

LIGTAS

DISASTER RISK REPORTING APP FOR ALITAGTAG, BATANGAS

A PROJECT IN IT 332: Integrative Programming and Technologies



LIGTAS





PROJECT DESCRIPTION

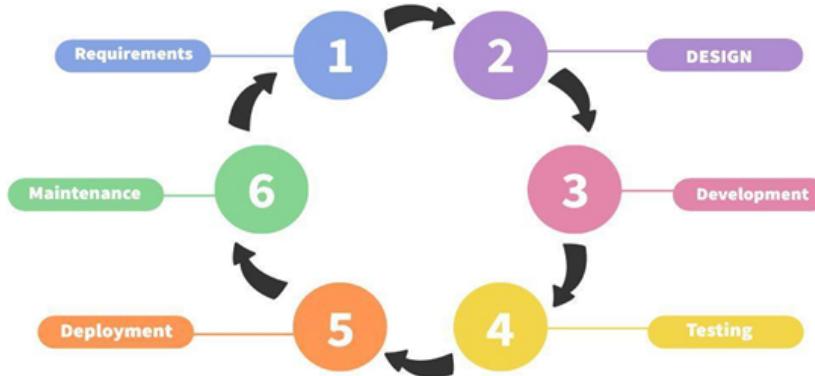


LIGTAS is a disaster risk management and reporting system application that aims to help the municipality of Alitagtag, Batangas to minimize existing disaster risk and handle residual risk, thereby improving resilience and reducing disaster losses. The application will have a disaster preparedness guide that will help the residents of Alitagtag become knowledgeable in terms of different disaster risks as it outlines the guidelines that organizations have to follow in the case of a crisis or emergency. Moreover, it also contains a reporting module that allows Alitagtag residents to report damaged properties, man-made disasters, and accidents. This will help the Alitagtag MDRRMO easily get and manage reports. Lastly, the application will notify users of emergencies.

Overall, LIGTAS is a disaster risk management and reporting system application designed to help Alitagtag, Batangas, minimize and manage disaster risks. It includes a disaster preparedness guide, reporting module for property damage, and notifications for emergencies. The application aims to improve resilience and reduce disaster losses in the municipality.



DEVELOPMENT MODEL



In the development of the system, the researchers will use agile methodology as shown in Figure above. The agile methodology will help with the development of the system by making it more efficient and effective. It also ensures that the project will be completed within the specific time given. Furthermore, it helps proponents make changes easily and quickly while keeping the overall project timeline consistent. The following various phases are:

a. Requirements. The first phase is the system requirements, which include the understanding, goal, and purpose of the system in order to avoid problems in developing the system. Further, the proponents gather information to be able to identify the system's needs. The planning was also executed in order to set plans and be able to understand them.



DEVELOPMENT MODEL



Further, the proponents gather information to be able to identify the system's needs. The planning was also executed in order to set plans and be able to understand them.

b.Design. The design phase is the specification document that was developed to outline the design's technical needs. This phase will also improve the system's interface. Moreover, the proponents studied the system's needs in order to visualize the system's functionality and features. After that, the researchers outlined the system's design and added what the system needed.

c.Development. The development phase involves the creation of the system, combining the thoughts of the system requirements and design in order to meet all defined system criteria. In this phase, the proponents will add up the ideas of the system requirements and design in order to create a functional system by coding.

d.Testing. The testing phase involves the testing and integration of the code to make sure that it works. Its purpose is to guarantee that every component of the mobile application is working and performing the desired functions. Further, after the development, the proponents will run and test the code in order to identify the bugs and the things that need improvement.





