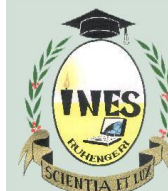


INSTITUT D'ENSEIGNEMENT SUPÉRIEUR DE RUHENGERI



Scientia et Lux

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Flood Emergency Response Advisor - User Manual

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Flood Emergency Response Advisor - User Manual

1. Introduction

Welcome to the Flood Emergency Response Advisor! This system helps communities, government agencies, and humanitarian organizations respond quickly and effectively during flood events. It provides real-time warnings and suggests safety actions based on weather data and current situation.

2. System Overview

The Flood Emergency Response Advisor has the following capabilities:

- Real-time flood risk alerts: based on user's input about the current situation
- Categorization of risk levels (low, moderate, high)
- Personalized advice based on user input
- Easy-to-use web interface with a simple form to input relevant conditions

3. Getting Started

3.1. System Requirements:

- **Hardware Requirements**
 - **Server/Hosting Requirements:** Web server with Django support
 - **Client Requirements:** Any modern web browser.
- **Software Requirements**
 - **Backend:**
 - Django 3.x or higher
 - Python 3.x
 - **Frontend:**
 - HTML, CSS, JavaScript

3.2. Accessing the System:

1. **Accessing the system:** click on the launch button on the github repository or create a Django project where you will use main.py as you views/app file and index.html in your template folder then run it in the terminal with "python manage.py runserver".
2. **Dashboard:** View the form that you will interact with.

4. How to Use the System

- **After gaining access to the system's ui if you are using it in your browser:**
 - check the boxes that correspond to your current situation.
 - Click on “Get Response advice”.
 - The system will inform you of your alert level and advise you on what to do.



Your Flood Emergency Response Advisor

Please check the boxes that apply to your current situation:

- ☐ Is heavy rainfall forecast issued? (More than 100mm in 24h?)
- ☐ Are water levels rising rapidly?
- ☐ Are roads impassable?
- ☐ Is clean water available?
- ☐ Is your community isolated?

[Get Response Advice](#)



Your Flood Emergency Response Advisor

Please check the boxes that apply to your current situation:

- ☒ Is heavy rainfall forecast issued? (More than 100mm in 24h?)
- ☒ Are water levels rising rapidly?
- ☒ Are roads impassable?
- ☒ Is clean water available?
- ☐ Is your community isolated?

[Get Response Advice](#)

High Flood Risk: Immediate evacuation needed!

1. Evacuate the area immediately to higher ground.
2. Avoid moving by car or any other vehicle.
3. Do not attempt to cross flooded roads or bridges.
4. Stay in a safe shelter until floodwaters recede.

5. Troubleshooting

This section provides solutions to common issues users may encounter while using the Flood Alert and Response Expert System.

Issue	Possible Cause	Solution
No response after selecting checkboxes and clicking submit	Slow internet connection or temporary system delay	Refresh the page and try again. Ensure you have a stable internet connection.
System displays an incorrect alert level	Incorrect input selection	Review your selected checkboxes and ensure they match your current situation. Try again.
Unable to access the website	Server maintenance or browser issues	Try again later. Clear your browser cache or use a different browser.
Page does not load properly	Browser incompatibility	Use an updated version of Chrome, Firefox, or Edge. Disable any browser extensions that may interfere.
No alert is issued despite selecting critical conditions	System bug or incorrect implementation	Report the issue to the system administrator with details of your input selections.
Recommendations are not displayed	JavaScript may be disabled in the browser	Enable JavaScript in your browser settings and reload the page.

For additional support, contact the system administrator or visit the official help page.

6. Final Testing Summary

Test Case ID	Test Scenario	Input Conditions	Expected Output	Status
FERA_TC-01	User checks weather forecast	Heavy rainfall forecast is issued (>100mm)	ORANGE ALERT: Be prepared for evacuation	Pass
FERA_TC-02	User checks weather and water levels	Heavy rainfall (>100mm) and rising water levels	RED ALERT: Immediate evacuation recommended	Pass
FERA_TC-03	User encounters flooded roads	Roads are impassable	Advice: Avoid flooded roads and seek alternative routes	Pass
FERA_TC-04	User does not have access to clean water	Clean water is unavailable	Advice: Use purification tablets or boil water	Pass
FERA_TC-05	User's community is isolated	Community is isolated	Advice: Contact emergency services (112 or 115)	Pass
FERA_TC-06	User selects multiple critical conditions	Heavy rainfall, rising water levels, roads impassable, no clean	RED ALERT: Immediate evacuation + All relevant advice (avoid roads, purify water, contact emergency services)	Pass

Test Case ID	Test Scenario	Input Conditions	Expected Output	Status
		water, community isolated		
FERA_TC-07	User selects no conditions	No checkboxes selected	No Alert Issued: Normal conditions	Pass

Test Result Screenshots:

The screenshot shows a web application titled "Flood Risk Assessment". It features three input fields: "City Name:" with the value "kigali", "Rainfall (mm):" with the value "75.0", and "Water Level (m):" with the value "3.0". Below these fields is a green button labeled "Check Flood Risk". Under the button, an orange box displays the result: "Medium Risk: Prepare evacuation plans and flood barriers.". At the bottom of the form, a summary line reads "City: kigali | Rainfall: 75.0 mm | Water Level: 3.0 m". A "Safety Instructions:" section is also visible, containing three bullet points: "Stay Informed: Monitor weather updates from local meteorological agencies.", "Evacuate Early: Move to higher ground or shelters if water levels rise.", and "Avoid Floodwaters: Do not walk or drive through moving water to prevent drowning or being swept away."

More see demo video

Conclusion:

The Flood Emergency Response Advisor is a life-saving tool that helps communities and emergency responders stay safe and prepared during floods. By following this manual, you can make the most of the system's features and ensure quick, coordinated actions in situations of crises.