicator**
- Select **Sub-Indicator**
- Select **Sub-Sub-Indicator**



**Figure 2. 3 Indicator Selection**

**Indicator Selection**

Indicator:  
----- Indicator -----

**Sub-Indicator:**  
----- Sub-Indicator -----

Sub-Sub-Indicator:  
----- Field -----

**Figure 2. 4 Selecting Sub-Indicator**

**Indicator Selection**

Indicator:  
----- Indicator -----

Sub-Indicator:  
----- Sub-Indicator -----

**Sub-Sub-Indicator:**  
----- Field -----

**Figure 2. 5 Selecting Sub-Sub-Indicator**

### 2.2.2 View Metadata Details information

After section 2.2.1 **Indicator Selection** is completed, metadata will be visible at the right panel.

**Digital Risk Information Platform**

HOME META DATA VIEWER INFORMATION VIEWER REPORT VIEWER MORE

Register Login

**Indicator Selection**

Indicator:  
Erosion

Sub-Indicator:  
Exposure

Sub-Sub-Indicator:  
Combined Exposure

**Meta-data Details Information**

|   |  |
|---|--|
| Indicator                                     | Erosion  |
| Component                                     | Exposure   |
| Sub-Component                                 | Combined Exposure  |
| Title   | 1000 years   |
| Abstract                                      | A spatial data layer of Exposure level for river bank erosion of Bangladesh, 2020 published by Asian Development bank (ADB).     |
| General                                       | Not Available  |
| Quality                                       | Not Available  |
| Completeness                                  | The data covers different districts of Bangladesh  |
| History of the dataset                        | Not Available  |
| Purpose of production                         | Assessing disaster risk to ensure risk informed public investment  |
| Process description                           | Data has been collected from the programming division, planning commission into shapefile format and converted as tabular format |
| Type of dataset                               | Spatial dataset  |
| Dataset Language                              | English  |
| Additional information source for the dataset | Not Available  |

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**Figure 2. 6 Meta Data Details information**



# Chapter Three: Information Viewer

## 3.1 Overview

Based on the Admin Boundary Selection in the **Map Filter (Section-3.2.1.5 Map Filter)**, and on mouse over the map, a user will be able to view the map. If the mouse is hovered on a map, the boundary of the District or Upazila will be visible.

To see the overall information regarding that District/Upazila follow the following steps:

- Click on any boundary (Any District from the map).
- Click on any tab from details information to respective data.

The screenshot shows a 'Detail Information' window with a tabbed interface. The 'Cyclone' tab is selected. The window is divided into two main sections: 'Disaster Risk' and 'DRR Measures'.

| Disaster Risk       |            |
|---------------------|------------|
| Indicator           | Cyclone    |
| Division            | Mymensingh |
| District            | Mymensingh |
| Area Sqkm           | 4343.40    |
| Hazard Level        | Low        |
| Exposure Level      | Very High  |
| Vulnerability Level | Medium     |
| Risk Level          | Medium     |

| DRR Measures       |   |  |                      |
|--------------------|---|--|----------------------|
| Indicator          | Components  | Possible DRR Measures  | Cost for DRR Measure |
| Cyclone            | Access to necessary utility facilities                        | Emergency lighting facilities  |                      |
|                    |   | Emergency fuel supply  |                      |
|                    | Agricultural Lands  | Elevated seed bed  |                      |
|                    |   | Cyclone resistant crop harvesting  |                      |
|                    | Availability of Food and Drinking Water                       | Proper distribution of drinking water and relief goods                           |                      |
|                    |   | Establishing infrastructures considering characteristics of Cyclone on that area |                      |
|                    | Infrastructural vulnerability                                 | Providing assistance in re-establishing infrastructures (houses, roads etc.)     |                      |
|                    |   | Elevated platforms for keeping livestock's safe                                  |                      |
|                    | Livestock and Fisheries                                       | Barrier around fish ponds.   |                      |
|                    |   | Reservoir based fisheries system.  |                      |
| Medical Facilities | Emergency medical facilities with free distribution of drugs. |  |                      |
| Population         | Establishment of multipurpose cyclone shelters                |  |                      |
|                    | Capacity building among                                       |  |                      |

Figure 3. 1 Disaster Detail Information

| Detail Information  |           | Cyclone                                 |   |   |                      |
|---------------------|-----------|---|---|---|----------------------|
| Indicator           | Cyclone   | Indicator                               | Components                              | Possible DRR Measures   | Cost for DRR Measure |
| Division            | Dhaka     | Cyclone                                 | Access to necessary utility facilities  | Emergency lighting facilities   |                      |
| District            | Dhaka     |   |   | Emergency fuel supply   |                      |
| Area Sqkm           | 1477.63   |   | Agricultural Lands                      | Elevated seed bed   |                      |
| Hazard Level        | Medium    |   |   | Cyclone resistant crop harvesting   |                      |
| Exposure Level      | Very High |   | Availability of Food and Drinking Water | Proper distribution of drinking water and relief goods  |                      |
| Vulnerability Level | Very Low  |   |   | Establishing infrastructures considering characteristics of Cyclone on that area                          |                      |
| Risk Level          | High      |   | Infrastructural vulnerability           | Providing assistance in re-establishing infrastructures (houses, roads etc.)                              |                      |
|                     |           |   |   | Elevated platforms for keeping livestock's safe   |                      |
|                     |           |   | Livestock and Fisheries                 | Barrier around fish ponds.  |                      |
|                     |           |   |   | Reservoir based fisheries system.   |                      |
|                     |           |   | Medical Facilities                      | Emergency medical facilities with free distribution of drugs.   |                      |
|                     |           |   | Population                              | Establishment of multipurpose cyclone shelters  |                      |
|                     |           |   | Profession                              | Capacity building among affected people for switching to alternate profession during post cyclone period. |                      |
|                     |           | Thicker covering around infrastructures |   |   |                      |
|                     |           | Salinity Intrusion                      | Appropriate polder height and           |   |                      |

Figure 3. 2 Detail Information about Cyclone

| Detail Information  |                 | Disaster Risk                           |   |  |             |       |           |          |                |             |
|---------------------|-----------------|---|---|--|-------------|-------|-----------|----------|----------------|-------------|
| Cyclone             | Drought: Kharif | Drought: Pre Kharif                     | Earthquake                              | Erosion  | Flash Flood | Flood | Landslide | Salinity | Sea Level Rise | Storm Surge |
| Indicator           | Drought: Kharif | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Division            | Dhaka           | Disaster Risk                           |   |  |             |       |           |          |                |             |
| District            | Dhaka           | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Area Sqkm           | 1477.63         | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Hazard Level        | Very Low        | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Exposure Level      | Very High       | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Vulnerability Level | Very Low        | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Risk Level          | Low             | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Indicator           | Drought: Kharif | Disaster Risk                           |   |  |             |       |           |          |                |             |
| Drought: Kharif     | Drought: Kharif | Disaster Risk                           |   |  |             |       |           |          |                |             |
|                     |                 | Agriculture                             | Agriculture                             | Strengthening field bunds to conserve more rain water  |             |       |           |          |                |             |
|                     |                 |   |   | Adopting drought- resistant crops  |             |       |           |          |                |             |
|                     |                 | Availability of Food and Drinking Water | Availability of Food and Drinking Water | Adopting Water-efficient irrigation system   |             |       |           |          |                |             |
|                     |                 |   |   | Minimizing wastage of water during crop production   |             |       |           |          |                |             |
|                     |                 | Drought Affected Area                   | Drought Affected Area                   | Emergency irrigation facilities for the farmers  |             |       |           |          |                |             |
|                     |                 |   |   | Increase of Wetland.   |             |       |           |          |                |             |
|                     |                 | Drought Duration                        | Drought Duration                        | Enhanced public awareness by arranging Training Programs, Workshops, and Group Discussions at the root level |             |       |           |          |                |             |
|                     |                 |   |   | Proper distribution of drinking water and relief goods   |             |       |           |          |                |             |
|                     |                 |   |   | Enhanced precaution over historically highest drought affected areas   |             |       |           |          |                |             |
|                     |                 |   |   | Coordinated Emergency Response and Rescue and Recovery during and post drought period                        |             |       |           |          |                |             |
|                     |                 |   |   | Drought proofing to reduce   |             |       |           |          |                |             |

Figure 3. 3 Detail Information about Drought Kharif.