DEVELOPMENT MODEL

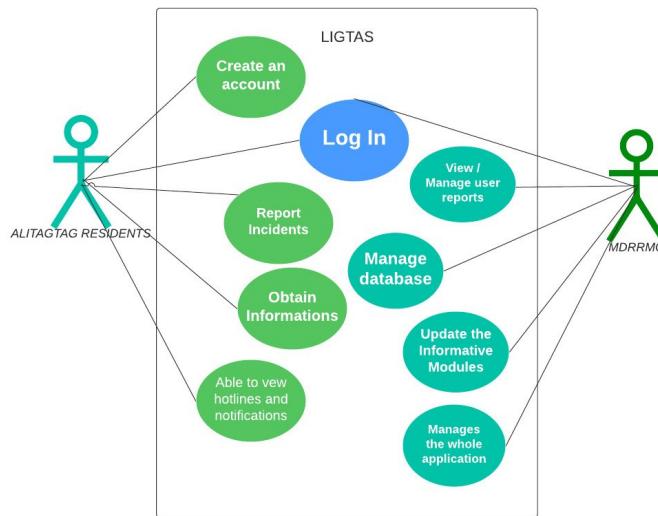


e. Deployment. The deployment phase begins once the testing is completed, then the system is ready for deployment. Hence, proponents will deploy the system once it has not had a problem and meets expectations and requirements.

f. Maintenance. The maintenance phase involves the monitoring of errors in the system in order to make changes for the sake of the system. Likewise, the proponents will need system maintenance to be able to monitor and maintain its smoothness.



USE CASE DIAGRAM

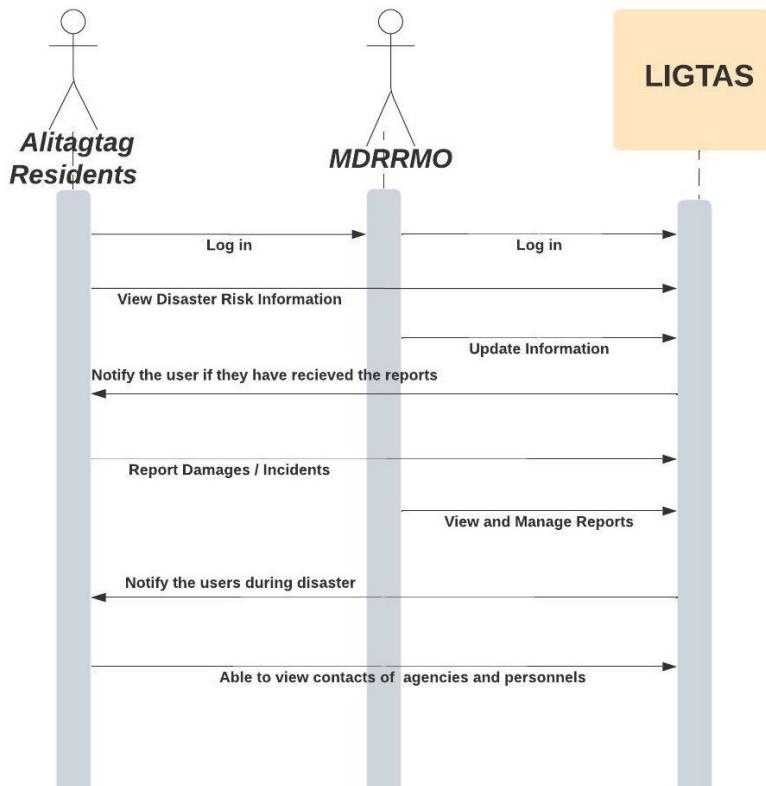


As shown in the diagram, both the residents and the MDRRMO are required to log in. Further, the residents of Alitagtag can view disaster risk management information, such as a disaster preparedness guide on how to prepare for different types of disasters, and disaster emergency hotlines. They can also report damaged properties, man-made disasters and accidents. Meanwhile, for admin use cases, the MDRRMO can view the reports that came from the residents, edit and update disaster risk management information, manage databases, notify residents during times of emergency.





SEQUENCE DIAGRAM



The figure shows the system sequence diagram and presents the process interactions on how they work together. As shown in the figure, it shows how the residents and MDRRMO navigate the system. Further, the diagram shows the two main actors of the system, which are the residents and the MDRRMO, together with their sequence messages.



GITHUB REPOSITORY



LIGTAS: Disaster Risk Reporting App for Alitagtag, Batangas

Introduction

Natural calamities are typical natural phenomena that occur in every country throughout the world, and in the Philippines, it is one of the countries that is considered to be calamity prone. However, one of the major issues for disaster risk reduction offices is residents' lack of understanding about what to do before, during, and after a natural catastrophe occurs. Localities remain dependent on old DRRM approaches. We live in a digital age, which necessitates a modern approach to DRRM.

