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Journal: Filling Up Wetlands Is Harmful to Nature

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Introduction: Why Wetlands Matter More Than We Realize

Wetlands are often overlooked. Many people see them as soggy, unproductive land—places that hinder construction or agriculture. But wetlands are among the most biologically rich ecosystems on Earth. They serve as transition zones between land and water, supporting an abundance of plants, birds, reptiles, insects, and aquatic life.

Yet, despite their tremendous ecological value, wetlands continue to be filled in for housing, industries, roads, and commercial development. Every time a wetland disappears, nature loses far more than just a patch of waterlogged ground. Filling wetlands damages ecosystems, reduces biodiversity, worsens flooding, and disrupts climate balance.

This journal explores why filling up wetlands is so harmful, reflecting on both scientific understanding and personal observations.

The Ecological Role of Wetlands

Wetlands are sometimes called the “kidneys of the Earth” because they filter pollutants naturally. Water flows into wetlands carrying sediments, fertilizers, chemicals, and waste from surrounding land. Wetland plants trap these pollutants and purify the water before it enters rivers, lakes, or groundwater.

They are also a refuge for wildlife. Birds use wetlands as breeding and nesting grounds. Amphibians like frogs and salamanders depend on wetlands for their life cycles. Fish use wetlands as nurseries to grow safely before entering open waters. Even large mammals—such as deer, elephants, and water buffalo—rely on wetland vegetation and water.

When wetlands are filled, the intricate network of life they support collapses. Species lose their habitats, leading to population decline and, in some cases, extinction.

Flood Protection: Nature's Safety Buffer

One of the most critical functions of wetlands is flood control. Wetlands act like giant sponges. They absorb excess rainwater, store it temporarily, and release it slowly back into the environment.

But when a wetland is filled with soil, concrete, or debris:

- Rainwater has no place to go

- Floodwater rises faster

- Surrounding towns and farmland become more vulnerable

- Stormwater drainage systems get overwhelmed

Countries around the world have experienced severe flooding linked directly to wetland destruction. Ironically, the same cities that destroy wetlands later spend billions building artificial drainage systems—systems that never work as effectively as nature's own.

Climate Regulation and Carbon Storage

Wetlands store massive amounts of carbon in their soil and plant matter. They act as long-term carbon sinks, holding greenhouse gases that would otherwise enter the atmosphere and contribute to global warming.

But when wetlands are filled or drained:

- The stored carbon is released into the atmosphere

- Greenhouse gas levels increase

- The land loses its future ability to store carbon

Peatlands, a type of wetland, store more carbon than all the world's forests combined. Destroying them accelerates climate change significantly.

Biodiversity Loss and the Fragile Web of Life

Every wetland contains a rich food chain—from microscopic plankton to birds of prey. When wetlands disappear, entire chains break down.

Species affected include:

- Migratory birds that rely on wetlands as seasonal resting spots

- Fish that need wetlands to spawn

- Turtles and snakes that depend on wetland vegetation

- Insects like dragonflies and butterflies

- Aquatic plants that grow nowhere else

Some species can adapt, but many cannot. As wetlands shrink, biodiversity declines. Once biodiversity is lost, it cannot be easily restored.

Human Health and Community Impacts

Wetlands help control diseases by regulating mosquitoes and waterborne pathogens. Many wetland birds, fish, and insects naturally keep mosquito populations in check.

But when wetlands are filled:

- Stagnant water accumulates

- Mosquitoes breed unchecked

- Diseases like dengue, malaria, and chikungunya increase

Communities that once depended on wetlands for fishing, agriculture, and small-scale irrigation lose their livelihoods.

Personal Reflection: Seeing the Loss Up Close

I have seen firsthand how communities change when wetlands are filled. A few years ago, a large wetland near my town was leveled to make space for a new housing project.

Before the filling began, the area was full of life—cranes standing on long legs in the shallow water, frogs croaking during rainy evenings, fish flickering beneath the surface. During monsoons, the wetland absorbed overflowing water, sparing nearby homes from floods.

After it was filled:

- Flooding in the neighborhood became frequent

- Birds stopped coming

- Fish disappeared

- The air felt hotter and drier

Seeing this transformation made me realize how fragile these ecosystems are.

Economic Myths vs. Ecological Truths

Developers often justify filling wetlands by arguing:

- New land is needed for housing

- Real estate profits benefit the economy

- Wetlands are "unproductive"

But this ignores long-term losses:

- Increased flooding costs

- Water treatment expenses

- Climate damage

- Loss of fish, tourism, and agriculture income

Studies show that preserving wetlands saves far more money than destroying them.

The Path Forward: Conservation and Awareness

Protecting wetlands requires:

1. Stronger environmental laws

2. Community awareness programs

3. Restoration projects

4. Sustainable urban planning

5. Education about wetland ecology

Some countries have begun reclaiming old wetlands because they realized the cost of destroying them was too high.

Conclusion: Wetlands Are Not Wastelands

Filling up wetlands is harmful to nature in every way—environmentally, economically, and socially. These ecosystems are not empty or useless spaces. They are life-support systems for the planet. Protecting wetlands is not optional; it is essential.