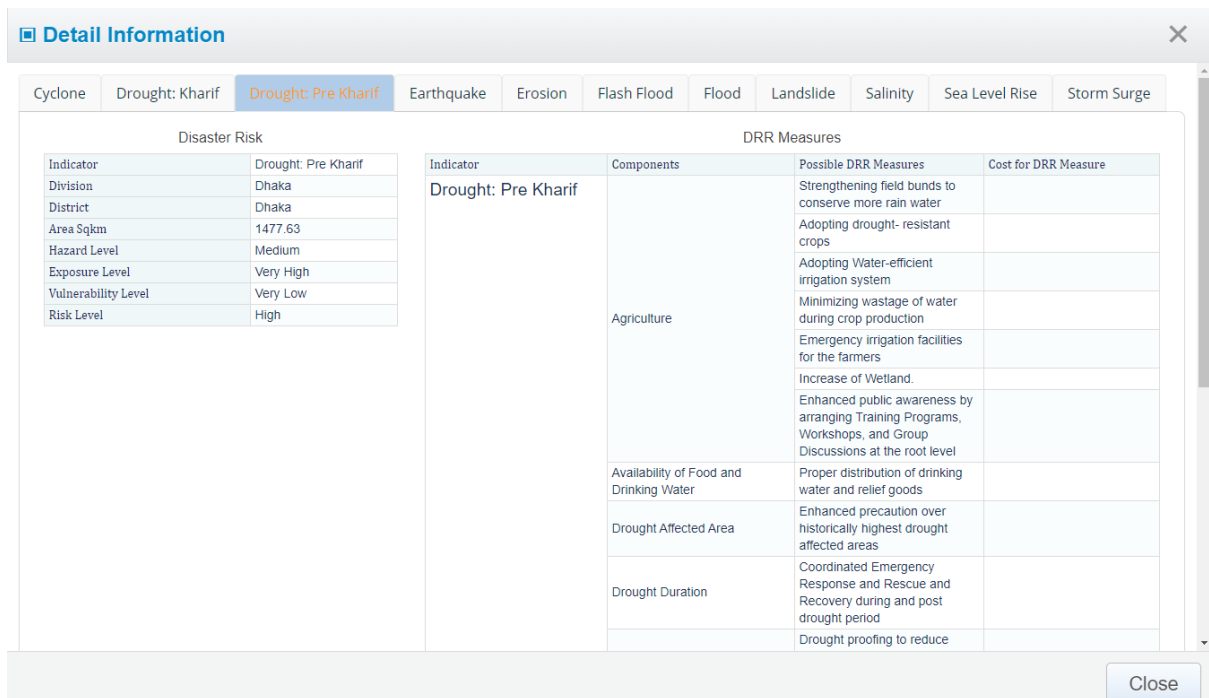


Figure 3. 4 Detail Information about Drought Pre Kharif

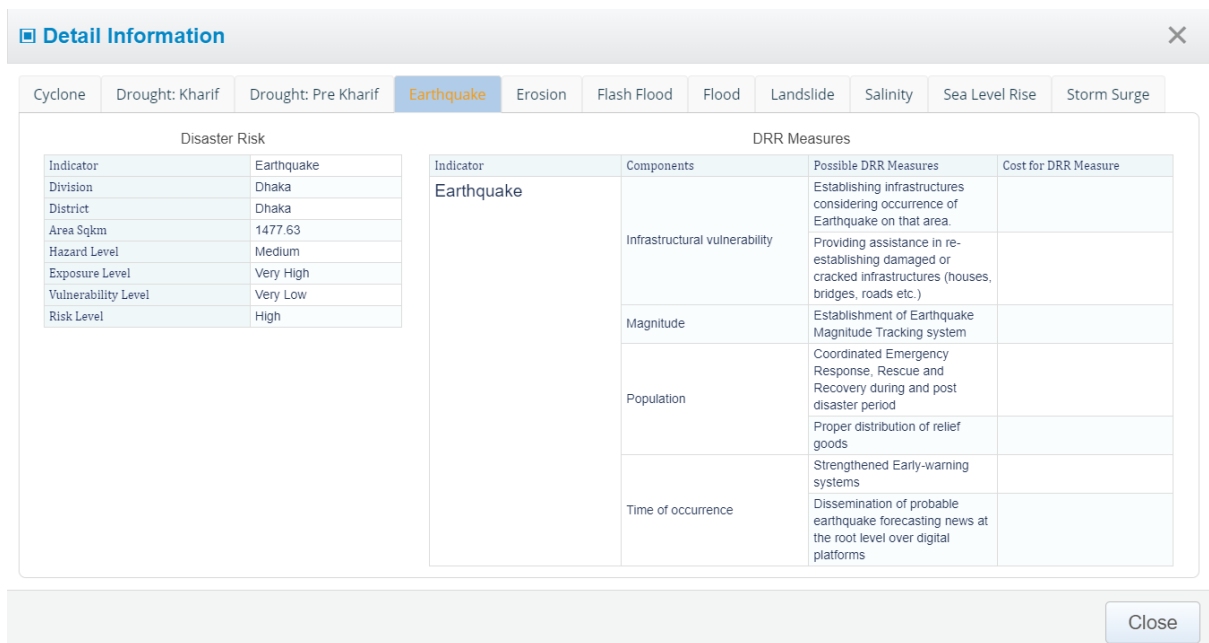
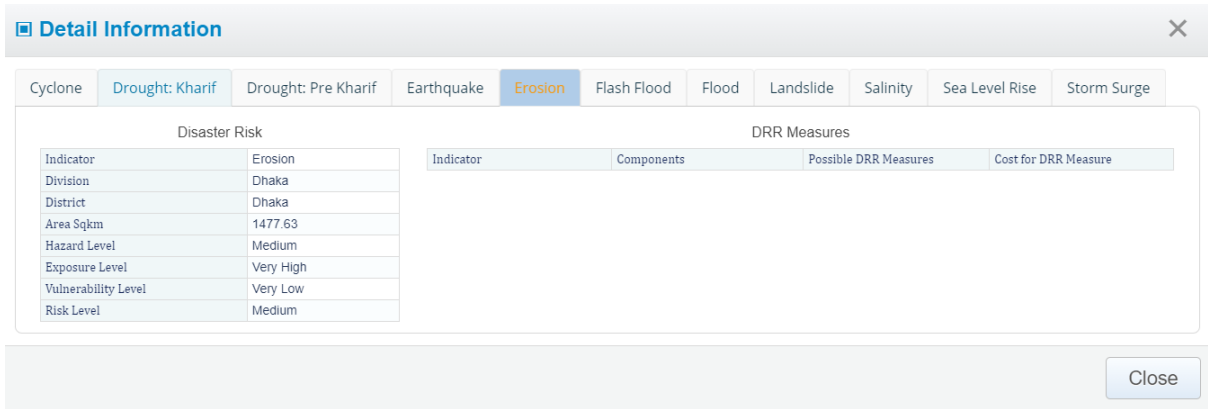
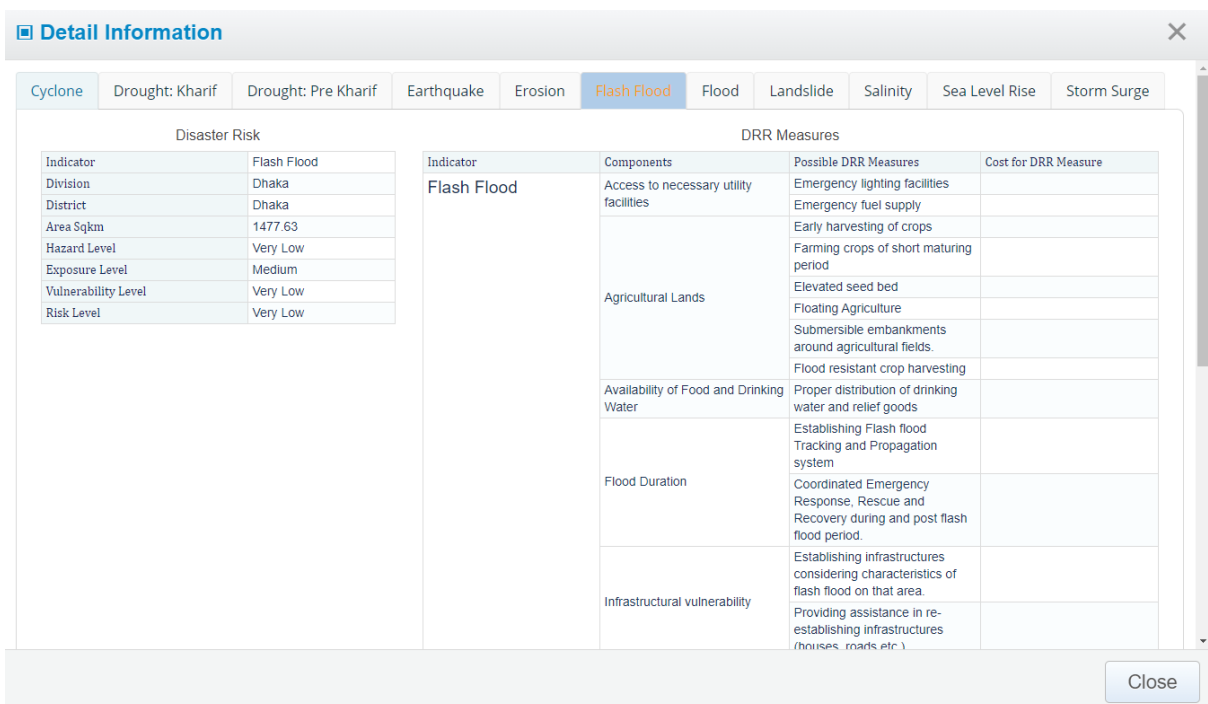


