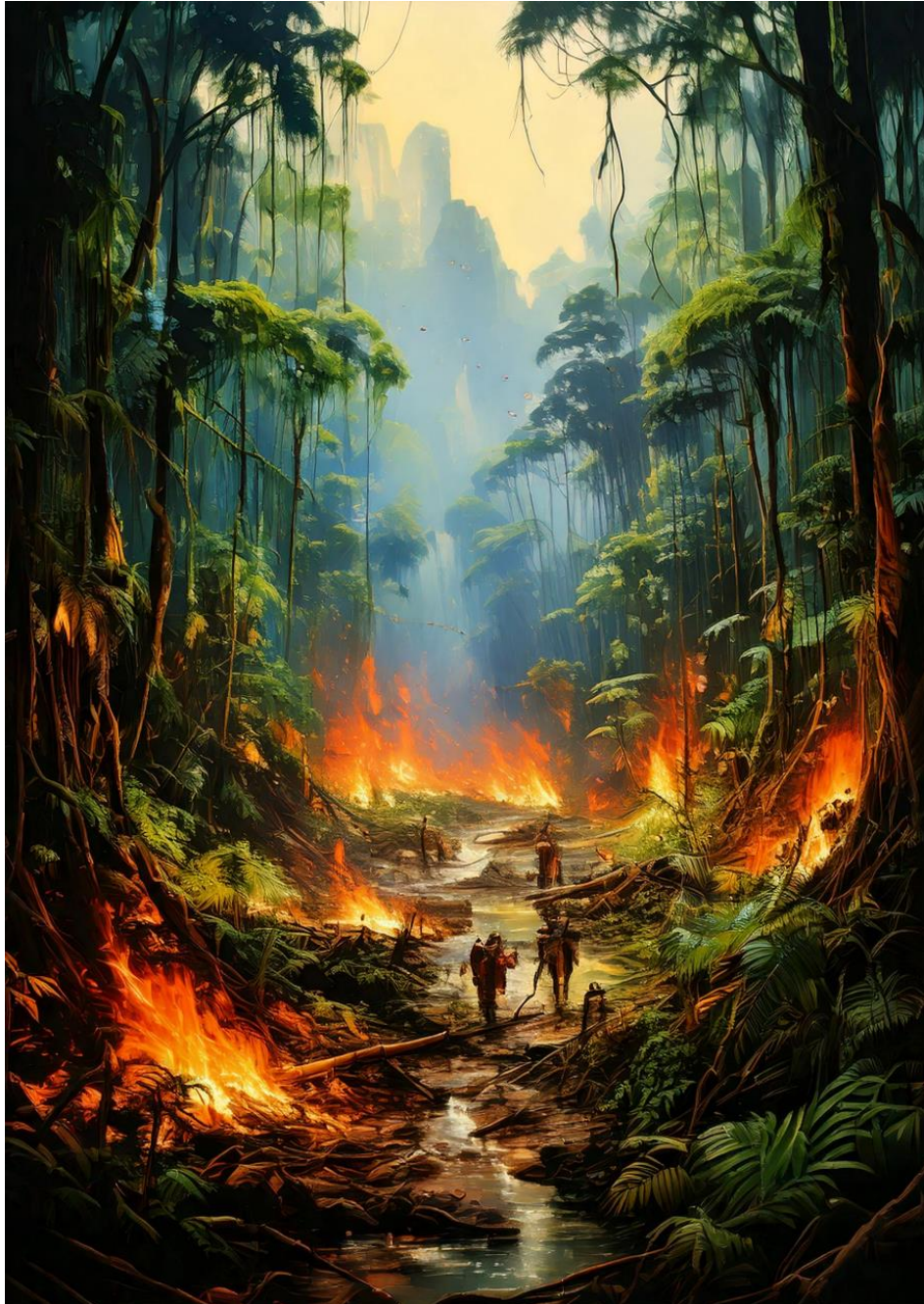


Eco Rescuers

Game Design Document (GDD)

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Game Design Document (GDD)

Game Title: Eco Rescuers

Platform: PC

Genre: Cooperative Multiplayer / Action-Adventure

Target Audience: Ages 12+, players interested in teamwork, environmental issues, and light-action mechanics

1. Game Overview

Game Concept:

In *Eco Rescuers: Jungle Guardians*, players become rescuers in a jungle devastated by wildfires. The main goal is to extinguish fires, rescue injured animals, and repair habitats before the jungle is destroyed. Each player has a unique role with specialized tools, emphasizing collaboration and strategy within a 5-minute time limit. The game promotes environmental awareness and aligns with the UN Sustainable Development Goals (SDGs):

