EcoGuardian

Workspace

Github:

- Repository: https://github.com/btabuenca/HelloWorldKt/

- Releases: https://github.com/btabuenca/HelloWorldKt/releases

Workspace: https://upm365.sharepoint.com/sites/MobileAppSite .

Description

EcoGuardian is a community-powered environmental reporting app built with Flutter. It allows users to report environmental hazards like ragweed outbreaks, water pollution, illegal dumping, and noise pollution. The app maps these reports using GPS, making it easier to monitor, analyze, and take action.

Compared to similar apps, EcoGuardian combines photo documentation, offline capabilities via SQLite, and an interactive statistics dashboard in one clean package. While existing platforms (like local government portals or dedicated apps for air quality) offer fragmented solutions, EcoGuardian delivers a unified approach.

Demo Video

[EcoGuardian Demo](https://limewire.com/d/UDxS4#1aOHbxPDCj)

Features

Functional Features:

- Report environmental issues by type

- Interactive Google Map with filterable report markers

- Attach photos from camera/gallery

- Automatic GPS tagging

- View statistical trends

Technical Features:

- SQLite database for local persistence

- Provider for state management

- GPS location via geolocator

- Google Maps integration

- Image handling with camera/image_picker

- Permissions handled using permission_handler

- Native platform support for Android and iOS

How to Use

1. Tap the "+" to create a report.

2. Fill in title, description, type, and optional image.

3. The app auto-detects location.

4. Submit and view it on the map or list view.

5. Use filters or go to the statistics tab to track trends.

Participants

List of MAD developers:

- Vladimir-Nicolae Olteanu (vladimir-nicolae.olteanu@alumnos.upm.es)

- Nicu Catalin Iovita (nicu-catalin.iovita@alumnos.upm.es)

Workload distribution between members: 50% / 50%