

Ecosystem Services

Ecosystem services benefit us in myriad ways.

- **Provisioning services:** drinking water, oil, and natural gas
- **Regulating services:** climate regulation, decomposition, and water purification
- **Supporting services:** nutrient cycling, photosynthesis, and soil creation
- **Cultural services:** recreation and creative inspiration

Gross Domestic Product

In 2009, the ecosystem services value (ESV) was an estimated \$149.61 trillion for the entire biosphere. (The world GDP was approximately \$71.75 trillion.)

Marine systems contributed approximately 75.15% of the ESV.



Drinking Water

Plants act as natural water filters, removing pollutants and sediments before they reach reservoirs. Forests and vegetation determine how much water is available locally.



Flood Prevention

By soaking up floodwater, wetlands reduce the height of peak flow and slow the movement of water to mitigate floods, making damage less likely to occur.



Pollination

The total production value of pollination in the United States is estimated to be \$2 billion dollars. In other words, through insect pollination, farmers can save \$2 billion dollars in required pollination annually.

Farmers Market



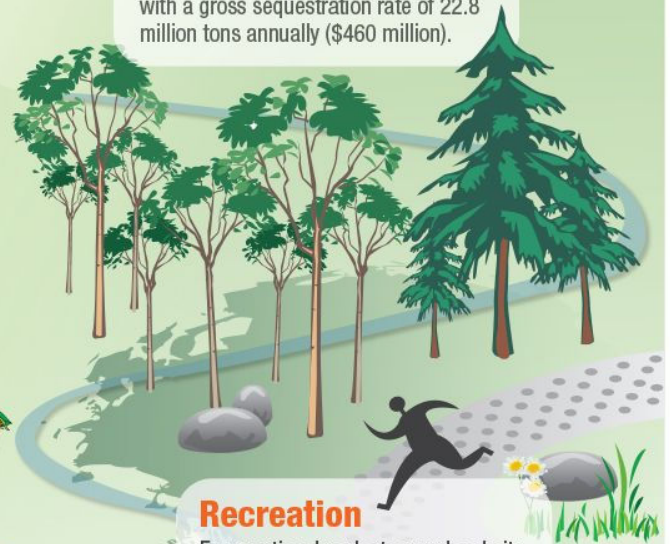
Fishing

From 2008 to 2010, fishing represented a \$4 billion dollar industry in the United States and contributed to 1 million jobs around the country.



Urban Trees

In 2002, field data from 10 US cities indicated urban trees stored 700 million tons of carbon (\$14.3 billion value), with a gross sequestration rate of 22.8 million tons annually (\$460 million).



Recreation

From national parks to your local city park, natural areas provide opportunities for some of the best recreation. Walking, running, and biking, for instance, promote both physical and mental wellness.

Sources: Li, Guangdong and Chuanglin Fang. 2014. "Global mapping and estimation of ecosystem services values and gross domestic product: A spatially explicit integration of national 'green GDP' accounting." *Ecological Indicators* 46: 293–314.

Nowak, David J. and Daniel E. Crane. 2002. "Carbon storage and sequestration by urban trees in the USA." *Environmental Pollution* 116: 381–89.