- SDG 13: Climate Action
- SDG 15: Life on Land
- SDG 3: Good Health and Well-being
- SDG 17: Partnerships for the Goals

Unique Selling Points:

- **Cooperative Gameplay:** Each player's unique role fosters teamwork and strategic play.
 - **Educational Theme:** Raises awareness about environmental protection through immersive gameplay.
 - **Time-limited Challenge:** A 5-minute timer creates urgency, enhancing excitement and replayability.
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2. Gameplay Mechanics

Core Mechanics:

1. **Objective Completion:** Players collaborate to achieve the main objective (extinguishing fires) and optional objectives:
 - Rescue injured animals.
 - Restore habitats.
 - Clear debris to open safe pathways.
2. **Tool System:** Each player has a unique tool:
 - **Fire Extinguisher:** For putting out fires.

- **Health Kit:** For healing injured animals.
- **Hammer:** For repairing shelters and structures.
- **Laptop:** For monitoring environmental data and identifying critical zones.

3. Controls (PC):

- **WASD/Arrow Keys:** Move.
- **Mouse:** Rotate camera.
- **E Key:** Interact (pick up, use tools).
- **Spacebar:** Jump.
- **Tab:** Check map and objective progress.

Objectives:

- **Main Objective:** Extinguish fires to prevent further environmental damage.
- **Optional Objectives:**
 - Rescue wildlife using the health kit.
 - Repair shelters with the hammer.
 - Clear debris collaboratively to create safe routes.

Win/Loss Conditions:

- **Win Condition:** Complete the main objective within 5 minutes. Optional objectives boost scores and jungle recovery.
 - **Loss Condition:** If fires aren't contained, the jungle suffers irreversible damage, resulting in failure.
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3. Level Design

Setting:

- **Jungle Biome:** A lush, dense environment with:
 - Thick vegetation.
 - Scattered water sources.
 - Rocky areas and winding paths.
 - A small village surrounded by scorched land.
- **Fire Zones:** Areas with active fires, smoke, and scorched land.
- **Spawn Points:** Tools placed across accessible zones for players to locate and use.
- **Wildlife Zones:** Habitats where animals gather, serving as rescue objectives.

Challenges:

1. **Navigation:** Players must overcome blocked paths from fallen trees and burnt vegetation.
2. **Environmental Hazards:** Fire spreads dynamically, requiring quick action.
3. **Time Constraint:** Players have only 5 minutes to save the jungle.

Player Roles:

1. **Firefighter:** Uses a fire extinguisher to tackle fires directly.
 2. **Medic:** Uses a health kit to heal injured animals.
 3. **Engineer:** Repairs structures and removes obstacles using a hammer.
 4. **Tech Specialist:** Guides the team using a laptop to locate critical zones and resources.
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4. Art Style

Visual Style:

- **Theme:** A stylized yet realistic jungle.
- **Palette:** Earth tones (greens, browns) contrasted with fire effects (reds, oranges) and smoky greys.
- **Character Models:** Low-poly characters with distinct tool indicators.
- **Animal Models:** Realistic yet simple designs with expressive animations.

UI Elements:

- **HUD:** Displays timer, objectives, and tool status.
 - **Minimap:** Highlights fire zones, tool locations, and key areas.
 - **Progress Indicators:** Tracks completion percentages and remaining tasks.
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5. Sound and Music

Sound Effects:

1. **Fire Crackling:** Enhances urgency in fire zones.
2. **Tool Sounds:** Unique sounds for each tool (e.g., extinguisher spray, hammer repair).
3. **Animal Sounds:** Immersive cues for wildlife rescue zones.

Music:

- **Background Music:** Tense, atmospheric tracks that build as the timer counts down.
 - **Victory/Defeat Music:** Uplifting tones for success and sombre melodies for failure.
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6. Development Timeline and Task Breakdown

Phase 1: Pre-Production

- Define concept, objectives, and level layout.
- Create initial terrain and environment in Unreal Engine.

Phase 2: Production

- Develop character and tool models.
- Animate player and animal interactions.
- Code mechanics and integrate multiplayer functionality.
- Design HUD and minimap.

Phase 3: Testing and Refinement

- Conduct playtests for balance and difficulty adjustments.
- Polish graphics, animations, and sound design.

Phase 4: Final QA and Launch Prep

- Perform bug fixes and optimize performance.
- Finalize presentation and release.

7. Sustainability Goals Addressed

1. **SDG 13: Climate Action** - Focused on extinguishing fires to prevent environmental damage.
2. **SDG 15: Life on Land** - Rescuing and restoring wildlife habitats supports biodiversity.
3. **SDG 3: Good Health and Well-being** - Healing injured wildlife promotes ecosystem safety.
4. **SDG 17: Partnerships for the Goals** - Collaborative multiplayer design emphasizes teamwork in solving environmental challenges.