Indeed, one of the significant challenges faced by the disaster risk reduction offices is the lack of knowledge among the citizens on what

Code Issues Pull requests Actions Projects Wiki Security Insights

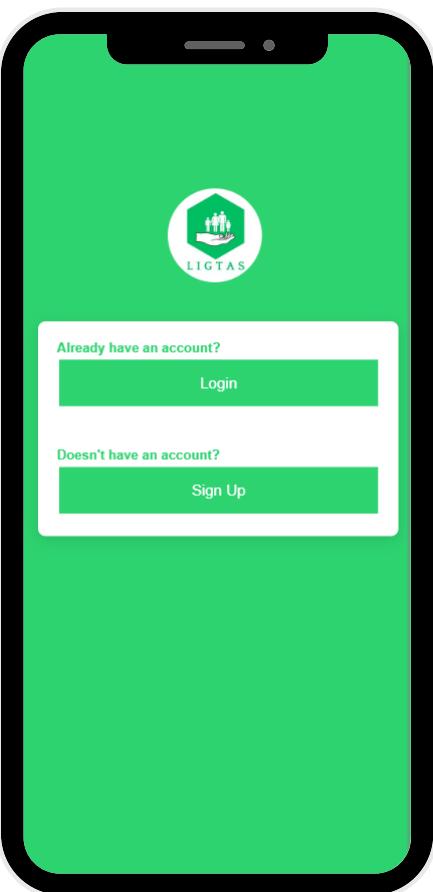
YraelDelasAlas Finalna

| Name | Last commit message | Last commit date |
|-------------------|---------------------|------------------|
| ... | | 8 minutes ago |
| vscode | Finalna | 8 minutes ago |
| src | Finalna | 8 minutes ago |
| browserslist | Finalna | 8 minutes ago |
| editorconfig | Finalna | 8 minutes ago |
| eslint.json | Finalna | 8 minutes ago |
| gitignore | Finalna | 8 minutes ago |
| angular.json | Finalna | 8 minutes ago |
| ionic.config.json | Finalna | 8 minutes ago |