Figure 3. 5 Detail Information about Earthquake



**Figure 3. 6 Detail Information about Erosion**



**Figure 3. 7 Detail Information about Flash Flood**

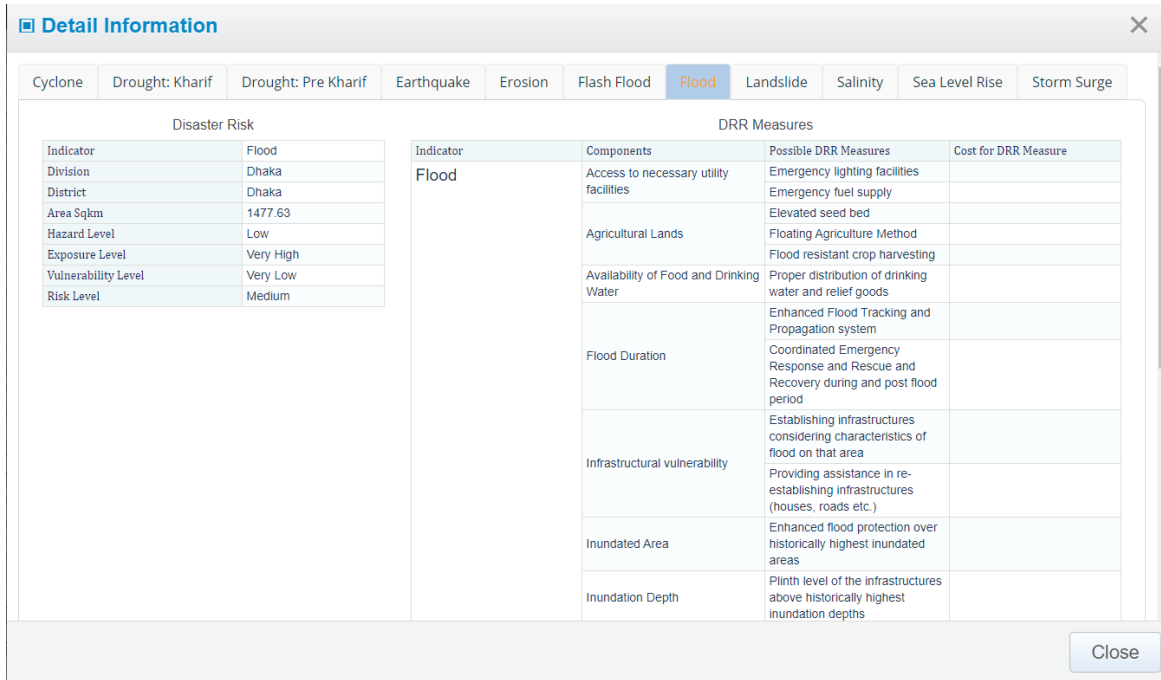


Figure 3. 8 Detail Information about Flood

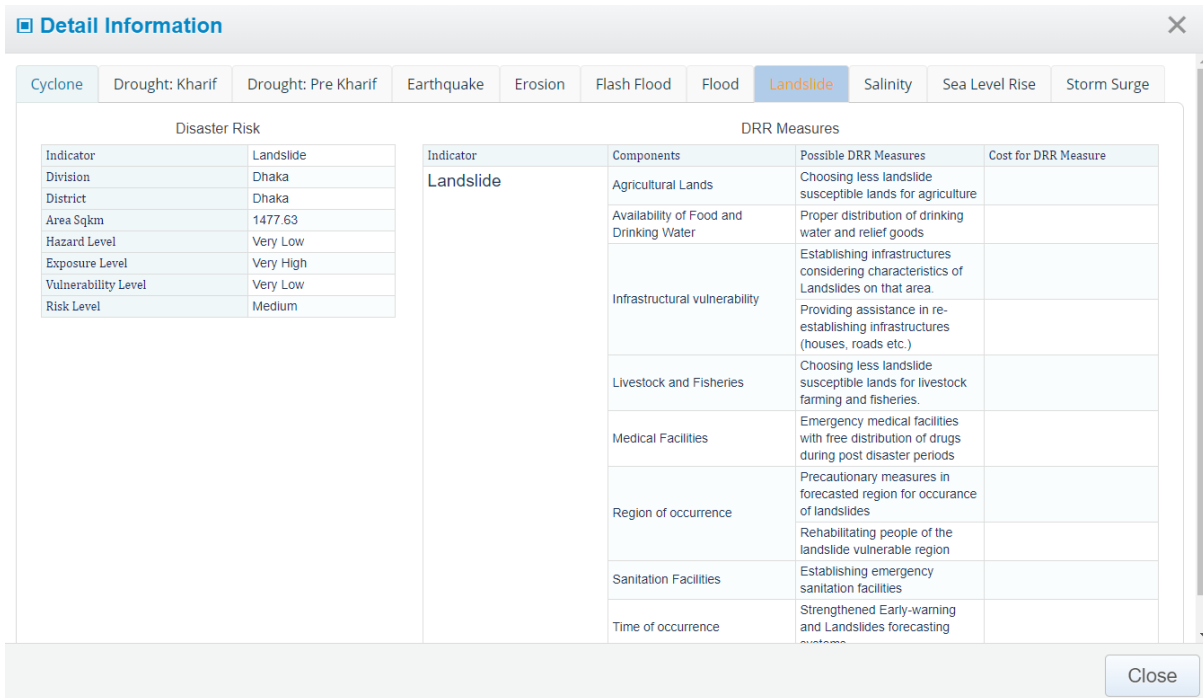


Figure 3. 9 Detail Information about Landslide

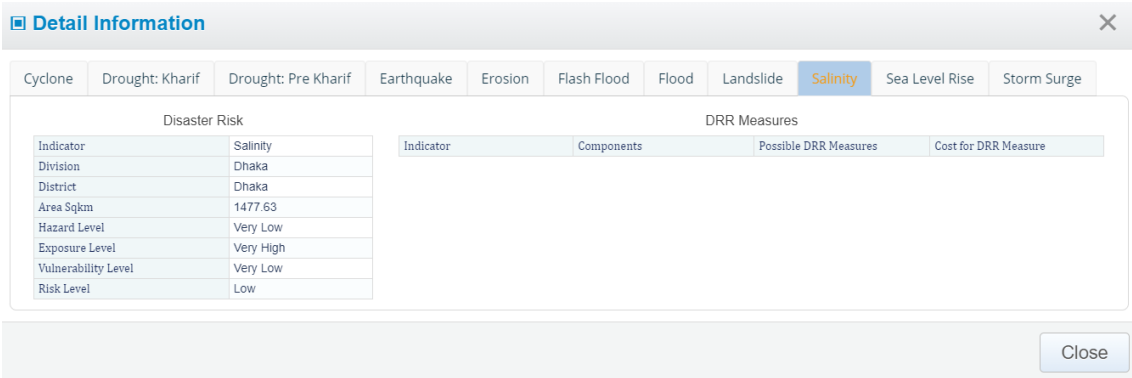


Figure 3. 10 Detail Information about Salinity

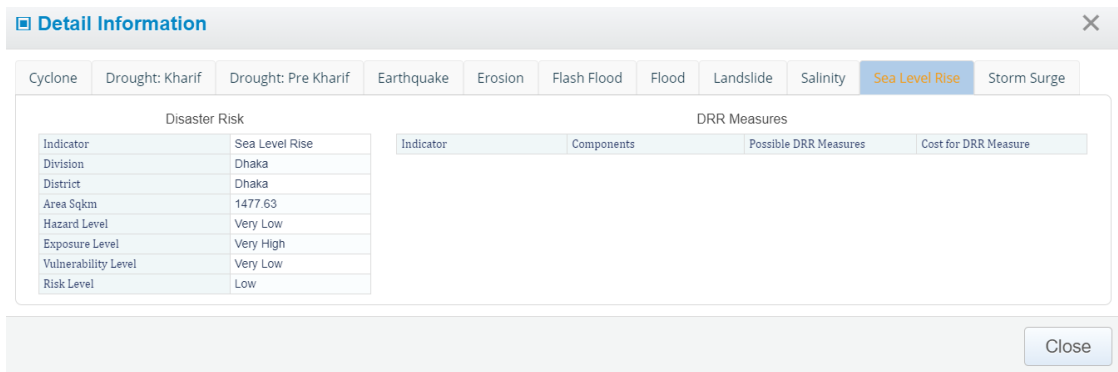


Figure 3. 11 Detail Information about Sea Level Rise

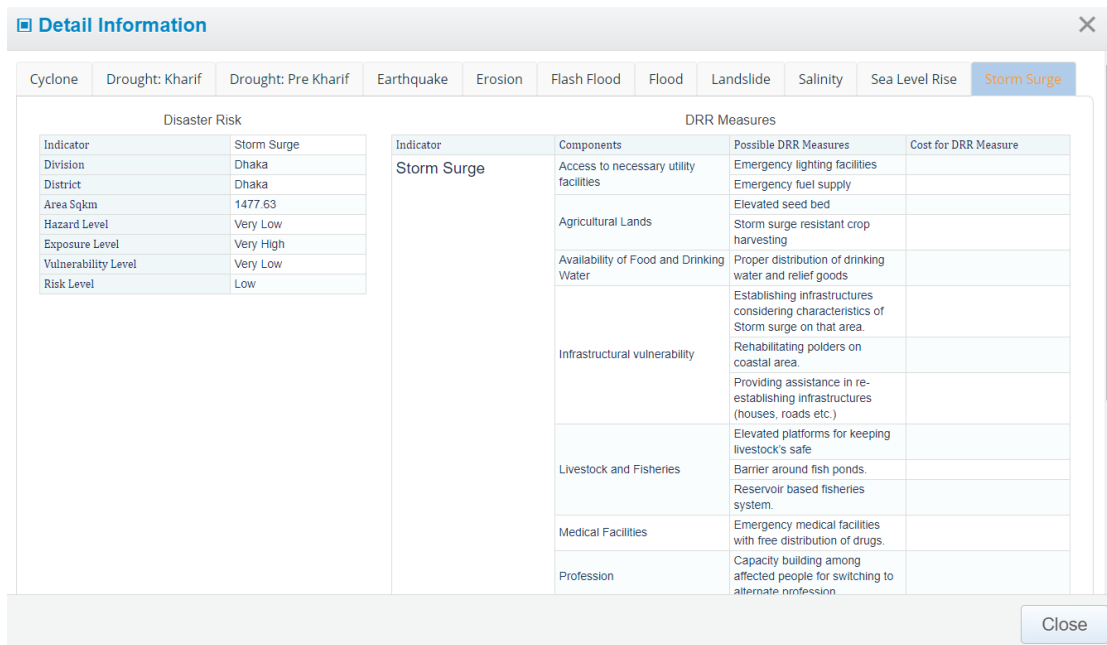


Figure 3. 12 Detail Information about Storm Surge

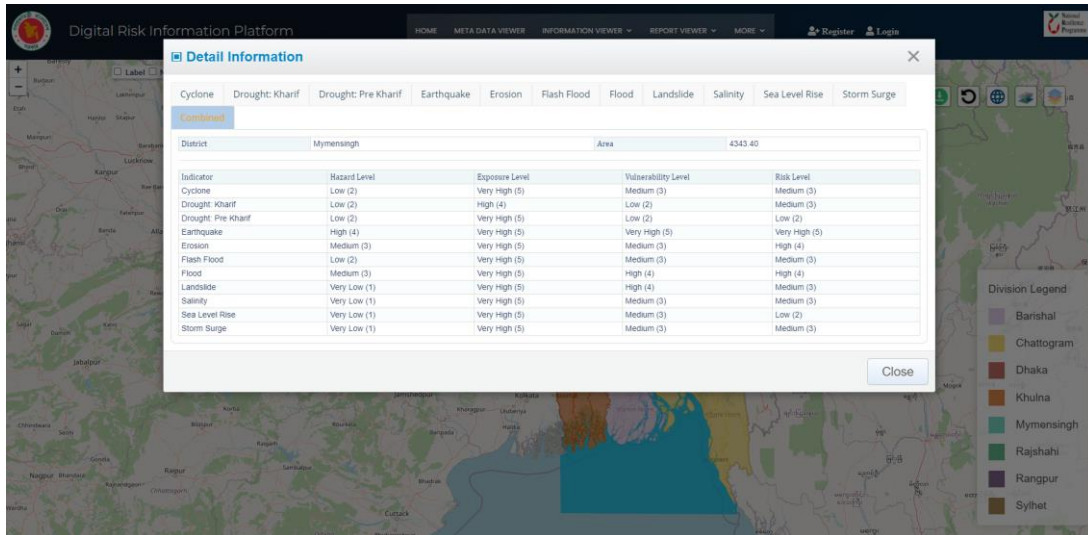


Figure 3. 13 Detail Information Combined

DRIP includes **Map Viewer** section

- Disaster Risk Map
- Climate Projection Map

Disaster Risk Map displays the possible risk on disasters like **Cyclone, Drought: Kharif, Drought: Pre Kharif, Earthquake, Erosion, Flash Flood, Landslide, Salinity, Sea Level Rise, Storm Surge.**

### 3.2 Disaster Risk Map

To view the disaster risk information in the form of a map:

- Go to the **Information Viewer** tab
- Click the **Disaster Risk Map** tab



Figure 3. 14 Information Viewer.

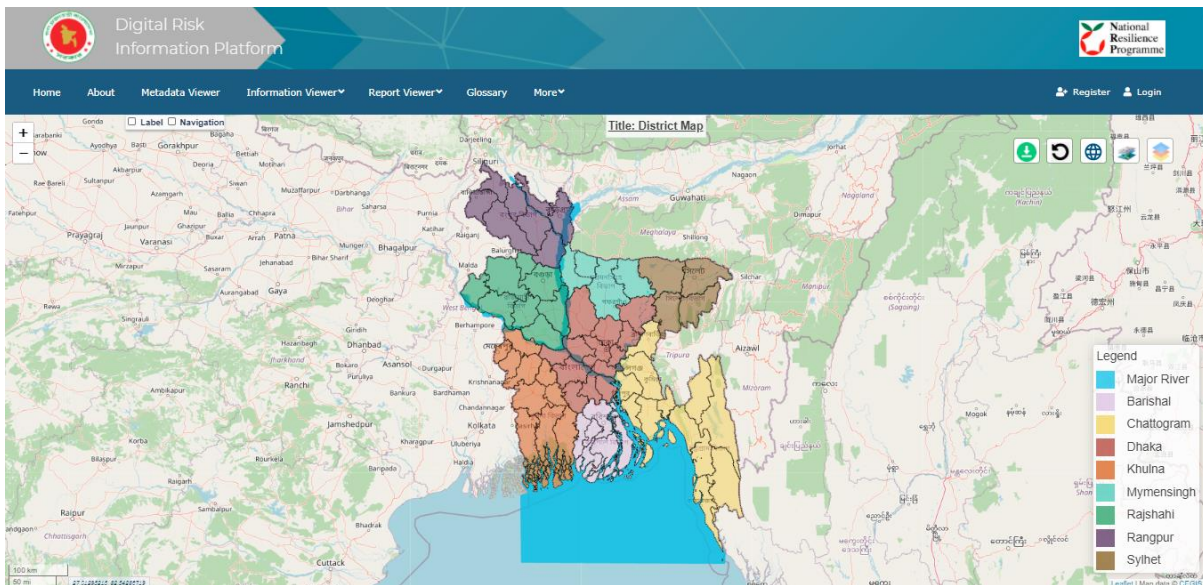


Figure 3. 15 Disaster Risk Map

Here on the top right (Figure-3.15), a **map customization panel** is available. To set the different functionality of the map viewer use the **map customization panel** (Figure-3.16).

### 3.2.1 Map Customization Panel

The picture below (Figure-3.16) is the main customization panel of the Disaster Risk Map. Each icon is assigned to specific functionality in the map section.



Figure 3. 16 Map Customization Panel

#### 3.2.1.1 Map Download



Figure 3. 17 Map Download

Click the **Map Download** (Figure-3.17) to download the map as a **.png** file like figure-3.18.



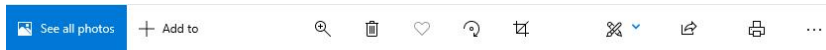


Figure 3. 18 Downloaded map in the png format.

### 3.2.1.2 Map Reset



Figure 3. 19 Reset the map

Click on the **Reset** icon to reset the map to its original state (Figure-3.19).

### 3.2.1.3 Full Extending the map



Figure 3. 20 Full Extending the map icon

Click on the marked icon for extending the map to its full extend.

Click on the **Extend Map icon** (Figure-3.20) to extend the map to the full screen. Later the whole map will be fully extended.

### 3.2.1.4 Map Background Layer



Figure 3. 21 Map Background Layer

Click on the map background layer to change its background (Figure-3.21).

There are several map backgrounds

- Open street
- Google Hybrid
- Google Satellite
- Google Street
- Google Terrain
- ESRI
- None

Choose a background from any of the above.