8. Rewards and Recognition

- **Skill Upgrades:** Completing objectives grants players upgrades to their tools, such as:
 - A fire extinguisher with greater capacity or range.
 - A health kit that works faster or heals more effectively.
 - Enhanced hammers for quicker repairs and debris removal.
- **Visual Rewards:** As players succeed, the environment visibly recovers, with greener foliage, wildlife returning, and the village rebuilding.
- **Score Multiplier:** Achieving optional objectives increases team scores and rewards cooperation.

- **Achievements:** Players earn badges for milestones, such as rescuing a specific number of animals or completing a level without taking damage.
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9. Monetization

- **Base Game Purchase:** The game is sold as a single purchase, with no pay-to-win mechanics.
 - **Optional Cosmetic Add-ons:** Players can purchase:
 - Custom skins for characters and tools.
 - Decorative elements for the environment, such as unique animal models.
 - **Expansion Packs:** New levels addressing different climate crises, available as paid DLCs.
 - **Collaboration with Environmental Organizations:** A portion of proceeds could fund real-world conservation efforts, adding a socially impactful layer to monetization.
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10. Advanced Features for Expansion

1. **Dynamic Weather:** Incorporate rain or wind to affect fire behavior and player strategies.
 2. **Expanded Roles:** Add characters like a Botanist who restores vegetation or a Scout who detects hidden dangers.
 3. **Interactive Objects:** Introduce destructible obstacles and repairable elements in the environment.
 4. **Additional Levels:** Create new scenarios focused on different environmental crises, such as oil spills or urban pollution.
 5. **Tool Upgrades:** Allow players to enhance their tools for improved functionality and efficiency.
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11. Community Engagement

1. **Player Feedback:** Regularly gather input from players to refine mechanics and features.
2. **Educational Campaigns:** Collaborate with environmental organizations to incorporate real-world conservation efforts into gameplay.
3. **Modding Support:** Enable players to create custom levels or mechanics to expand the game's reach.

12. Art Design and Visual Style Concept

Scene Concept and Atmosphere Creation

1. **Fire and Smoke:** The fire transitions from a blazing orange to gray and black, while smoke is designed with gradient effects to depict the spread and dissipation of the fire.
2. **Pollution and Environmental Damage:** Water contamination and air quality decline are represented through elements like oil-contaminated water and polluted air, emphasizing the long-term impact of ecological disasters.
3. **Forest and Abandoned Buildings:** Charred trees, twisting vines, and abandoned structures depict the destruction and desolation of the jungle environment.

Stylized Elements

1. **Natural Elements:** Trees, plants, and rocks are designed in a semi-realistic style, balancing natural ecology with the destructive aftermath of fire.
2. **Abandoned Buildings and Ruins:** The design of buildings and plants merging represents the intertwining of ruins and the jungle environment, highlighting the blend of nature and human history.

Preliminary Game Art Design and Visual Style Considerations

Fusion of Low-Poly and Cartoon Style

To ensure that *Eco-Rescue* is both approachable and effectively conveys the environmental protection theme, a combination of Low-Poly and Toon Shading styles is used. This design creates a simple yet expressive artistic effect while maintaining a balanced thematic atmosphere.

1. **Low-Poly Model Design (Early-stage design) :**
 - a. Models feature simple geometric shapes, reducing detail while maintaining flat surfaces and sharp edges to ensure visual clarity.
 - b. For example, the trees in the jungle are designed with simplified geometric shapes, bringing life to the natural landscape through colour matching and texture. Abandoned buildings use minimalist structures and colour block stitching, highlighting the stark contrast between environmental destruction and recovery.
2. **Cartoon Shading Style:**
 - a. The use of Toon Shader technology creates high-contrast lighting effects and colour block rendering, giving characters and environments a hand-drawn, illustrative look that enhances vibrancy and expressiveness.
 - b. Disaster elements (such as fire, smoke, and pollution) are depicted using simplified lighting effects and highly saturated colour blocks, increasing visual impact while avoiding an overly oppressive tone.

Stylized Elements and Game Atmosphere

By blending Low-Poly and Toon Shading, the game maintains a light-hearted atmosphere while conveying the theme of environmental disaster. This approach encourages players to engage in rescue and restoration tasks. Despite depicting a sense of disaster, the design uses colour contrast, dynamic lighting, and simplified shapes to create elements that are visually impactful without being overly heavy or oppressive.