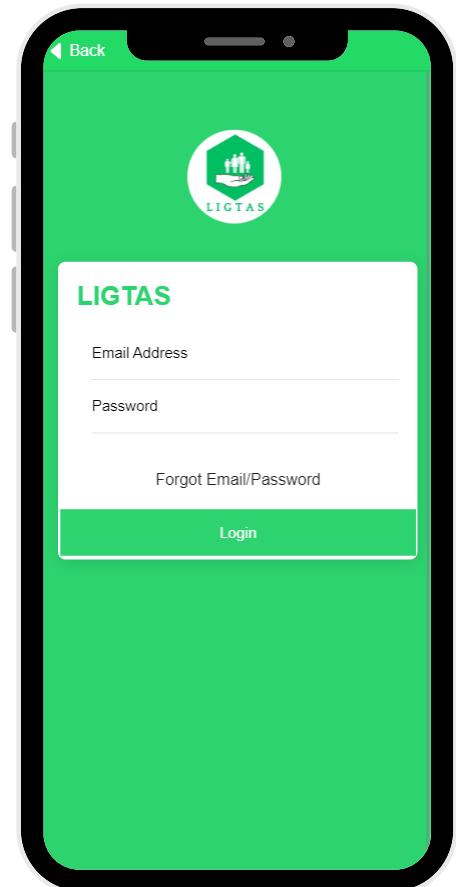




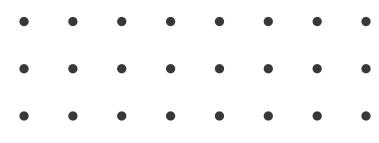
APPLICATION SCREENSHOTS



Log In or Sign up Page

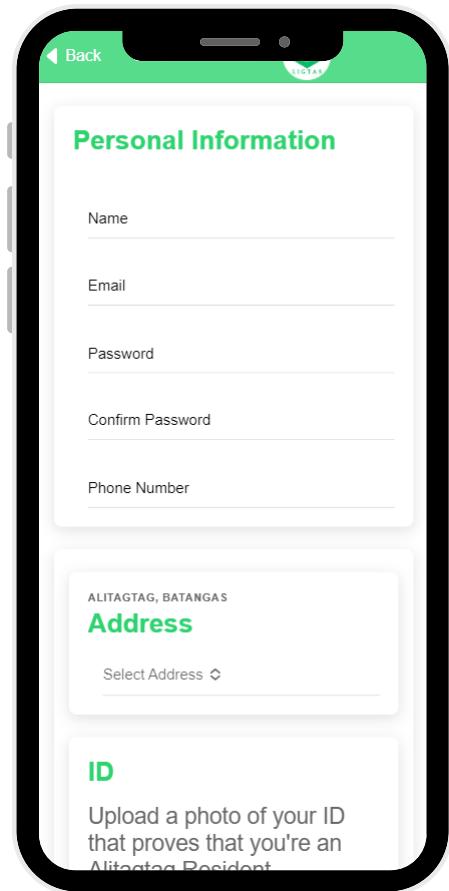


Login

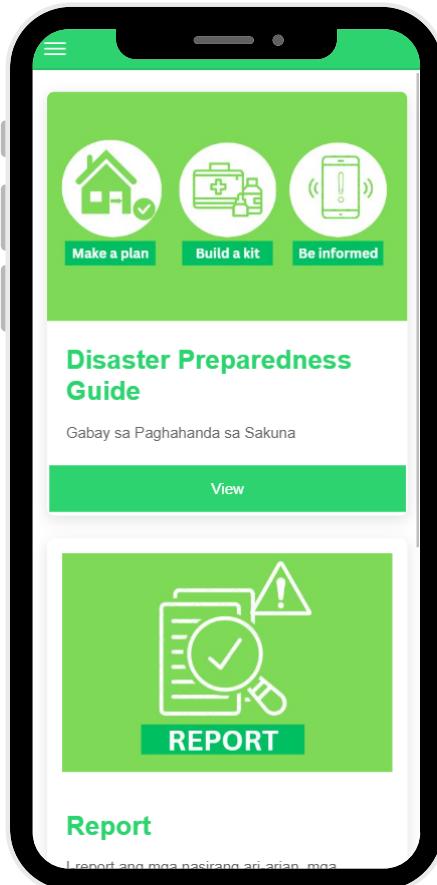




APPLICATION SCREENSHOTS



Signup

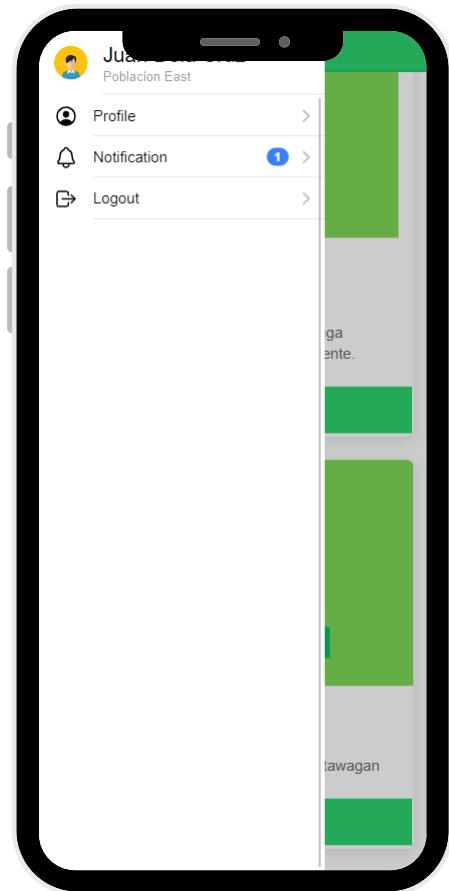


Home

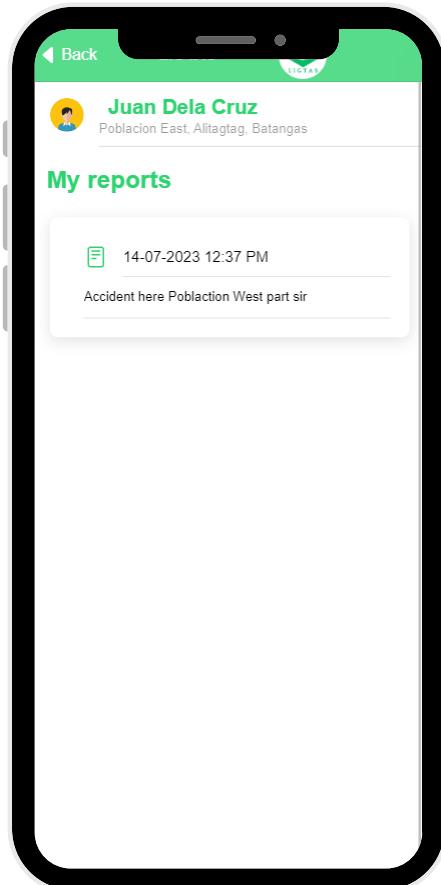




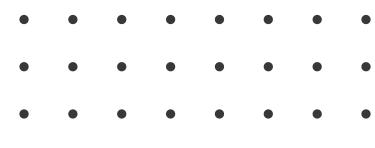
APPLICATION SCREENSHOTS



Menu

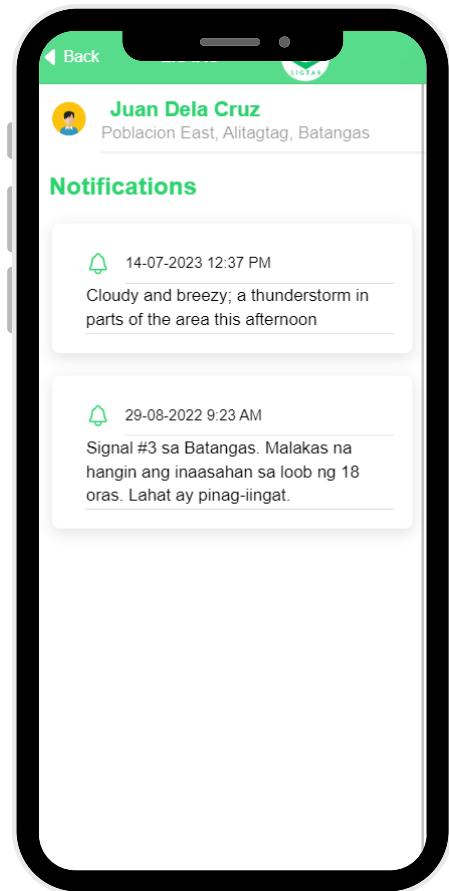


