**Introduction**

This app is designed to connect rangers, farmers, and experts in real-time, enabling them to work together to monitor the health of our natural resources and take action to address any threats or issues that arise. By utilizing citizen science and the power of technology, this app provides a common platform for people to share information, report incidents, and collaborate on solutions.

One of the key features of the app is its reporting system, which allows users to quickly and easily report any issues they encounter while out in the field. Whether it's an elephant trap, a diseased plant, or a pest infestation, users can take a photo and upload it to the app along with the location and other relevant details. This information is then shared with rangers, farmers, and experts, who can take action to address the issue.

The app also has a wealth of resources for farmers and plant enthusiasts, including information on proper composting techniques, best practices for planting, and ways to identify and treat common plant diseases. By sharing this knowledge and expertise, the app helps to promote sustainable agriculture practices and improve crop yields.

For rangers, the app provides a powerful tool for monitoring and protecting wildlife. By enabling them to quickly respond to incidents and coordinate with other stakeholders, rangers can more effectively track and address issues like poaching, habitat loss, and invasive species.

Finally, the app also has a section for commercial agricultural companies and high-ranking government officials, enabling them to collaborate with rangers and farmers on key issues like product development and wildlife conservation.

Overall, this app has the potential to bring together a wide range of stakeholders to address some of the most pressing issues facing our communities today. By leveraging technology, citizen science, and collaborative problem-solving, we can create a more sustainable and resilient future for ourselves and our planet.

**Three roles**

Public users(Tourists/Farmers)

These are individuals who use the app to report sightings or risks, view alerts and notifications, and access educational resources about local wildlife and environmental issues. They should be able to easily upload photos and GPS data, and receive updates about the status of their reports.

Rangers

These are the authorities who monitor and protect the local wildlife and environment. They will use the app to receive and respond to reports, track and monitor wildlife, and upload information about threats, risks, and monitoring efforts.

Experts

These are individuals with specialized knowledge about local wildlife, environmental issues, or cultural practices. They can provide advice and guidance to rangers and app users, and help to identify and address threats and risks to the local ecosystem.

**Access / Reasonabilitys**

Public users

They should be able to see educational resources, general information about the local environment, and a list of any reported sightings or risks in the area. They should not have access to any sensitive or confidential data.(When they went inside a danger zone they should get a notification about the dangers)

Rangers

They should have access to all data in the app, including reported sightings and risks, monitoring data, and any sensitive or confidential data related to cultural practices or land management.

Experts

They should have access to all data in the app, including reported sightings and risks, monitoring data, and any sensitive or confidential data related to cultural practices or land management. They should also be able to provide advice and guidance to rangers and public users.

**How should the report looks like**

Type of sighting or risk

\*required

Clearly state what you have seen or what the risk is.

Wildlife sightings

This can include sightings of threatened or endangered species, or animals that pose a risk to the public, such as large predators or venomous snakes.

Disease outbreaks

This can include outbreaks of plant or animal diseases that can have a significant impact on local ecosystems or agricultural production.

Pest infestations

This can include infestations of invasive species that can harm native plants and animals or cause damage to crops and property.

Environmental hazards

This can include risks such as oil spills, chemical spills, or other environmental hazards that can have a negative impact on the local environment.

Illegal activities

This can include reports of illegal hunting, poaching, or other activities that are harmful to the local environment or wildlife.

Natural disasters

This can include reports of natural disasters such as floods, wildfires, or severe weather events that can have an impact on the local environment and community.

Other risks

There may be other types of risks that can be reported through the app, depending on the local context and needs.

Location

\*required

Provide the exact location of the sighting or risk, including GPS coordinates if possible. This will help rangers to quickly locate and respond to the issue.( This should get automatically form the phone)

Date and time

\*required

Note the date and time that the sighting or risk occurred. This information can be used to track trends and patterns over time. .( This should get automatically form the phone)

Description

\*required

Provide a detailed description of the sighting or risk, including any distinguishing features, behavior, or other relevant information.

