

Ecosystem Restoration and Biodiversity Conservation

Ecosystem restoration and biodiversity conservation are critical for the planet's health and human well-being. Biodiversity, encompassing the variety of life from genes to ecosystems, provides essential services like food, water, medicine, and climate regulation. Over half of the global GDP is dependent on nature, highlighting its economic importance. However, nature is in crisis, with up to one million species threatened with extinction.

Human activities, primarily land use for food production, are the main drivers of biodiversity loss, altering over 70% of ice-free land. Climate change is increasingly exacerbating this decline, causing species loss, increased diseases, and mass mortality events. Rising ocean temperatures have led to significant coral reef loss.

Restoring degraded ecosystems and conserving intact ones are vital for mitigating climate change and preserving biodiversity. Healthy ecosystems act as natural carbon sinks, with forests and peatlands storing vast amounts of carbon. Protecting and restoring these natural spaces can achieve a significant portion of necessary greenhouse gas emission reductions. Efforts include in-situ conservation, such as protected areas, sustainable land management, and ex-situ methods like botanical gardens and zoos. International agreements, like the Kunming-Montreal Global Biodiversity Framework, aim to tackle these interlinked crises through collaborative action and increased funding.