Profile

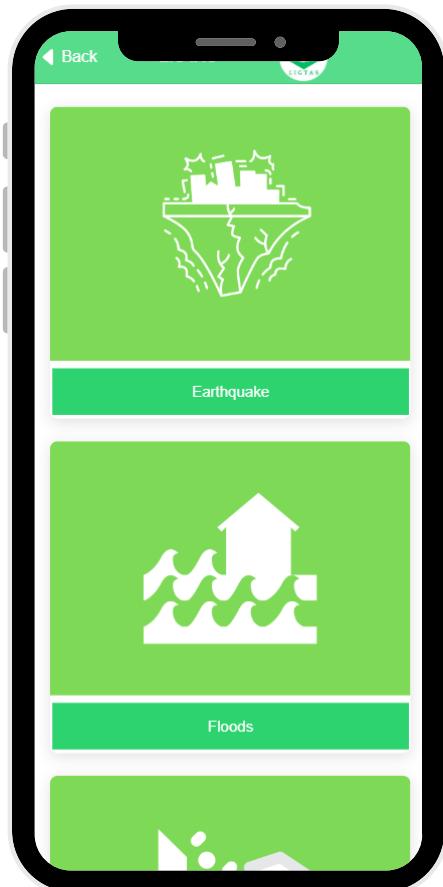




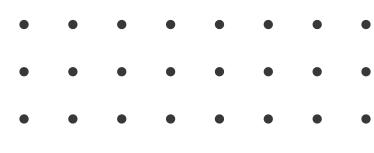
APPLICATION SCREENSHOTS



Notifications



Disaster preparedness
info





APPLICATION SCREENSHOTS



Earthquake

An earthquake is a sudden, rapid shaking of the ground caused by the shifting of rocks deep underneath the earth's surface. Earthquakes can cause fires, tsunamis, landslides or avalanches. While they can happen anywhere without warning.

