NATURE'S CLIMATE SOLUTIONS

Kelp Forests

1. What Are Kelp Forests?

Kelps are large brown algae that thrive in shallow coastal waters and rely on sunlight to grow. They grow fast and tall from the ocean floor to the water's surface. Areas highly dense with kelp are called kelp forests. Kelp forests provide an underwater habitat for thousands of species, making them vital ecosystems.

2. South Africa's Kelp Forest

"It is the only forest of giant bamboo kelp on our planet, harboring other-worldly creatures, startling abundance, and rich biodiversity. This enormous habitat fringes the shores of Cape Town and stretches north for more than 1000km into Namibia." - Sea Change Project

3. Kelps Are Carbon Sinks

Kelp's rapid growth allows it to absorb lots of Carbon Dioxide (CO_2) through photosynthesis. Research shows kelp can take in CO_2 at a faster rate than land forests. When kelp decomposes, the absorbed CO_2 ends up at the bottom of the ocean, where it can stay in stores for hundreds to thousands of years. These forests are carbon sinks because they take in more carbon than they release.

Kelp forests cover 25% of the world's coastline and are part of coastal ecosystems which are 20 times more efficient at removing carbon than land forests.
Kelp forests are predicted to decline due to climate change. The decline of kelp forests would be a major loss of potential for carbon sequestration and a habitat for many marine species.

4. What Needs To Be Done?

- Increased appreciation and protection of these forests.
- Conservation of the diverse ecosystems.
- More research to better understand these forest's role as an ecosystem and in carbon absorption.

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