Photos or videos

\*required

If possible, include photos or videos of the sighting or risk. This will help rangers to verify the report and take appropriate action.(As proof)

Contact information

If you are willing to be contacted for further information or to provide updates, include your contact information in the report.

**UI for Reporting Page**

Start with a clear and concise heading, such as "Report a Risk". This should be prominently displayed at the top of the page.

Create a form for users to fill out, with fields for relevant information such as type of risk, and a brief description of the situation. Use drop-down menus or checkboxes to make it easy for users to select the appropriate options.( Date and the location should not ask from user and it should get from the phone automatically when submitting)

Include a section for the user to upload a photo or video, if applicable. This could be helpful in identifying the risk and taking appropriate action.

Add a "submit" button at the end of the form for users to submit their report. Once the user clicks the button, they should receive a confirmation message that their report has been received and will be reviewed.

Use simple and clear language throughout the form to ensure that users understand what information is being requested and why.

Ensure that the UI is mobile-friendly, so that users can easily report risks on the go.

(Consider adding a feature to allow users to track the status of their report, such as whether it has been reviewed, action has been taken, or if more information is needed.)

**Ranger Dashboard**

Map

A map interface that displays the ranger's location and the locations of all reported incidents. The map should also allow the ranger to navigate to specific locations and mark areas for future monitoring.

Incident Reports

A section that displays all incident reports submitted by tourists, farmers, and the public. The ranger should be able to view each report in detail, including any attached photos, and mark it as resolved once the issue has been addressed.

Daily Tasks

A to-do list that outlines the ranger's daily tasks and priorities. This could include monitoring specific areas of the land, checking traps or cameras, or conducting wildlife surveys.

Wildlife Database

A database of all the wildlife in the area, including their habitats, behaviors, and potential threats. The ranger should be able to add new information to the database as they learn more about the wildlife in the area.

Alerts

A section that displays any alerts or warnings related to weather events, safety issues, or other important information that the ranger needs to be aware of.

Messaging

A messaging system that allows the ranger to communicate with other rangers, experts, and officials.

**Public User Dashboard**

Map view

The dashboard should have a map view that displays the user's location and any relevant information related to their location. For example, if there is a reported wildlife sighting or a risk in their area, it should be displayed on the map.

Reporting

The dashboard should provide an easy-to-use reporting system where the user can report any risks, sightings or issues related to wildlife or farming. This should be a simple process that only requires the user to input basic information like location, description and possibly photos.

Alerts

The dashboard should display any relevant alerts or notifications related to their location or their interests. For example, if there is a wildfire risk in their area, they should receive a notification.

News feed

The dashboard could have a news feed that provides relevant news articles, updates, and other content related to wildlife and farming.

Resources

The dashboard could have a section that provides users with useful resources like guides, educational materials, and other relevant information.

Settings

The dashboard should have a settings section where users can customize their preferences, such as their interests, notifications, and other settings.

Overall, the public user's dashboard should be easy to navigate, visually appealing, and provide a clear overview of any risks, alerts or updates related to wildlife and farming.

**Experts Dashboard**

Inbox

This section will contain all the messages and requests received from rangers. It will also show the status of each request (e.g., pending, in-progress, completed, etc.).

Map View

Experts can view a map of the area to monitor the locations of different reported issues, wildlife sightings, and other events.

Analytics

This section can contain various charts, graphs, and statistics that provide insights into the reported issues. For example, the number of reported sightings of a particular animal, the locations with the highest number of reported issues, etc.

Profile

This section will allow experts to view and edit their personal and professional details, such as their name, photo, job title, expertise, etc.

Reporting

This feature will allow experts to create and submit their reports on issues they have addressed. This feature can be essential for the rangers to track the progress of the issue and identify the best course of action to take.

Messaging

This feature will allow the experts to communicate with rangers and provide them with real-time support and guidance(only with rangers).