

Ecosystem Services

All life on Earth depends on a host of goods and services that ecosystems provide.



The Earth's varied habitats, such as forests and wetlands, provide many goods and services upon which we depend, often without our knowing it.

These ecosystem services are as familiar as fish and fresh water or as subtle as the stabilization of climate.

Our multi-trillion dollar economy is linked in innumerable ways to ecosystem services, but it is difficult to assign price tags to the ecological, recreational, spiritual, and aesthetic values that they provide.



Pollination

- Pollinators come in all shapes and sizes. Over 100,000 species—from bees, beetles, moths, and flies, to birds, mammals, and reptiles—serve as pollinators worldwide.
- Most flowering plants require help from pollinators to produce fruit and seed.
- Almost all commercially important crops—more than 150 in the United States—require pollination to produce their crops, including almonds, apples, alfalfa and squash.



Flood Damage Control

- About one quarter of the rain that falls on the Earth runs off as flood water.
- Forests, wetlands, rivers and coastal floodplains catch, store, absorb and slowly release excess water.
- These ecosystems help prevent or reduce damage to human settlements and natural areas from flash flooding and lessen the height and duration of floods.



Forest Carbon Storage

- Forests remove carbon dioxide—the principle greenhouse gas—from the atmosphere and store it as carbon.
- Carbon dioxide is released back into the atmosphere when forests are burned or cleared.
- Forest protection and restoration help slow global warming and provide important conservation co-benefits, such as preserving watersheds and biodiversity.



Water Purification

- Streams, wetlands, lakes, estuaries, and forests all play important roles in purifying water.
- Excess nutrients, sediments, oil, bacteria, and viruses are processed and filtered out as water moves through these ecosystems.
- This natural purification process provides clean water for drinking, industrial uses, recreation, and wildlife habitat.

Communicating Ecosystem Services

TOOLS FOR SCIENTISTS TO ENGAGE THE PUBLIC

<http://esa.sdsc.edu/ecoservices>



Ecological Society of America

202.833.8773
<http://es.sdsc.edu>



Union of Concerned Scientists

617.547.5552
<http://www.ucsusa.org>