✓ ChecklistGuro

Weed Infestation Mapping Checklist

Planning & Preparation

Defining scope, objectives, and resources needed for the weed infestation mapping project.

Total Area to be Mapped (hectares)

Enter a number...

Project Goal (Select one)

☐ Initial Weed Survey

☐ Monitoring Weed Spread

☐ Supporting Herbicide Application

☐ Regulatory Compliance

Project Start Date

Enter date...

Project End Date

Enter date...

Define Objectives of the Mapping Effort

Write something...

Potential Weed Species of Concern (Select all that apply)

☐ Kochia

☐ Russian Thistle

☐ Canada Thistle

☐ Leafy Spurge

☐ Other (Specify in LONG_TEXT)

Contact Person Name

Write something...

Contact Phone Number

Write something...

Describe Existing Weed Management Strategies (if any)

Write something...

Data Acquisition - Remote Sensing

Gathering imagery and other remote sensing data for weed identification and mapping.

Satellite Imagery Source

☐ Sentinel-2

☐ Landsat

☐ Planet Labs

☐ Drone/UAV Imagery

☐ Other (Specify)

Spatial Resolution (meters)

Enter a number...

Acquisition Date Range

Enter date...

Cloud Mask/Atmospheric Correction File (if applicable)

⬆ Upload File

Bands Utilized (e.g., RGB, NDVI)

☐ RGB

☐ NDVI

☐ NDRE

☐ NIR

☐ Red Edge

Notes on Imagery Selection/Justification

Write something...

Data Acquisition - Ground Truthing

Collecting ground truth data to validate remote sensing interpretations.

GPS Coordinates of Sample Plot

📍 Set My Current Location

Plot Size (m²)

Enter a number...

Observed Weed Species (Select all that apply)

- ☐ Kochia
- ☐ Russian Thistle
- ☐ Canada Thistle
- ☐ Cheatgrass
- ☐ Other (Specify in Long Text)

Other Weed Species (if selected)

Write something...

Weed Cover (%) - Visual Estimate

Enter a number...

Detailed Description of Weed Infestation (e.g., density, health)

Write something...

Growth Stage of Dominant Weed Species

- ☐ Seedling
- ☐ Vegetative
- ☐ Flowering
- ☐ Seeding

Photograph of Weed Infestation

⬆ Upload File

Image Processing & Analysis

Processing and analyzing imagery to identify and delineate weed infestations.

Satellite Image Resolution (meters)

| Enter a number... |

Image Enhancement Technique Applied

☐ None
☐ Contrast Stretching
☐ Edge Enhancement
☐ Histogram Equalization

Spectral Indices Calculated

☐ NDVI
☐ EVI
☐ SAVI
☐ NDRE
☐ Other (Specify in LONG_TEXT)

If 'Other' Spectral Index selected, please specify:

Write something...

Threshold Value (for weed differentiation)

Enter a number...

Classification Method Used

☐ Visual Interpretation

☐ Supervised Classification

☐ Unsupervised Classification

☐ Object-Based Image Analysis (OBIA)

Describe any specific image processing steps taken (e.g., noise reduction, atmospheric correction)

Write something...

Example Processed Image (for quality assurance)

⤒ Upload File

Geographic Information System (GIS) Integration

Importing, managing, and analyzing weed infestation data within a GIS environment.

GIS Software Used

☐ ArcGIS Pro

☐ QGIS

☐ Other (Specify in Long Text)

Specify GIS Software (if 'Other')

Write something...

Shapefile/Geojson of Weed Infestation Polygons

⬆ Upload File

Spatial Resolution of Data (meters)

Enter a number...

Coordinate Reference System (CRS)

☐ WGS 84 (EPSG:4326)
☐ UTM Zone (Specify in Long Text)
☐ State Plane (Specify in Long Text)
☐ Other (Specify in Long Text)

Specify CRS (if 'Other' or UTM/State Plane)

Write something...

Buffering Distance (meters)

Enter a number...

Notes on Data Integration

Write something...

Mapping & Visualization

Creating maps and visualizations to communicate weed infestation patterns and extent.

Base Map Used for Visualization

- [ ] Satellite Imagery
- [ ] Topographic Map
- [ ] Parcel Boundaries
- [ ] Soil Maps

Visualization Layers Included

- [ ] Weed Infestation Polygons
- [ ] Field Boundaries
- [ ] Drainage Patterns
- [ ] Elevation
- [ ] Soil Type

Scale of the Map (e.g., 1:5000)

Enter a number...

Description of Symbolization/Color Ramps Used

Write something...

Map Projection Used

☐ UTM

☐ State Plane

☐ Geographic (Latitude/Longitude)

Exported Map Image (.jpg, .png, .pdf)

⬆ Upload File

Notes on Map Interpretation & Potential Biases

Write something...

Reporting & Documentation

Documenting methods, findings, and recommendations for weed management.

Executive Summary

Write something...

Methodology Description

Write something...

Total Area of Infestation (hectares/acres)

Enter a number...

Dominant Weed Species Identified

☐ Species A

☐ Species B

☐ Species C

☐ Other (specify in long_text)

Recommendations for Weed Management

Write something...

Map File (e.g., shapefile, GeoTIFF, PDF)

⬆ Upload File

Report Creation Date

Enter date...

Limitations and Uncertainties

Write something...

Report Audience

- ☐ Farmer/Landowner
- ☐ Agricultural Consultant
- ☐ Government Agency
- ☐ Other

Data Management & Storage

Ensuring proper organization, security, and preservation of data collected and processed.

Project Data Directory Name

Write something...

Data Retention Period (Years)

Enter a number...

Data Backup Procedures (Detailed description)

Write something...

Data Storage Location

- ☐ Local Server
- ☐ Cloud Storage (Specify)
- ☐ Shared Network Drive

Data File Formats Used

- ☐ GeoTIFF
- ☐ Shapefile
- ☐ CSV
- ☐ Raster Data
- ☐ Other (Specify)

Last Data Backup Date

Enter date...

Access Control Procedures (Who has access and what are their permissions?)

Write something...

Data Storage Security Audit Report (if applicable)

⬆ Upload File