Prepare Before an Earthquake

Make an Emergency Plan: Create a family emergency communications plan that has an out-of-state contact. Plan where to meet if you get separated. Make a supply kit that includes enough food and water for several days, a flashlight, a fire extinguisher and a whistle.

- Being prepared allows you to avoid unnecessary excursions and to address minor medical issues at home, alleviating the burden on urgent care centers and hospitals.
- Remember that not everyone can afford to respond by stocking up on necessities. For those who can afford it, make essential purchases and slowly build up supplies.

Protect Your Home: Secure heavy items in your home like bookcases, refrigerators, water heaters, televisions and objects that hang on walls. Store heavy and breakable objects on low shelves.

- Consider making improvements to your building to fix structural issues that could cause your building to collapse during an earthquake.

Earthquake

Flood

An overflow of water onto normally dry land. The inundation of a normally dry area caused by rising water in an existing waterway, such as a river, stream, or drainage ditch. Pounding of water at or near the point where the rain fell. Flooding is a longer term event than flash flooding: it may last days or weeks.

Prepare Before a Flood

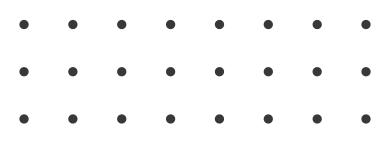
When preparing your family and property for natural disasters, you also need to consider your animals.

- Check your home, contents and car insurance cover are in order.
- Identify where and how to turn off the electricity, gas and water mains.
- Purchase emergency equipment such as containers to store drinking water, extra fuel supplies and hessian bags for sandbags.
- Store all chemicals and poisons well above ground level.
- Identify items that you will want to raise if floodwaters threaten your home.
- Consider alternatives to carpet floor coverings.
- Relocate electricity sockets and power points to well above floor level.

Create an evacuation plan.

Never ignore an evacuation order authorities will direct you to leave if you are in a low-lying area or

Flood





APPLICATION SCREENSHOTS



Landslide

Landslides are caused by disturbances in the natural stability of a slope. They can accompany heavy rains or follow droughts, earthquakes, or volcanic eruptions. Landslides occur when masses of rock, earth, or debris move down a slope. Debris flows, also known as mudslides, are a common type of fast-moving landslide that tends to flow in channels.

Prepare Before a Landslide

- Assume that steep slopes and areas burned by wildfires are vulnerable to landslides and debris flows.
- Learn whether landslides or debris flows have occurred previously in your area by contacting local authorities, a county geologist or the county planning department, state geological surveys or departments of natural resources, or university departments of geology.
- Contact local authorities about emergency and evacuation plans.
- Develop emergency and evacuation plans for your family and business.
- Develop an emergency communication plan in case family members are separated.
- If you live in an area vulnerable to landslides, consider leaving it.

During Intense Storms and Rainfalls.

Landslide

Home Fires

A fire can become life-threatening in just two minutes. A residence can be engulfed in flames in five minutes.

- Fire is FAST! In less than 30 seconds a small flame can turn into a major fire. It only takes minutes for thick black smoke to fill a house or for it to be engulfed in flames.
- Fire is HOT! Heat is more threatening than flames. Room temperatures in a fire can be 100 degrees at floor level and rise to 600 degrees at eye level. Inhalation of this super-hot air will scorch your lungs and melt clothes to your skin.
- Fire is DARK! Fire starts bright, but quickly produces black smoke and complete darkness.
- Fire is DEADLY! Smoke and toxic gases kill more people than flames do. Fire produces poisonous gases that make you disoriented and drowsy.