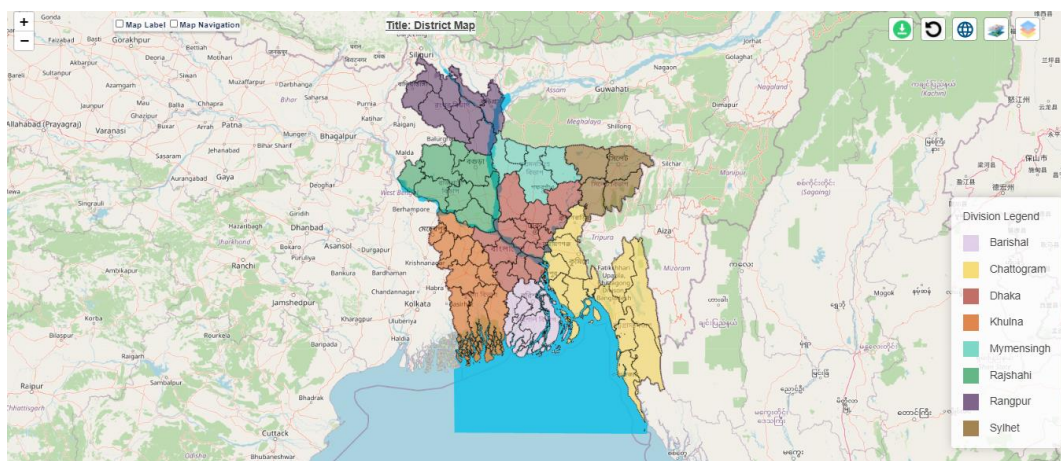


Figure 3. 22 Open Street Map

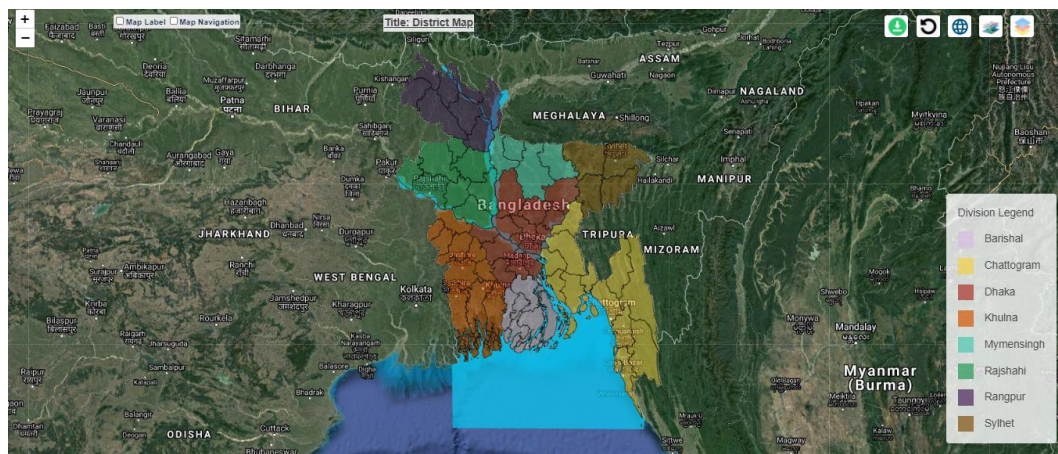


Figure 3. 23 Google Hybrid background

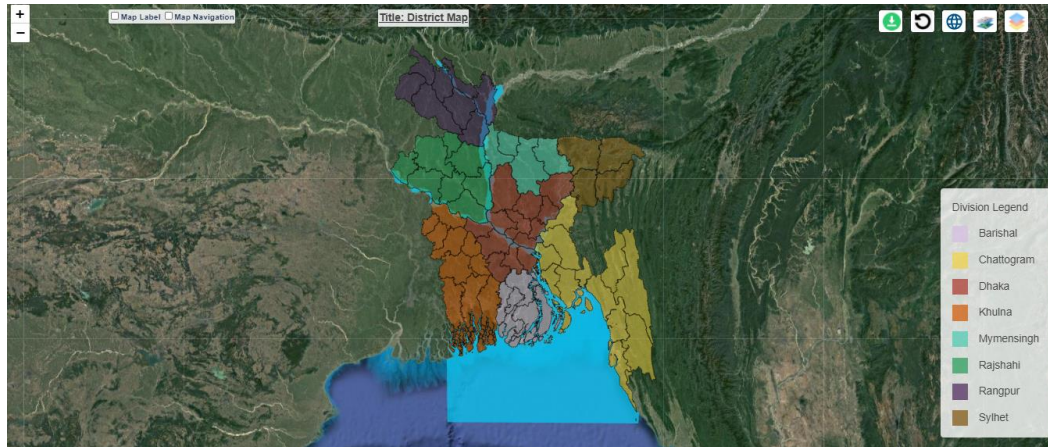


Figure 3. 24 Google Satellite background

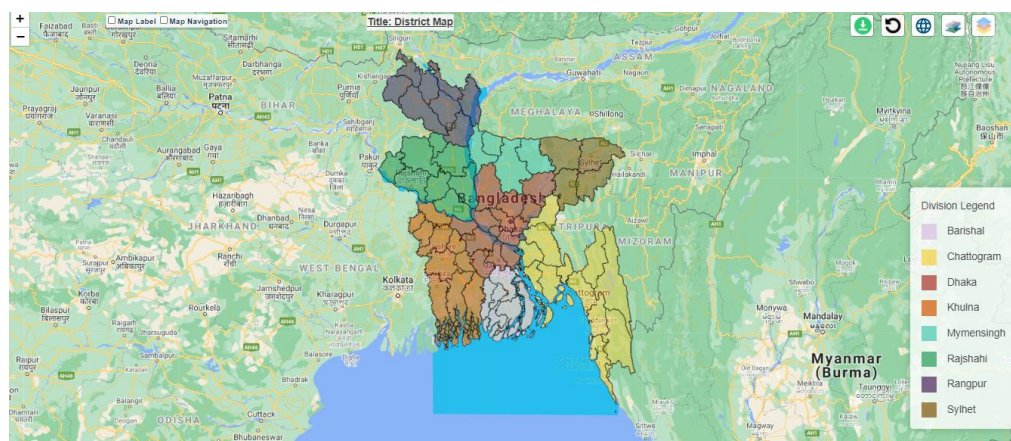


Figure 3. 25 Google Street Background

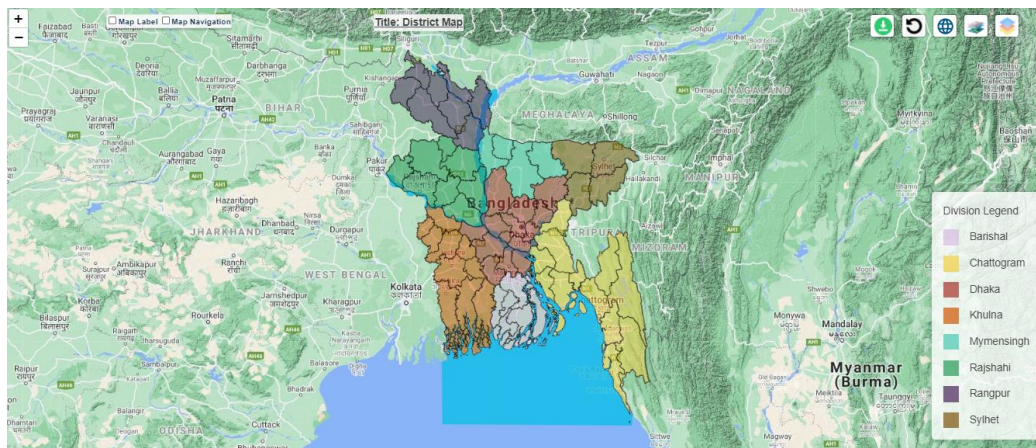


Figure 3. 26 Google Terrain Background

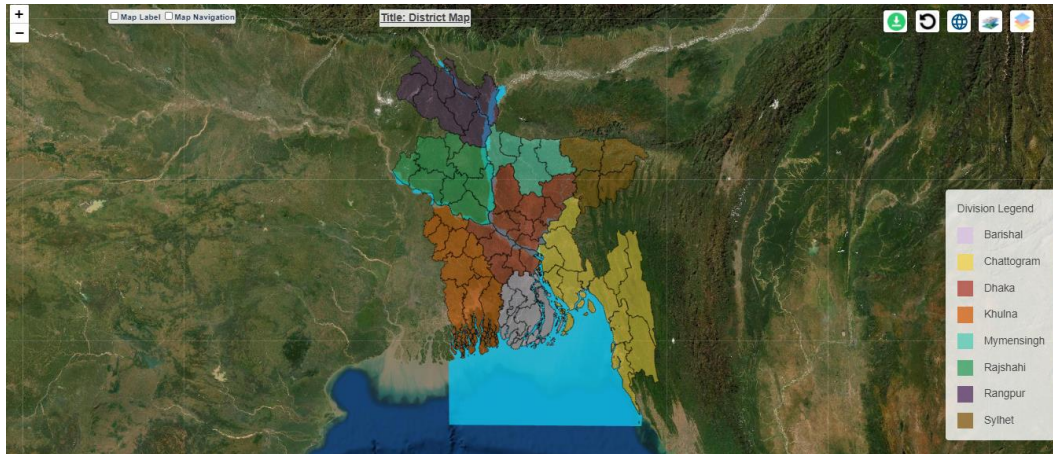


Figure 3. 27 ESRI Background

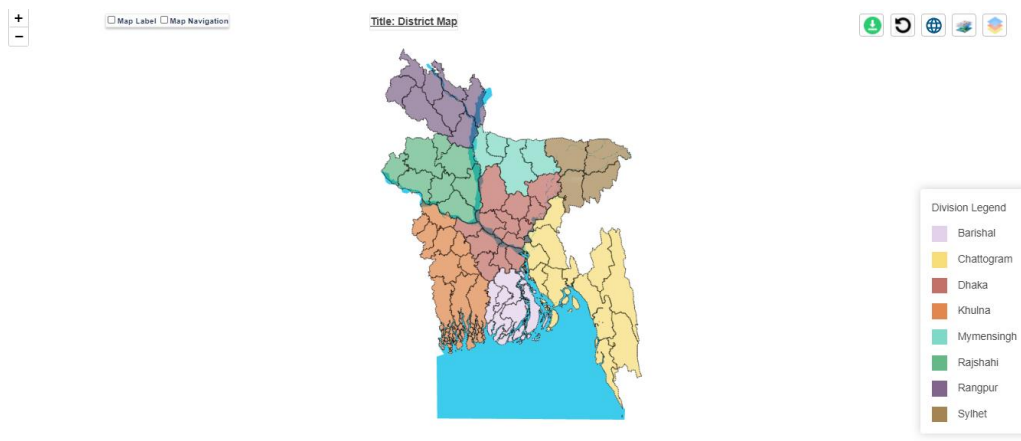


Figure 3. 28 None Background

### 3.2.1.5 Map Filter



Figure 3. 29 Map filter

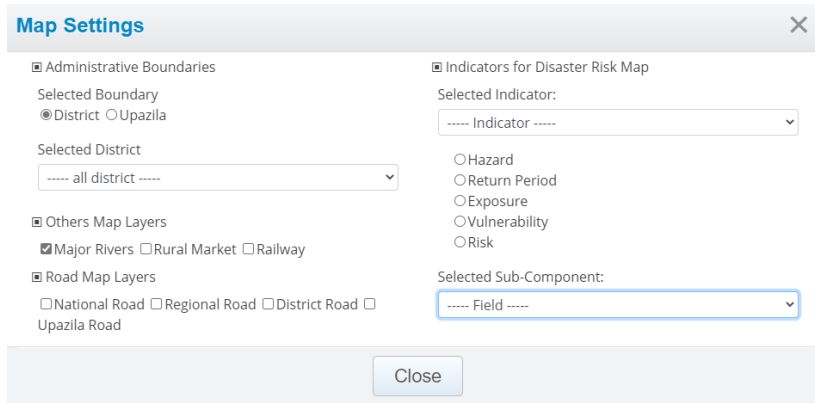
This is the main customization option for the map viewer section.

To filter out data from the map follow the steps mentioned below:

- Click on the **filter the map** icon.
- Select boundary and indicator information

In the **Disaster Risk Map**, a tab will be visible like the picture below (Figure-3.30).

#### 3.2.1.5.1 Map Settings



**Figure 3. 30 Map Settings**

To visualize the proper layers in the map the following criteria must be fulfilled.

Here two settings can be set with two different sections

### 3.2.1.5.2 Fixing Boundary and Indicator

To view the disaster map for a particular district we have to:

- 1 Select proper boundary
- 2 Select proper indicator

In the Map Settings, we have to configure both the boundary and Indicator for displaying the map.

There are several indicators available there are:

- Cyclone
- Drought: Kharif
- Drought: Pre Kharif
- Earthquake
- Erosion
- Flash Flood
- Landslide
- Salinity
- Sea Level Rise
- Storm Surge

### Selecting Boundary

To select the district map:

- Select the boundary as **District**.
- Select the desired district from the dropdown.
- Select other map layers or roads if necessary.

Follow the steps mentioned below to select the Upazila map

- Select the boundary as **Upazila**.
- Select the desired district from the district dropdown.
- Select the desired Upazila from the Upazila dropdown.
- Select other map layers or roads if necessary.

**Map Settings**

Administrative Boundaries

Selected Boundary

District  Upazila

Selected District

----- all district -----

Others Map Layers

Major Rivers  Rural Market  Railway

Road Map Layers

National Road  Regional Road  District Road  Upazila Road

**Figure 3. 31 Setting District boundary information**

Administrative Boundaries

Selected Boundary

District  Upazila

Selected District

----- all district -----

Selected Upazila

----- all upazila -----

**Figure 3. 32 Setting Upazila boundary information**

Others Map Layers

Major Rivers  Rural Market  Railway

**Figure 3. 33 Other Map Layers**

Indicators for Disaster Risk Map

Selected Indicator:

----- Indicator -----

Hazard  
 Return Period  
 Exposure  
 Vulnerability  
 Risk

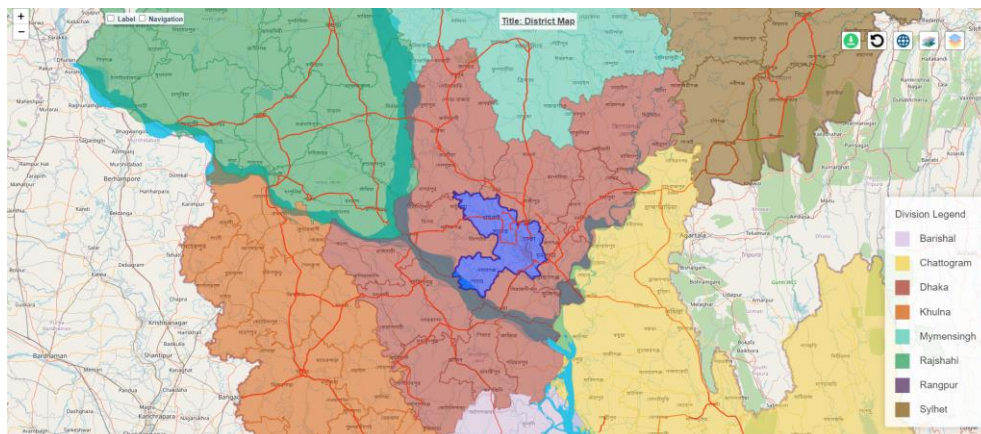
Selected Sub-Component:

----- Field -----

**Figure 3. 34 Indicator for Disaster Risk Map**

For selecting the Indicators:

- Select an Indicator.
- Select associated hazard/ return period/ exposure/ vulnerability/ risk.
- Select Sub-Component.
- Click the **close** or **X** icon at the top right corner.



**Figure 3. 35 Disaster Risk map based on district**

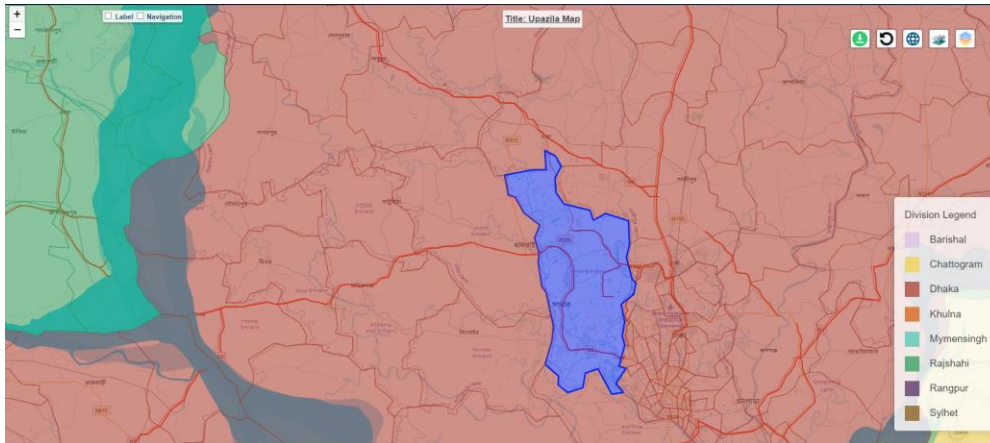


Figure 3. 36 Disaster Risk map based on Upazila

### 3.3 Climate Projection Map

#### 3.3.1 Overview

The climate projection map gives a projection based on the climate considering several factors.

To go to the climate projection map:

- Hover the mouse on the **Information Viewer**.
- Click on the **Climate Projection Map** from the dropdown.

In the figure climate projection map, A map customization panel would be available on the top right side. To learn more functionality about each icon please take a look at **section 3.2.1 Map Customization Panel**. To know more about the map filter functionality read **section 3.3.2**.

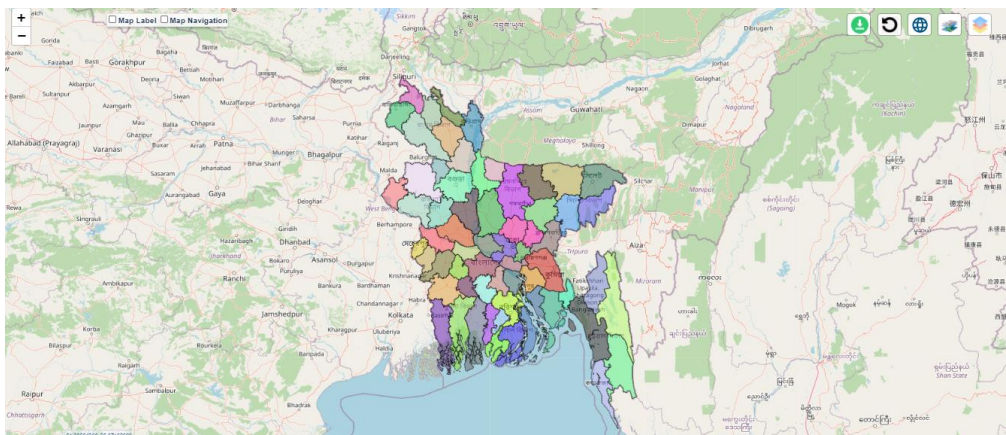
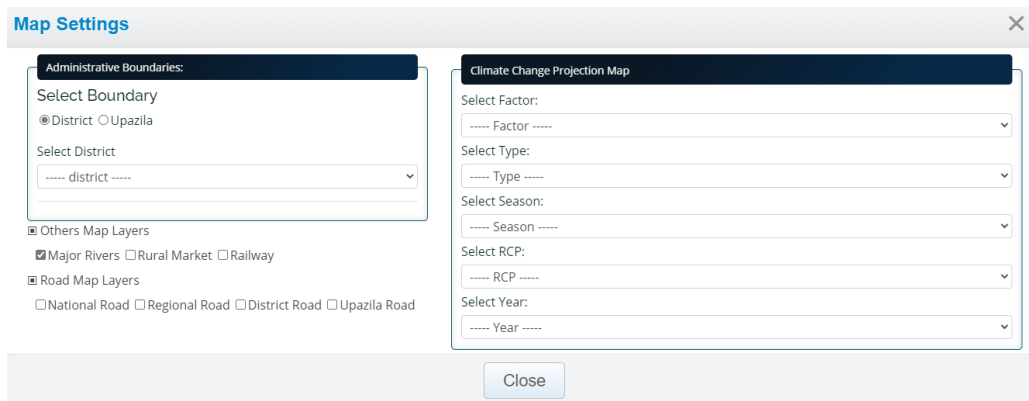


Figure 3. 37 Climate projection map

#### 3.3.2 Map Filtering in Climate Projection

After clicking the **filter map** icon below a new window will pop up like Figure-3.38.

