

Natural Environment (Mobile) – Technical README

Overview

Natural Environment (Mobile) is a lightweight and highly optimized collection of terrain elements designed specifically for mobile games and AR/VR projects. All assets are low-poly and GPU-friendly, ideal for runtime procedural generation, mobile RTS/FPS games, or stylized nature scenes.

Package Contents

- Models/Prefabs
 - 12 optimized rocks (LOD-ready)
 - 4 mobile-friendly trees
 - 3 mesh-based grass/flower prefabs
- Textures
 - Tileable ground textures (albedo only, 512x512)
- Materials
 - Mobile unlit/URP-compatible materials
- Scenes
 - Sample demonstration scene (URP-ready)
- Scripts
 - Not included (compatible with any custom vegetation system)

Note: For users requiring higher fidelity, the package includes optional 2K versions of the ground textures in a compressed ZIP archive named '2KTextures_source.zip'. These are not imported by default and must be manually extracted and assigned.

Compatibility

- Unity 2021.3 LTS and above
- Render Pipelines:
 - Built-in RP ✓
 - Universal Render Pipeline (URP) ✓
 - HDRP ✗

Tested on:

- Android (OpenGL ES3)
- Oculus Quest 2
- WebGL (URP)

Setup Instructions

1. Import Package

- Import via Unity Package Manager or Asset Store.
- Recommended: Use a URP template project for best results.

2. Assign Terrain Layers (Grass)

- Navigate to your Terrain → "Paint Details".
- Add Grass01, Flower01, Flower02 as Detail Meshes.
- Set Render Type to Mesh.
- Enable GPU Instancing for performance.

3. Terrain Painting

- Grass items are designed to be layered on the same terrain texture using different Minimum Strength values (e.g., 0.0 / 0.1 / 0.2).
- Optional: Use third-party tools like Vegetation Studio, Nature Renderer, or The Vegetation Engine for enhanced control.

4. LOD and Optimization

- All props are low-poly and can be used with custom LOD systems.
- Materials are compatible with GPU instancing (URP Lit or Unlit).

Recommended Settings

- Target Platform: Android/iOS
- Quality Settings:
 - Texture resolution: Half
 - LOD Bias: 1.5
 - Shadow Distance: 30–50
- URP Optimizations:
 - Enable SRP Batcher
 - Disable real-time shadows for terrain vegetation

Known Issues

- Due to Unity terrain limitations, the detail mesh system supports a maximum of 8 detail objects at a time.
- Ensure all grass prefabs have Transform values set to (Position 0, Rotation 0, Scale 1) to pass Asset Store validation.

Support

For issues, bug reports, or optimization suggestions, please contact:

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Asset ID: 324098

Asset Store: <https://assetstore.unity.com/packages/3d/environments/landscapes/natural-environment-mobile-324098>