

# Nature Can Heal If/When We Stop Attacking

Contributed by RDK

Lower Niagara wetlands at risk from logging.  
(Photo: Doug Radies) Yale Study Finds Evidence that Damaged  
Ecosystems Can Recover Rapidly Environmental News Network  
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A recent study by Yale University's School of Forestry and Environmental Studies reports that if humans commit to the restoration effort, most ecosystems can recover from very major disruption within decades to half-centuries. The study was written by Holly P. Jones and Oswald J. Schmitz and will appear in the June edition of the journal PLoS ONE. According to the study, researchers compiled information from 240 independent studies conducted since 1910 that examined large, human-scale ecosystems recovery following the termination of both human and naturally imposed disruption.

Researchers grouped the data into seven broad aquatic and terrestrial types of ecosystems, and disruptions such as deforestation, hurricane, invasive species, oil spoils, power plant and sea trawling. Most of the studies measured multiple response variables, which researched grouped into three categories: ecosystem function, animal community, and plant community. The researchers evaluated the recovery of each of the variables in terms of the time it took for them to return to their original state as determined by each study's author. The study also assessed whether recovery times were related to the magnitude of the disturbance.

Reportedly, 83 studies demonstrated recovery for all variables; 90 demonstrated a mixture of recovered and non-recovered variables; 67 demonstrated no recovery for any variable; and 15 percent of all the ecosystems in the analysis are beyond recovery. The average recovery time was 20 years or less, and reportedly did not exceed more than 56 years. It was found that recovery from human disturbances was slower than natural disturbances, such as hurricanes. Recovery following agricultural, logging, and multiple stressors was significantly slower than all of other disturbance types.

The results of the study showed a positive relationship between the degree of disturbance and the recovery time. However, this was entirely determined by the type of ecosystem. For instance, the study states that aquatic system recovered much faster than terrestrial. Researchers noted that aquatic systems may recover more quickly because species and organisms that inhabit them turn over more rapidly. For instance, forests took the longest to recover due to the fact that forest inhabitants take longer to regenerate after logging or clear-cutting.

One potential pitfall of the study is that the uncertainty of the systems original state. The study explains that major disturbances such mass extinction combined with lower level disturbances such as pollution or climate change could create a baseline far removed from the historical natural state.

Jones and Schmitz concluded that "recovery is possible and can be rapid for many ecosystems, giving much hope for humankind to transition to sustainable management of global ecosystems."

[View the research article by Jones and Schmitz here .](#)