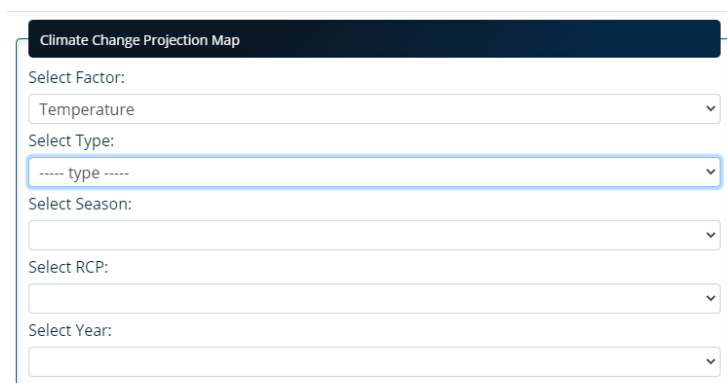




**Figure 3. 38 Map Settings of the Climate Projection Map**

**To get the desired map output:**

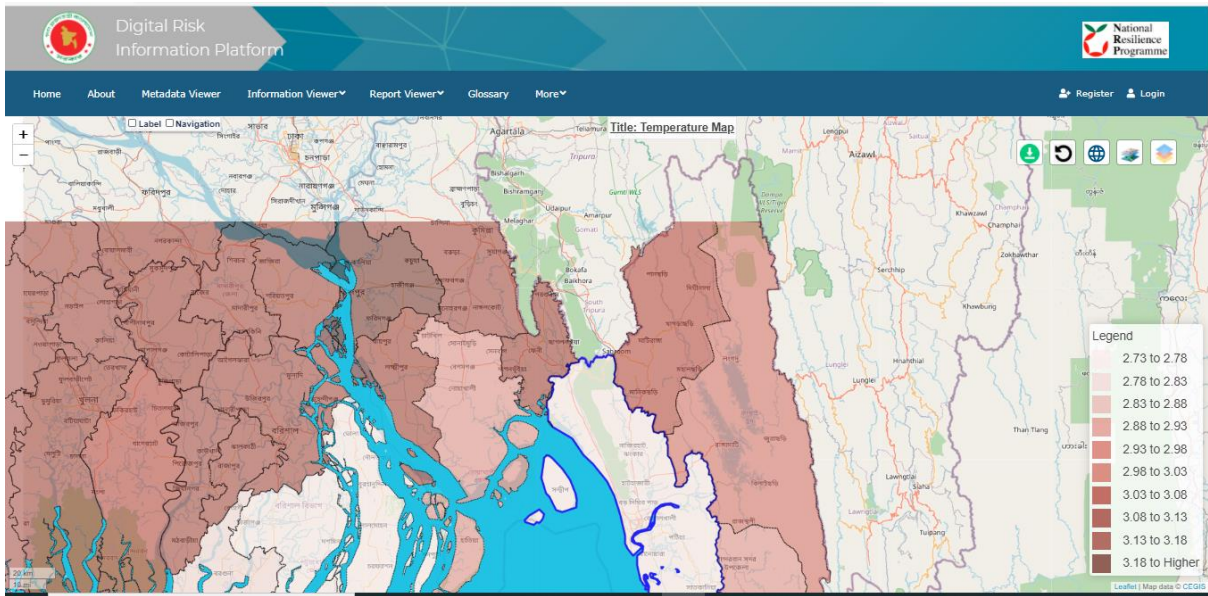
- Select the boundary.
- Select District or District along with Upazila.
- Select map layers if necessary.
- Select Factor.
- Select Type.
- Select Season.
- Select RCP.
- Select Year.
- Click X icon or click the **close** button to eliminate the popup tab.



**Figure 3. 39 Climate Change Projection Map setting (right panel)**

Here from the dropdown after configuring proper **Climate Change Projection Settings**. Some options in the dropdown might only be visible for certain combinations of selection.

Close the map settings by clicking the **X** icon on the top-right or click the **close** button. After all the configurations, if all the settings are configured properly a window like below will be visible (**Figure-3.40**).



**Figure 3. 40 Climate Change Map (Chittagong District, Factor-temperature, RCP-8.5, 2041-50)**

# Chapter Four: Report Viewer

## 4.1 Overview

To create an opportunity for the user to generate and download the report based on district or Upazila DRIP system has a feature called Development and Appraisal Tool.

## 4.2 Development and Appraisal tool

Drip System consists of several Advanced tools. One of them is **Development and Appraisal tool**. It generates the report dynamically based on the user's inputs. Only the authorized users can view the **Development and Appraisal Tool**.

To view **Development and Appraisal tool** the user must be logged in and he should also have the proper authorization. While the user generates the report the system will generate a log automatically with time, username, email along IP address.

To learn more please contact DRIP Admin.

To go to **Development and Appraisal tool** page:

- Hover on the **Report Viewer**.
- Click on the **Development and Appraisal Tool** button.



Figure 4. 1 Report Viewer Tab

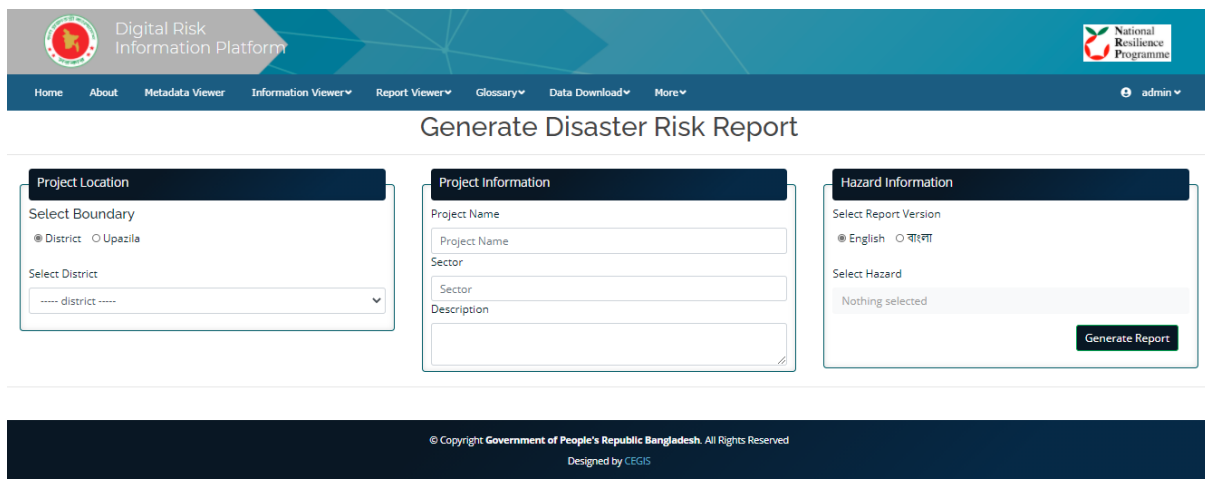


Figure 4. 2 Disaster Risk Report Generator.

The report generating page consists of three sections.

- **Project Location**
- **Project Information**
- **Hazard Information**

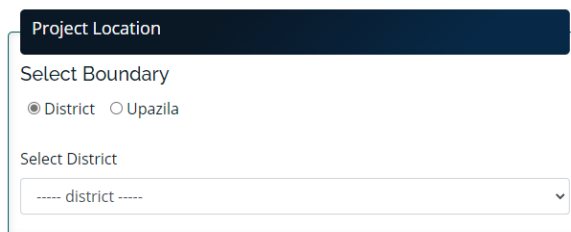
#### 4.2.1 Project Location

##### For District boundary:

- Select the boundary as **District**.
- The select district from the dropdown.

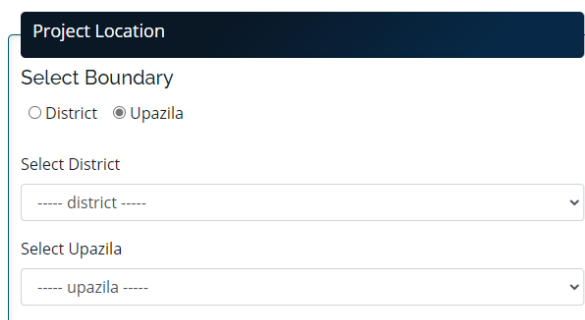
##### For Upazila:

- Select the boundary as **Upazila**.
- Select district from the dropdown.
- Select Upazila from the dropdown.



The screenshot shows a form titled "Project Location". Under "Select Boundary", the "District" radio button is selected. Below it, the "Select District" dropdown menu is open, showing "----- district -----" as the selected option.

**Figure 4. 3 Project Location (Boundary District)**



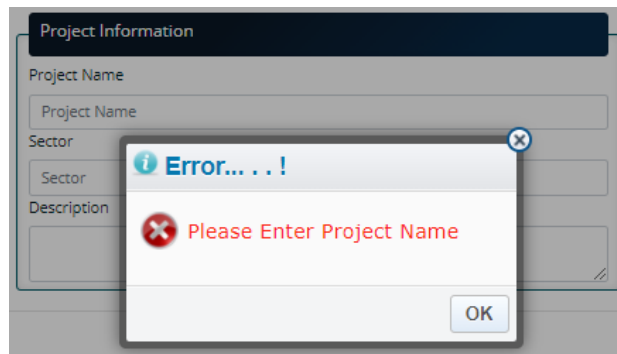
The screenshot shows a form titled "Project Location". Under "Select Boundary", the "Upazila" radio button is selected. Below it, the "Select District" dropdown menu is open, showing "----- district -----" as the selected option. Below that, the "Select Upazila" dropdown menu is open, showing "----- upazila -----" as the selected option.

**Figure 4. 4 Project Location (Boundary Upazila)**

**Figure 4. 5 Project Information**

### 4.2.2 Project Information

Give the project vital information like **Project Name, Sector, Description**. It is mandatory to give the **Project Name** otherwise a window like figure-4.6 will be visible.



**Figure 4. 6 Warning for not giving Project Information**

**Figure 4. 7 Hazard Information**

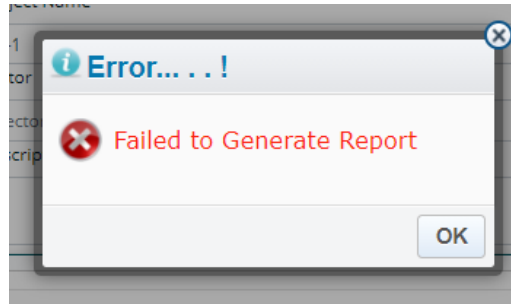
### 4.2.3 Hazard Information

To generate the report properly, it's mandatory to select at least one of the **Hazards**.

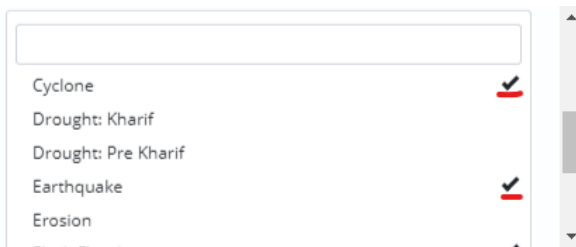
- Click on the **select menu** to select a hazard.
- Select one or more hazards.

- Click outside the dropdown area to close the dropdown.

In the case without selecting the appropriate option, if **Generate Report** button is pressed, a pop-up window like (Figure-4.8) will be displayed.



**Figure 4. 8 Warning failure message to generate a report**



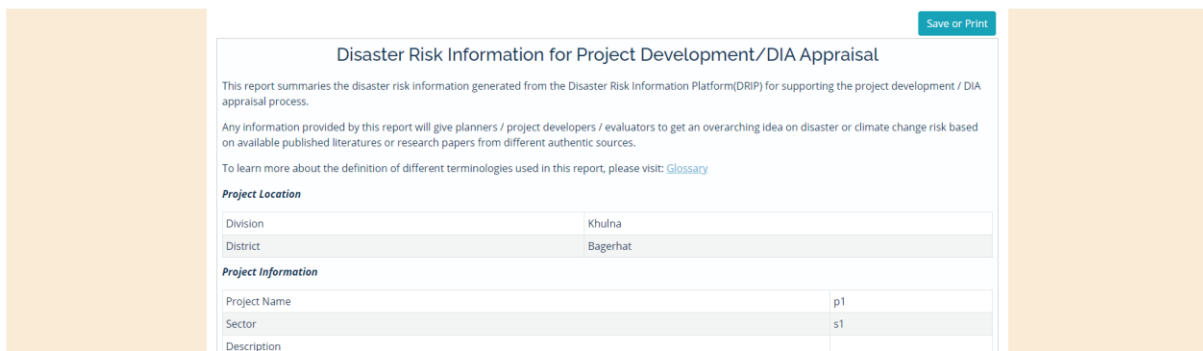
**Figure 4. 9 Selecting Hazard from the dropdown**

#### 4.2.4 Generate Report

After configuring project location, project information, hazard information

Click on the **Generate Report** button.

Meanwhile, a section will be rendered like below (Figure-4.10).



**Figure 4. 10 Generated report**

On the right-top side of the page, there is a link called **Save or Print**,

Click on the link to print or save the report in pdf format.