Before a Fire

Remember that every second counts in the event of a fire. Escape plans help you get out of your home quickly. Practice your home fire escape plan twice each year. Some tips to consider when preparing this plan include:

- Find two ways to get out of each room in the event the primary way is blocked by fire or smoke.
- Make sure that windows are not stuck, screens can be taken out quickly and that security bars can be properly opened.
- Practice feeling your way out of the house in the dark or with your eyes closed.
- Teach children not to hide from firefighters.
- If you use a walker or wheelchair, check all exits.

Home Fires





APPLICATION SCREENSHOTS



Volcanic Hazard

A volcanic hazard refers to any potentially dangerous volcanic process that puts human lives, livelihoods or infrastructure at risk of harm. Several hazards may affect the area around the volcano, such as lava flows, pyroclastic flows, lahars, jökulhlaups and landslides or debris avalanches. Volcanic activity also produces hazards that can affect areas far from the volcano, such as tephra or ash falls, releases of gas and tsunamis. Such hazards can impact areas hundreds or thousands of kilometres from the volcano, with the potential for significant health and economic impacts.

Preparing for a Volcanic Eruption

You can do many things to protect yourself and your family from the dangers a volcanic eruption can cause. The best way to protect yourself and your family is to follow the advice of local officials. Local authorities will give you information on how to prepare for a volcanic eruption, and if necessary, on how to evacuate (leave the area) or take shelter where you are.

How to Prepare

Be prepared either to shelter or to evacuate. Develop an evacuation plan and a sheltering plan for yourself, your family, and others in your household. Review the plans and make sure that everyone understands them. If you haven't already done so, put together an emergency supply kitexternal icon. Supplies should include the following:

Volcanic Hazard

Vehicular Accident

Vehicular accidents include car crashes, truck wrecks, and motorcycle crashes. Regardless of the type of motor vehicle involved, an accident victim has a legal right to pursue compensation from anyone who was at fault.

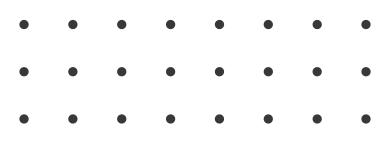
WHAT TO DO IF YOU ARE INVOLVED IN A VEHICULAR ACCIDENT

Following any type of motor vehicle accident, there are a number of steps that you should take to protect your health and legal rights. If your car is still operable and traffic conditions allow, you should safely move your vehicle to the side of the road as soon as possible.

SEEK MEDICAL ATTENTION RIGHT AWAY

If you have sustained any injuries - even if they appear to be minor - you should seek immediate medical attention. Symptoms of many injuries, including concussions and whiplash, may not be apparent right away, which makes it even more important to see a doctor promptly. In addition to obtaining the treatment that you need, visiting a doctor will also provide documentation of your injuries that can be used as evidence in your case.

Vehicular Accident





APPLICATION SCREENSHOTS



Report Something

Type Something here

Send report Add Photo

Report

| MDRRMO ALITAGTAG | ALITAGTAG MPS | BFP ALITAGTAG |
|------------------|---------------|---------------|
| (043)772-0005 | (043)772-3058 | (043)772-0331 |
| 0923-700-5974 | 0998-598-5682 | 0927-914-9838 |
| 0917-850-8183 | 0927-914-9838 | |

| Name of School | Name of School Head | Contact No. |
|------------------------------|----------------------|-------------|
| San Jose T. Reyes ES | Crisanto C. Magtalas | 09171557043 |
| Muzon ES | Louie L. Alvarez | 09774060458 |
| Pinakurusan ES | Loreta M. Asugui | 09176415362 |
| Alitagtag National HS | Rosalie L. Liwanag | 09213315912 |
| Dalipit ES | Zenaida G. Gutierrez | 09195663175 |
| Munlawin ES | Leonarda M. Papera | 09391675653 |
| Ping-as Coral ES | Jasmin M. Evangelio | 09082101972 |
| Alitagtag Senior High School | Sonia L. Dimayuga | 09260547705 |
| Tadiac ES | Leonila R. Castillo | 09214408483 |
| Alitagtag Central School | Yolanda A. Catapang | 09755455257 |

Emergency Hotlines





TEAM MEMBERS



Jemuel V. Manalo



James Andreison A.
Estole



Ysrael De las Alas

