



Seaweed: A Green Solution for Carbon Sequestration and Climate Mitigation

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Abstract

Climate change is one of the most pressing challenges of the 21st century, and effective solutions for mitigating ecosystems, particularly seaweed, offer a highly promising and underutilized solution. Seaweeds, as marine plants, have the potential to sequester significant amounts of carbon dioxide (CO₂) through their rapid growth and natural processes. This article explores the role of seaweed in carbon sequestration, focusing on its potential for climate mitigation. It examines how seaweed captures carbon, the various methods for utilizing seaweed in climate action, and ultimately, this article argues that seaweed has the potential to be a vital tool in the fight against climate change.

Keywords:

Seaweed, Carbon Sequestration, Climate Change, Ocean Acidification, Sustainable Development

Introduction

The ocean plays a crucial role in regulating Earth's climate, and seaweed, a diverse group of marine plants, has emerged as a promising natural solution for carbon sequestration. Seaweeds capture carbon dioxide (CO₂) from the atmosphere through photosynthesis and store it in their biomass. This process, known as blue carbon sequestration, has the potential to significantly reduce greenhouse gas concentrations and mitigate climate change. This article explores the role of seaweed in carbon sequestration, focusing on its potential for climate mitigation. It examines how seaweed captures carbon, the various methods for utilizing seaweed in climate action, and ultimately, this article argues that seaweed has the potential to be a vital tool in the fight against climate change. (2)

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