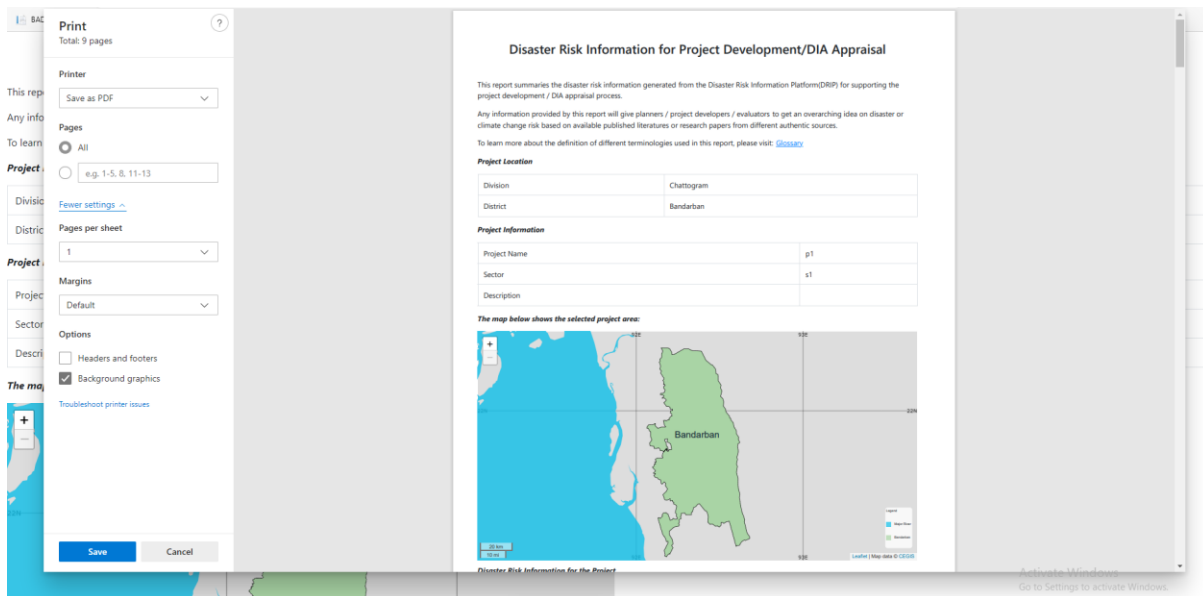


Figure 4. 11 Downloaded report (Top section)

Click on **Save** button and keep the **background graphics** checked from the settings options.

In the report section by clicking the **Report Menu** the user can also download data and images into different formats like **csv, xls, png, jpeg, pdf, svg**.

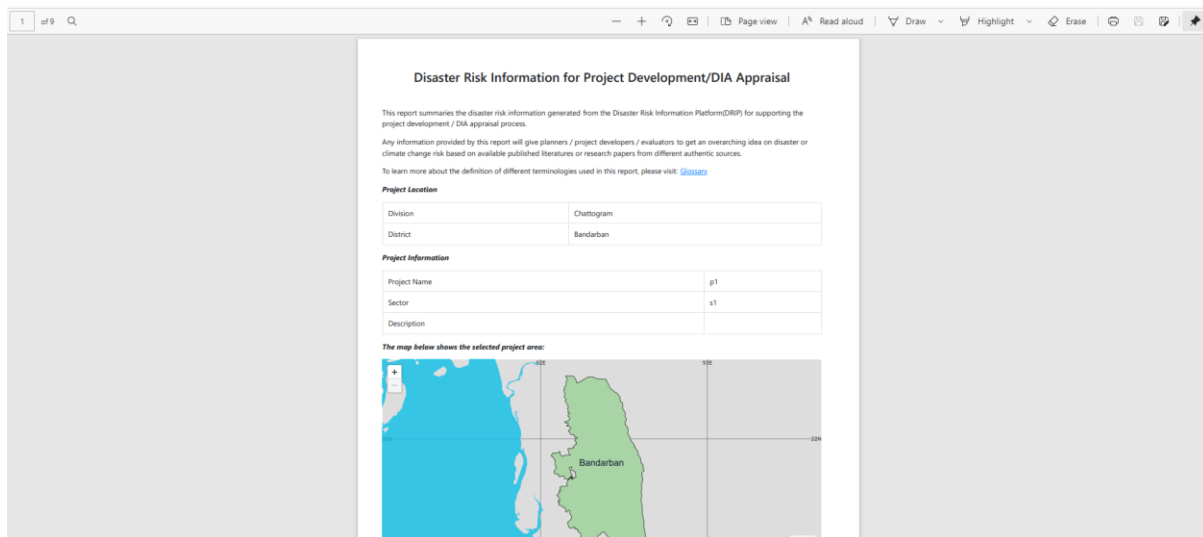


Figure 4. 12 View Downloaded report in pdf format.

The user can download data and images into different formats like **csv, xls, png, jpeg, pdf, svg** by clicking the **Report Menu**.

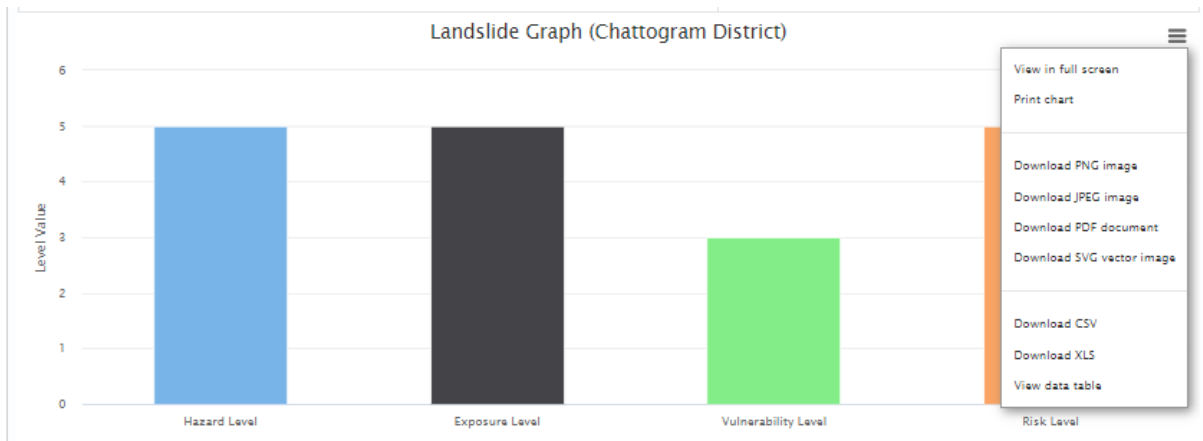


Figure 4. 13 Report Menu

|    | A            | B        | C | D | E |
|----|--------------|----------|---|---|---|
| 1  | Category     | Series 1 |   |   |   |
| 2  | Road         | 2        |   |   |   |
| 3  | Railway      | 2        |   |   |   |
| 4  | Settlement   | 1        |   |   |   |
| 5  | Population   | 1        |   |   |   |
| 6  | Rural Market | 5        |   |   |   |
| 7  | Forest       | 5        |   |   |   |
| 8  | Crop: Potato | 1        |   |   |   |
| 9  | Crop: Maize  | 1        |   |   |   |
| 10 | Crop: Jute   | 1        |   |   |   |
| 11 | Crop: Boro   | 1        |   |   |   |
| 12 | Crop: Aus    | 1        |   |   |   |
| 13 | Crop: Wheat  | 1        |   |   |   |
| 14 | Crop: Aman   | 1        |   |   |   |
| 15 |              |          |   |   |   |

Figure 4. 14 Downloaded CSV file data



# Chapter Five: Miscellaneous

## 5.1 Overview

In this section, Miscellaneous links will be discussed

- Glossary
- Relevant Important Documents
- Feedback
- About DRIP

## 5.2 Glossary

To view particular glossary information, follow the steps mentioned below:

- Click on the Glossary menu from the navigation bar.
- Click on the definition term to view the detailed information.

On the Glossary page, there are two panels left and right. The left panel consists of a **search bar** and a list of **all definitions**.

The user can also view the all-other definitions if he/she scrolls through the right panel.

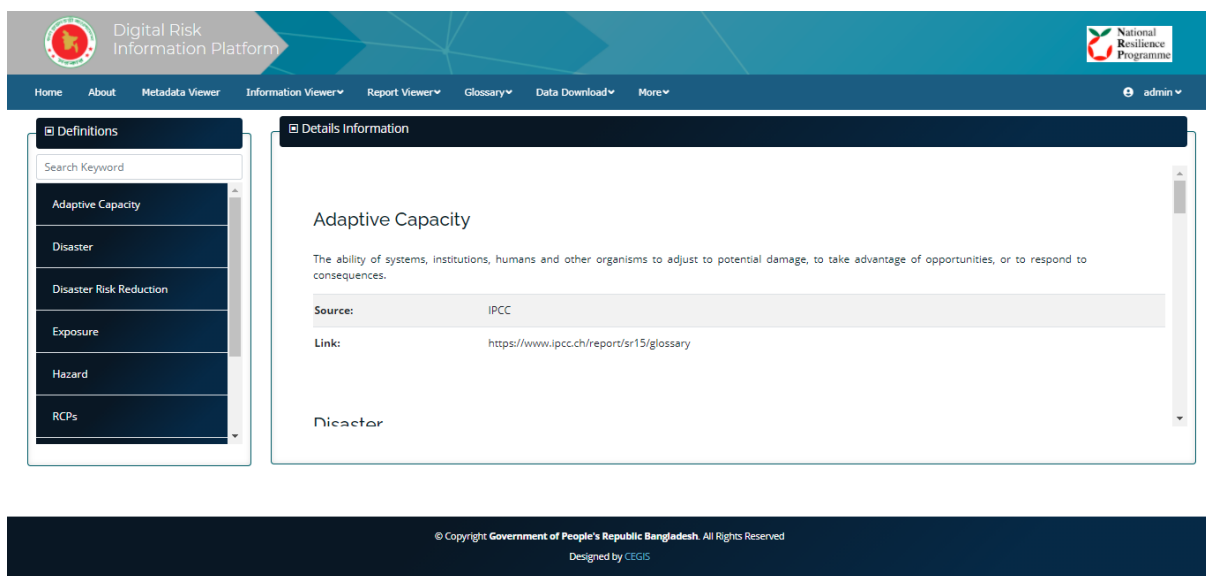


Figure 5. 1 Glossary page

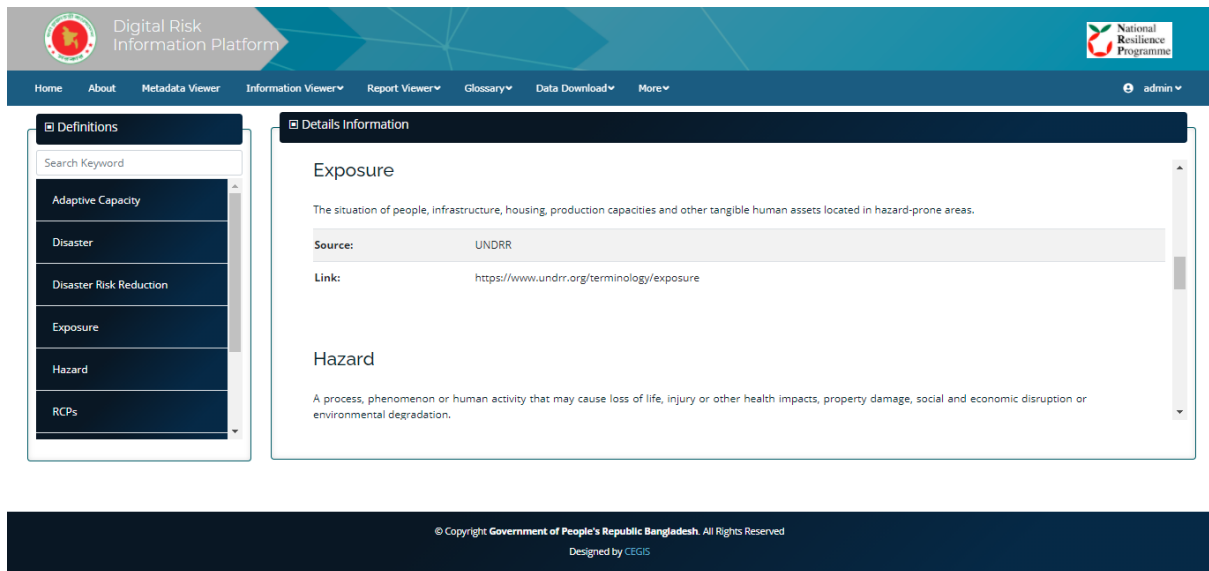


Figure 5. 2 A specific Definition Information

To search for a definition:

- Write the definition in the **search bar**.
- Hit **Enter**.

If the definition is available then it will be visible at the **left panel** otherwise there will be no definition at the left panel (Figure-5.3).

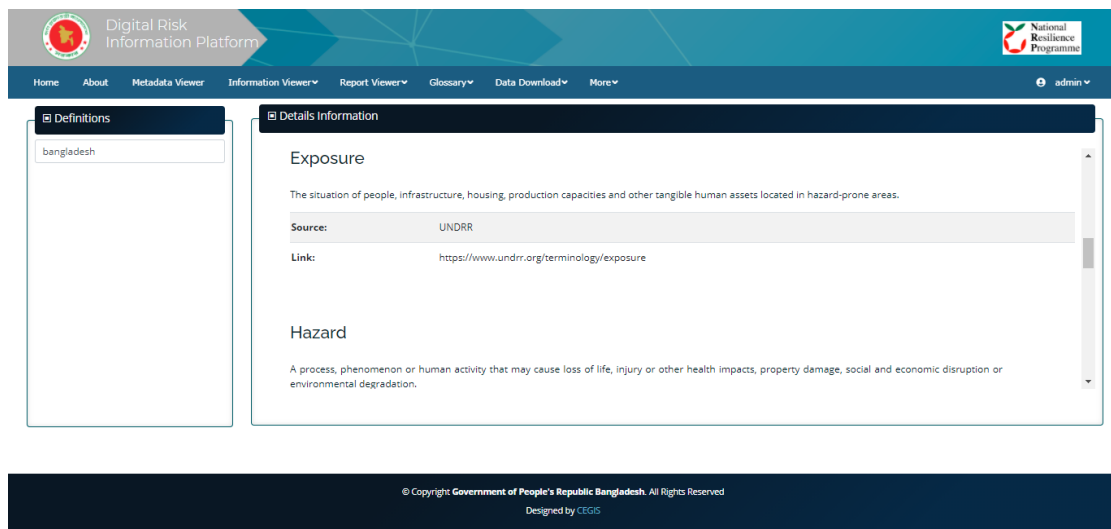


Figure 5. 3 Definition not found (Empty left panel)

## 5.3 Relevant Important Documents

To go to **Relevant Important Documents**:

- Hover/Click the mouse on the **More** tab.
- Click on the **Relevant Important Documents**.

