

Preface

Critical processes at the ecosystem level influence plant productivity, soil fertility, water quality, atmospheric chemistry, and many other local and global environmental conditions that ultimately affect human welfare. These ecosystem processes are controlled by both the diversity and identity of the plant, animal, and microbial species living within a community. Human modifications to the living community in an ecosystem (E) as well as to the collective biodiversity of the earth (E) can therefore alter ecological functions and life support services that are vital to the well-being of human societies. Substantial changes have already occurred, especially local and global losses of biodiversity. The primary cause has been widespread human transformation of once highly diverse natural ecosystems into relatively species-poor managed ecosystems. Recent studies suggest that such reductions in biodiversity can alter both the magnitude and the stability of ecosystem processes, especially when biodiversity is reduced to the low levels typical of many managed systems.

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