

Restoring and Rehabilitating Damaged Ecosystems

Part 1: Dialogue

Liam (Landscape Architect): We're moving forward with the **ecological restoration** plan for the wetland area. Have you reviewed the site conditions?

Sophia (Colleague): Yes, I have. The soil erosion is severe, and the water table is lower than expected. We'll need a strong **riparian buffer** to stabilize the banks.

Liam: Agreed. We should also establish a **biodiversity corridor** to connect fragmented habitats. That will help improve species movement.

Sophia: Good point. If we integrate native plants, they'll support local wildlife and improve long-term stability. Have you considered the reforestation strategy?

Liam: Yes. We'll start by planting a mix of fast-growing trees and slow-growing natives. That way, the **reforestation** process ensures both short-term and long-term coverage.

Sophia: That's a solid approach. What about water filtration? The wetland needs to retain more nutrients while reducing pollutants.

Liam: We'll introduce floating vegetation and sediment traps. These will naturally enhance water quality while maintaining the wetland's function.

Sophia: That makes sense. I also want to include **wildlife habitat enhancement** measures, like nesting platforms and fish shelters.

Liam: Great idea. The goal is to restore the ecosystem while also making it sustainable for the future.

Sophia: Exactly. Let's finalize our action plan and coordinate with the environmental team before implementation.

Part 2: Comprehension Questions

1. What is the purpose of a **biodiversity corridor** in ecosystem restoration?
(A) To increase tourism opportunities in protected areas
(B) To connect fragmented habitats and promote species movement
(C) To create artificial water sources for animals
(D) To control urban expansion into green spaces
 2. Why is **reforestation** important in restoring damaged ecosystems?
(A) It prevents soil erosion and improves habitat quality
(B) It allows non-native plants to grow freely
(C) It eliminates the need for water conservation
(D) It reduces the need for biodiversity corridors
 3. How does a **riparian buffer** contribute to wetland rehabilitation?
(A) It supports industrial development in wetland areas
(B) It removes all vegetation along water bodies
(C) It stabilizes riverbanks and filters pollutants
(D) It increases groundwater depletion
 4. What is the goal of **wildlife habitat enhancement** in ecosystem restoration?
(A) To remove all predatory species from the environment
(B) To introduce only domesticated animals into the habitat
(C) To encourage urban expansion into green spaces
(D) To improve shelter, food sources, and nesting opportunities for wildlife
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Part 3: Vocabulary with Definitions

- **Ecological restoration** (生態系の修復) – The process of restoring natural ecosystems to their original or improved state.
- **Biodiversity corridor** (生物多様性回廊) – A natural passage that connects habitats to support wildlife movement.

- **Reforestation (再森林化)** – The practice of planting trees to restore forests and degraded land.
 - **Riparian buffer (河岸緩衝帯)** – Vegetation along waterways that helps prevent erosion and improve water quality.
 - **Wildlife habitat enhancement (野生生物の生息地強化)** – Strategies to improve shelter, nesting, and food sources for animals.
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Part 4: Answer Key

1. **What is the purpose of a biodiversity corridor in ecosystem restoration?**
☒ (B) To connect fragmented habitats and promote species movement
2. **Why is reforestation important in restoring damaged ecosystems?**
☒ (A) It prevents soil erosion and improves habitat quality
3. **How does a riparian buffer contribute to wetland rehabilitation?**
☒ (C) It stabilizes riverbanks and filters pollutants
4. **What is the goal of wildlife habitat enhancement in ecosystem restoration?**
☒ (D) To improve shelter, food sources, and nesting opportunities for wildlife