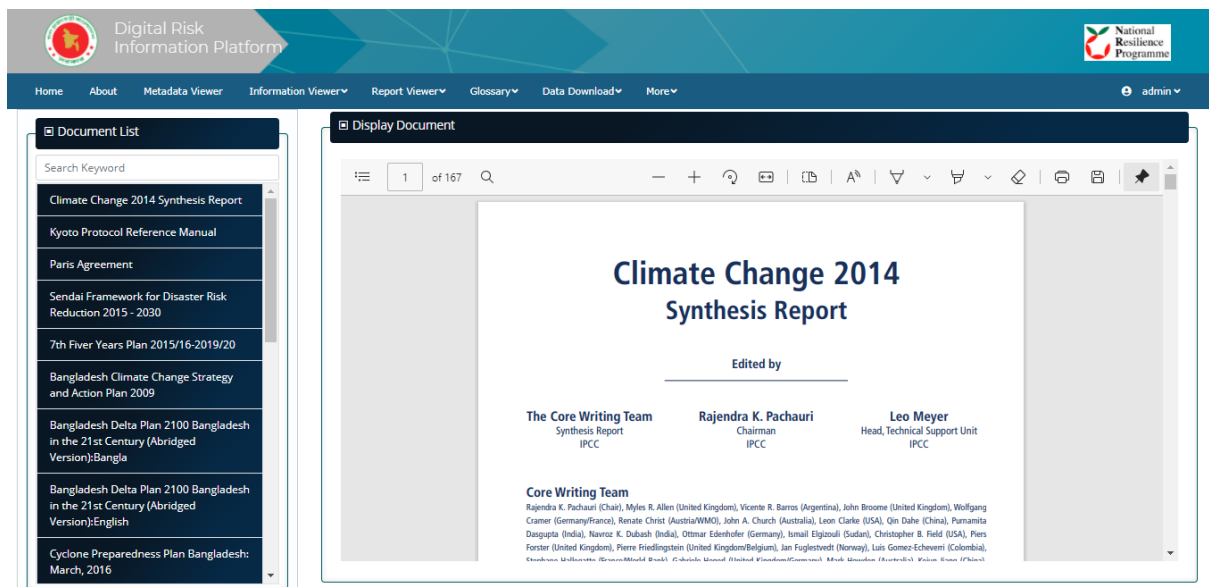


Figure 5. 4 Relevant Important Documents

The Relevant Important Documents has two panels, **left** and **right** (Figure-5.4).

To view a particular document,

Click on any title from the **left panel** on any of the links and the expected report will be visible on the **right side** (Figure-5.5).

To search, write the full or partial **title** of the document in the **search box**. If it's available in the system, then only the title can be seen on the **left side**.

Click the **found title** to see the expected document on the **right panel** (Figure-5.5).

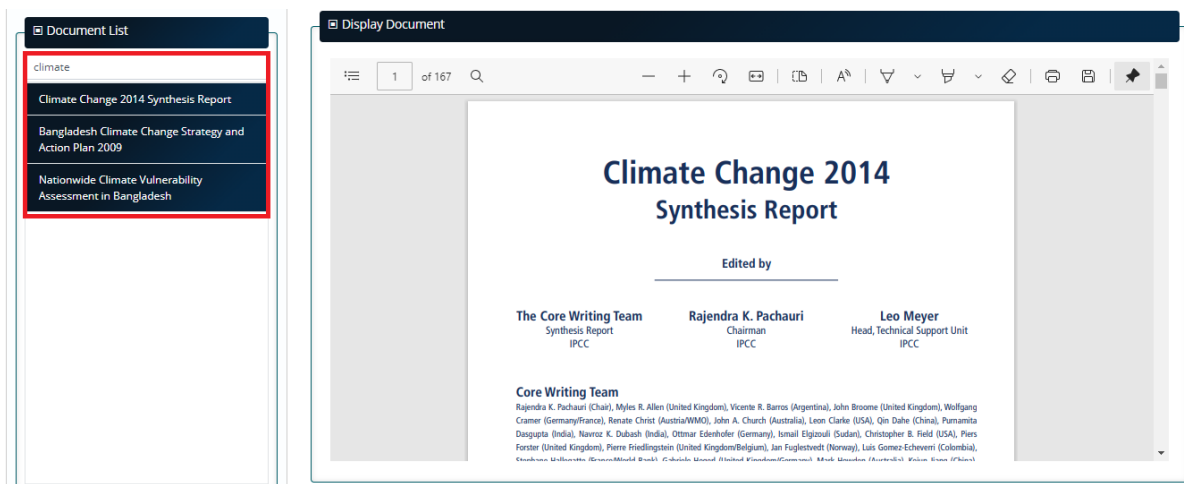


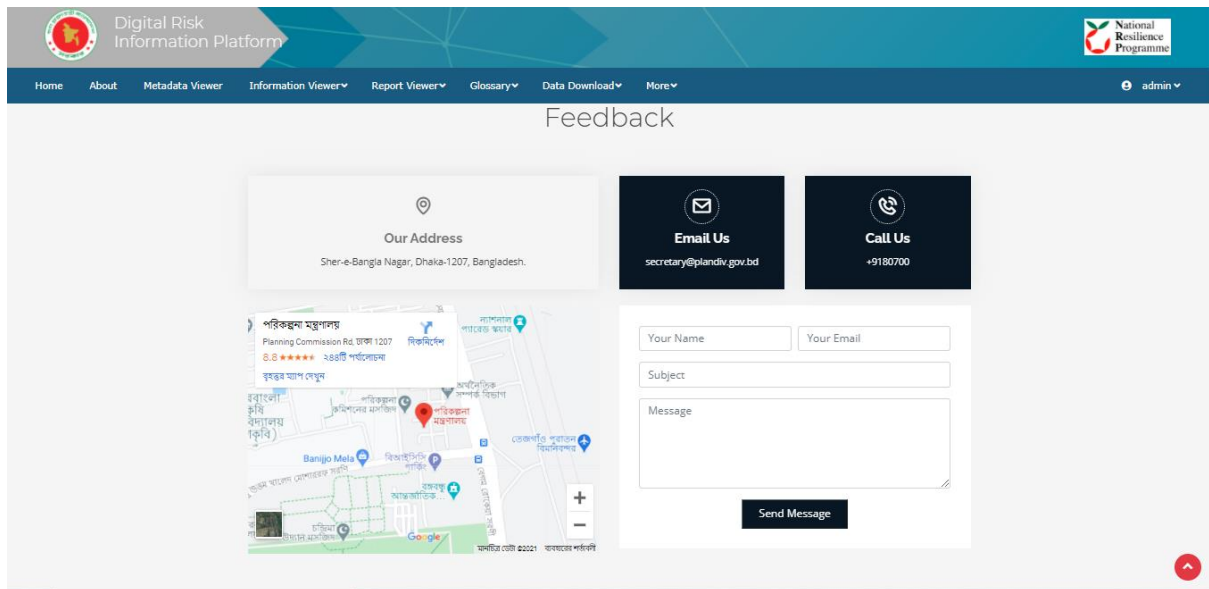
Figure 5. 5 Searching relevant Documents from the system.

## 5.4 Feedback

It's possible to submit feedback to the System Authority using the Feedback form.

To go the feedback:

- Hover/Click the mouse in the Navigation Bar on the **More** tab.
- Click **Feedback**.



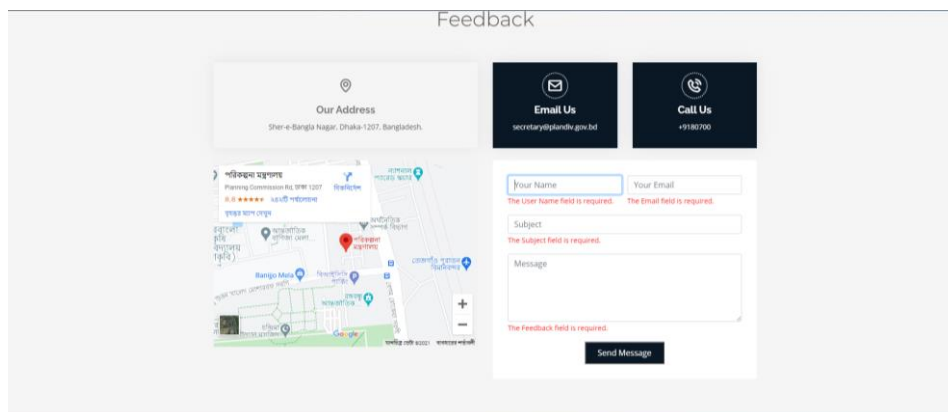
The screenshot shows the 'Feedback' page of the Digital Risk Information Platform. The page header includes the platform logo, navigation menu (Home, About, Metadata Viewer, Information Viewer, Report Viewer, Glossary, Data Download, More), and the National Resilience Programme logo. The main content area is titled 'Feedback' and contains several sections: 'Our Address' (Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh), 'Email Us' (secretary@plandiv.gov.bd), and 'Call Us' (+9180700). Below these are a map of the location and a feedback form with fields for 'Your Name', 'Your Email', 'Subject', and 'Message', along with a 'Send Message' button.

Figure 5. 6 Feedback Form

Give the following information

- **Your Name**
- **Your Email**
- **Subject**
- **Message**

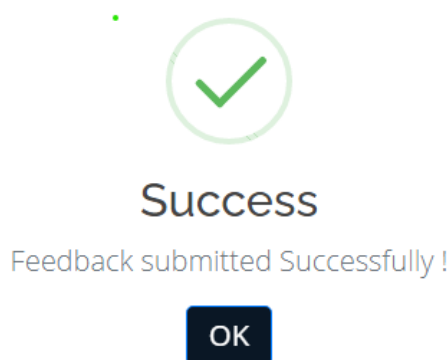
In a case without providing the above vital information if the **Send Message** button is pressed then the user will get errors on the client-side (Figure-5.7).



The screenshot shows the 'Feedback' page with client-side validation errors. The 'Your Name' field has the error 'The User Name field is required.' and the 'Your Email' field has the error 'The Email field is required.' The 'Subject' field has the error 'The Subject field is required.' and the 'Message' field has the error 'The Feedback field is required.' The 'Send Message' button is visible at the bottom of the form.

Figure 5. 7 Client-Side Validation in the feedback form

If the feedback is submitted successfully. The following message will appear as the pop-up message (Figure-5.8).



**Figure 5. 8 Display successful message on feedback submission**

## 5.5 About DRIP

The **About page** of DRIP contains all the necessary information about the Digital Risk Information Platform.

**Digital Risk Information Platform (DRIP)**

Bangladesh has made significant progress in disaster risk management, the country is still at risk of growing loss and damage due to disaster and climate stresses. The evidence shows that the current and likely future impact of disaster and climatic stresses on the economy, livelihoods and assets of the country has been pointedly increased in the past decades. Limitations are found in incorporating disaster and climate change risks in all stages of development planning. This extensive linkage between disaster and development generates an urgency to establish a risk information platform/interface to access disaster and climate risk information and tools for risk-informed planning and investment.

At present the available databases for managing development project life cycles, and climate risk screening tools are quite fragmented and lacks contextual data and information on disaster and climate change risks. Databases related to development planning and management located within the Government of Bangladesh do not supply

For Bangladesh, to assist in the budgeting process of development projects, a climate risk screening tool has been developed under the project titled "Establishing a Climate Risk Screening System for Mainstreaming Climate Change Adaptation into National Development Budgeting Activities", funded by Asian Development Bank (ADB) which can help Planning Commission officials to ascertain the impact of climate change in a development project, its economic losses and adaptation need.

This platform/interface is designed to provide necessary disaster and climate risk data and information to carry out Disaster Impact Assessment (DIA), a tool proposed by the National Disaster Management Council of Bangladesh headed by the Prime Minister, to ensure disaster resilient development. However, as such, there is no comprehensive database comprising tools and knowledge product to assist the planners to integrate disaster and climate risk data and information into development projects, plans and programmes for decision making and

The Digital Risk Information Platform (DRIP), a specialized software application, aims to strengthen the institutional capacity of the Government of Bangladesh for assessing, understanding and communicating disaster and climate related risks, with the goal of integrating disaster risk information into development planning & budgeting, policies and programs. The specific objectives of the project are listed below:

**Figure 5. 9 About DRIP Page**

# Chapter Six: Log in and Registration

## 6.1 Overview

The common pages are accessible to all users ignoring the fact whether they are logged in or not. To view the restricted page the login is a must for the user. Before login, the user must register in **DRIP**.

## 6.2 Register

To register in DRIP:

- Click on the **Register** link.
- Enter the email.
- Give username.
- Give the phone number.
- Enter password.
- Confirm the password again.
- Click **Register**.

In case if the user submits the request without filling the required field, he would get the validation error on the **client-side** (Figure-6.2).

The screenshot shows the 'User Registration' page of the Digital Risk Information Platform. The header includes the DRIP logo, the text 'Digital Risk Information Platform', and the National Resilience Programme logo. Navigation links include Home, About, Metadata Viewer, Information Viewer, Glossary, and More. User actions are Register and Login. The registration form has the following fields: Email, User Name, Phone Number, Password, and Confirm password. There are 'Back' and 'Register' buttons at the bottom of the form. The footer contains copyright information: '© Copyright Government of People's Republic Bangladesh. All Rights Reserved. Designed by CEGIS'.

Figure 6. 1 Register Page

**User Registration**

- The Email field is required.
- The UserName field is required.
- The PhoneNumber field is required.
- The Password field is required.

Email  
  
 The Email field is required.

User Name  
  
 The UserName field is required.

