

# Pesticides and Pollutants Their Long-Term Effects on Terrestrial and Aquatic Ecosystems

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## Abstract

environmental health. Their use has been essential in pest control, crop protection, and industrial processes, but their widespread application has raised concerns regarding long-term impacts on terrestrial and aquatic ecosystems.

persistence, bioaccumulation, and toxicity. Terrestrial ecosystems, including soil health and biodiversity, are adversely

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## Introduction

The use of pesticides and pollutants in agriculture and industry has significantly impacted the environment. These substances, which are designed to control pests and enhance crop yields, often persist in the environment and can be transported through air, water, and soil. This leads to contamination of ecosystems, affecting both terrestrial and aquatic life. The long-term effects of these pollutants include soil degradation, loss of biodiversity, and disruption of food chains. Understanding the mechanisms of these pollutants and their interactions with the environment is crucial for developing effective management strategies to mitigate their adverse effects. This paper explores the various pathways of pesticides and pollutants, their persistence in the environment, and the resulting impacts on different ecosystems. It also discusses the role of regulatory bodies and the importance of sustainable practices in reducing the use of these harmful substances.