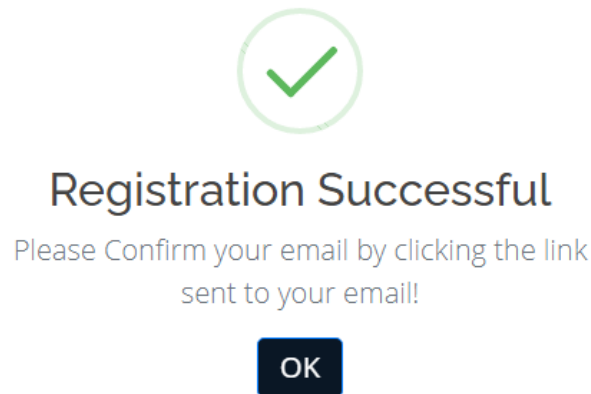
Phone Number  
  
 The PhoneNumber field is required.

Password  
  
 The Password field is required.

Confirm password

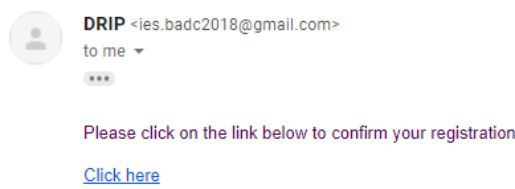
**Figure 6. 2 Client-side validation**

After submitting a request, the following pop window will appear on the current page click **OK** to close the pop-up window (Figure-6.3).



**Figure 6. 3 Success message on User registration**

After getting the above message check the inbox and click the email confirmation link sent to the user's email address (Figure-6.4).



**Figure 6. 4 Email Confirmation Link**

Click on the **Login button** in figure-6.5 for redirecting to the login page.

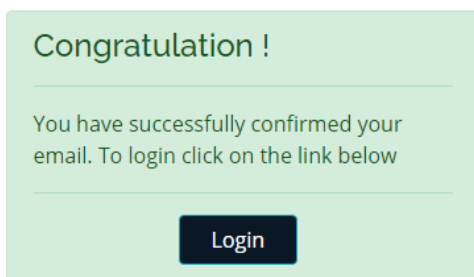


Figure 6. 5 Congratulation message for the email confirmation

## 6.3 Login

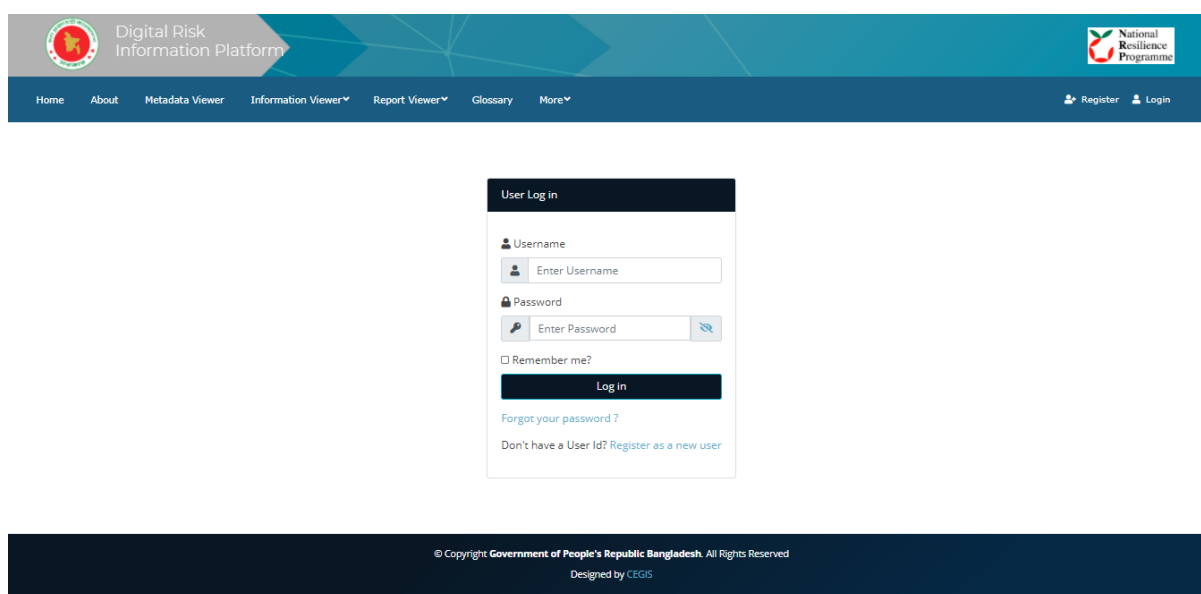


Figure 6. 6 Login Page

In case if the user has not confirmed his/her email but tries to log in, an error will be visible like figure-6.7.

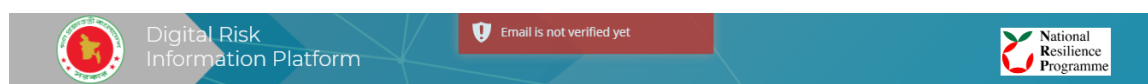


Figure 6. 7 Invalid Login Attempt due to the unconfirmed email address

To login into the system:

- Enter the username
- Give the password
- Click the **login** button.



If the **credentials** are **correct** then the user will automatically be logged in and would see the change in **navigation bar section** (Figure-6.8).



Figure 6. 8 Logged in User

## 6.4 Forgot Password

If a user forgot his/her password, to reset the password,

- Click on the **Forgot Your Password** link.
- Write the email address.
- Click **submit**.

After successful submission, the user will get a successful confirmation message of email submission (Figure 6.10).

Reset Password

Write your email address, which was used to register in Digital Risk Information Platform. An email will be sent to your email with password reset link. Click the link to reset the password.

Email

Submit

Figure 6. 9 Reset Password via email

Reset link has been sent successfully

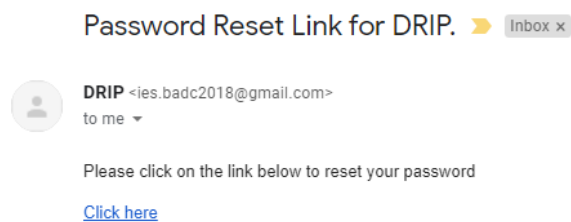
Reset Password

Write your email address, which was used to register in Digital Risk Information Platform. An email will be sent to your email with password reset link. Click the link to reset the password.

Email

Submit

Figure 6. 10 Success message on successful sent of a reset link



**Figure 6. 11 Reset password link in email.**

Click on the reset link (sent to your email) and a page will look like below (Figure 6.12).

- Enter the **new password**
- Confirm the **password** again
- Click **submit** button.

A web form titled "Enter a new Password". Below the title is a blue rounded rectangle containing the text "Enter a password by which you can login in Digital Risk Information Platform..". There are two text input fields: "New Password" and "Confirm Password". Below the second field is a dark blue "Submit" button.

**Figure 6. 12 Reset password**

After a successful password reset the confirmation message will appear like below.



**Figure 6. 13 Password reset confirmation**

# Chapter Seven: Authorized Options

## 7.1 Overview:

Based on logged in user role, users can see different menus and submenus in their profile dropdown. This dropdown will be visible at the top right of the menu bar.



Figure 7. 1 User menu in the Navigation bar (for Common User)

## 7.2 Common User

Usually, all logged users can see three options. In their user profile dropdown. Based on their role more options will be displayed here (for Admin).

- User Profile
- Change Password
- Logout

### 7.2.1 User Profile

If a user clicks on the **User Profile** link the following page will be displayed.

| User Profile                 |                        |
|------------------------------|------------------------|
| Username                     | admin                  |
| Email                        | gixen69356@hrandod.com |
| Contact                      | 12345678               |
| <a href="#">Edit Profile</a> |                        |

Figure 7. 2 User Profile

## 7.2.2 Change Password

- To change the current password,
- Click on the **Change Password** link
- Enter the current password
- Give the new password
- Click **submit**.

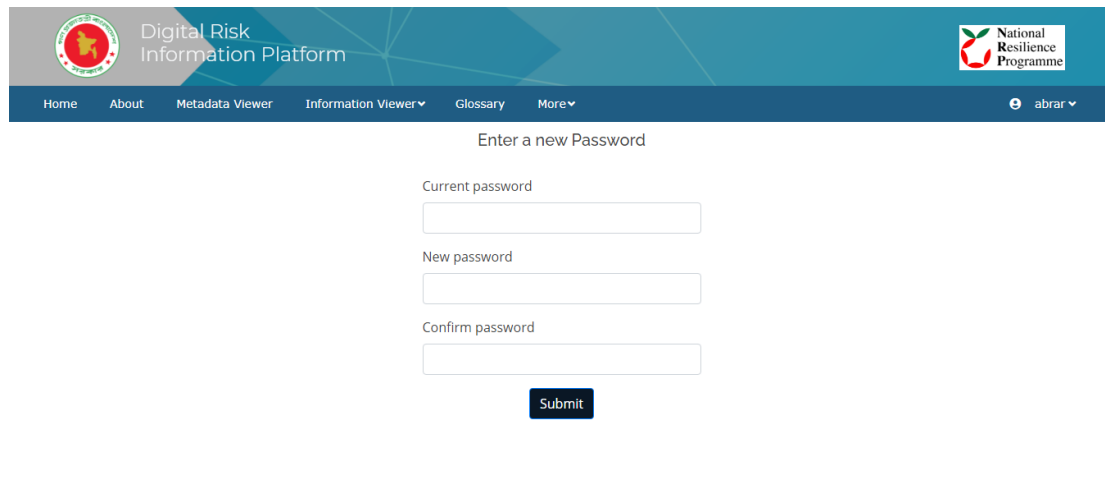


Figure 7. 3 Change Password Page

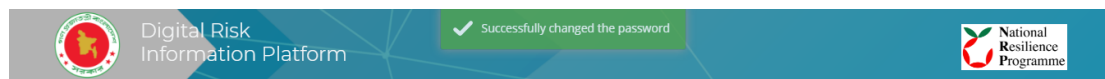


Figure 7. 4 Successful password change confirmation message

All the rest of the functionality for a logged-in user would be the same as unauthenticated user options.

There are four types of common roles are available in the DRIP system

- 1) Planner
- 2) DPP Appraisal
- 3) DPP Creator
- 4) Authenticated User

An authenticated user is not assigned to any special role in DRIP system but he/she would have option to, log into the system, view the profile information, change password and logging out. DRIP system also allows him/her to perform normal actions as a common user.

## 7.3 Planner

The planner has access to all the common functionality of the DRIP platform. With special privilege, they can also download and generate a disaster report (For detailed information, visit section 4.2 **Development and Appraisal Tool**).

## 7.4 DPP Appraisal & DPP Creator

DPP appraisal and DPP Creator have extra features other than a planner, one of them is the data download option. By using the Data Download option user can download two types of data. District Indicator data and Upazila Indicator data.

District Indicators Information

[Export To Excel](#)

| Indicator | District     | Area Sqkm | Hazard Level | Exposure Level | Exposure of Road | Exposure of Railway | Exposure of Settlement | Exposure of Population | Exposure of Rural Market | Exposure of Forest | Exposure of Potato | Exposure of Maize | Exposure of Jute | Exposure of E |
|-----------|--------------|-----------|--------------|----------------|------------------|---------------------|------------------------|------------------------|--------------------------|--------------------|--------------------|-------------------|------------------|---------------|
| Cyclone   | Bagerhat     | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                | 1             |
| Cyclone   | Bandarban    | 4595.41   | 4            | 1              | 1                | 1                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                | 1             |
| Cyclone   | Barguna      | 1344.61   | 5            | 2              | 3                | 1                   | 2                      | 1                      | 4                        | 3                  | 1                  | 1                 | 1                | 1             |
| Cyclone   | Barishal     | 2218.31   | 5            | 3              | 5                | 1                   | 2                      | 2                      | 4                        | 1                  | 1                  | 1                 | 2                | 2             |
| Cyclone   | Bhola        | 1947.24   | 5            | 2              | 3                | 1                   | 2                      | 1                      | 4                        | 3                  | 1                  | 1                 | 1                | 2             |
| Cyclone   | Bogura       | 2910.52   | 2            | 5              | 5                | 4                   | 3                      | 3                      | 4                        | 1                  | 4                  | 2                 | 3                | 5             |
| Cyclone   | Brahmanbaria | 1921.04   | 3            | 4              | 4                | 4                   | 3                      | 3                      | 3                        | 1                  | 1                  | 1                 | 2                | 4             |
| Cyclone   | Chandpur     | 1468.47   | 4            | 4              | 5                | 4                   | 3                      | 3                      | 3                        | 1                  | 2                  | 1                 | 2                | 3             |
| Cyclone   | Chattogram   | 4452.02   | 5            | 4              | 4                | 4                   | 3                      | 3                      | 2                        | 5                  | 1                  | 1                 | 1                | 1             |
| Cyclone   | Chuadanga    | 1163.10   | 3            | 3              | 5                | 5                   | 2                      | 2                      | 4                        | 1                  | 1                  | 5                 | 4                | 3             |

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Figure 7. 5 District Indicator Data

Upazila Indicators Information

[Export To Excel](#)

| Indicator | District  | Upazila        | Area Sqkm | Hazard Level | Exposure Level | Exposure of Road | Exposure of Railway | Exposure of Settlement | Exposure of Population | Exposure of Rural Market | Exposure of Forest | Exposure of Potato | Exposure of Maize | Exposure of Jute |
|-----------|-----------|----------------|-----------|--------------|----------------|------------------|---------------------|------------------------|------------------------|--------------------------|--------------------|--------------------|-------------------|------------------|
| Cyclone   | Bagerhat  | Bagerhat Sadar | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Chitalmari     | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Fakirhat       | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Kachua         | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Mollahat       | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Mongla         | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Morrelganj     | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Rampal         | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bagerhat  | Sarankhola     | 3655.92   | 5            | 1              | 2                | 2                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |
| Cyclone   | Bandarban | Alkadam        | 4595.41   | 4            | 1              | 1                | 1                   | 1                      | 1                      | 5                        | 5                  | 1                  | 1                 | 1                |

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Figure 7. 6 Upazila Indicator Data

The user can download district or Upazila data in form of .xlsx format by clicking **export to excel** link. It's also possible to search district or Upazila data by district/Upazila name respectively.