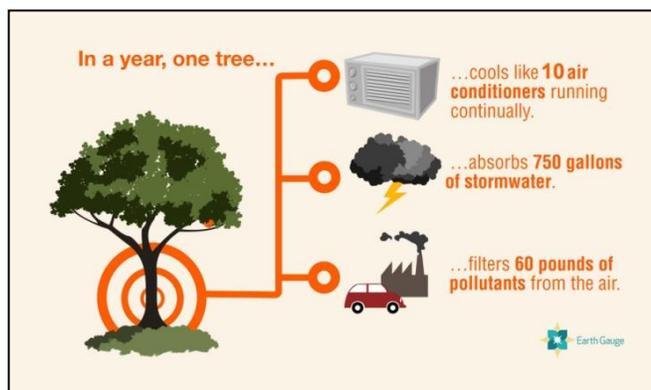


Ecosystem Services of Trees

Natural Resources

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As consumers of natural resources, it is important to understand the true value of the ecosystems which support these resources. By applying a monetary value to the services provided by nature, we may begin to view the world differently. **Ecosystem services** are benefits that people obtain from natural systems. Placing a monetary value on these services allows economists to compare the value of undeveloped land such as a park or preserve to developed land such as a shopping mall or apartment complex. In other words, we can now compare apples to apples instead of apples to oranges. The idea of assigning a value to ecosystem services is relatively new and still being developed, but it represents a big step for people trying to conserve lands around the world.



There are four main categories of ecosystem services:

- **Provisioning services** are the physical benefits nature provides such as: food, fuel, fiber, wood, biochemicals such as sap, rubber or glue, medicines, and fresh water.
- **Regulating services** are the benefits we receive from supporting a healthy ecosystem, including: better air quality, a comfortable climate, water storage and purification, erosion prevention, disease control, decomposition by bacteria, and pollination by bees and other insects.
- **Cultural services** are non-material benefits we receive from nature such as: cultural heritage and identity, aesthetic beauty, learning through interactions with nature, recreation, and creative hobbies such as art and music.
- **Supporting services** make **provisioning, regulating and cultural** services possible. These benefits include natural cycles such as: the process of photosynthesis; nutrient cycling allowing the sharing of important elements between plants and animals; water cycling such as the natural filtration of ground water; and soil formation.

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Some ways trees specifically benefit us include:

- **Preventing Soil Erosion** - Trees reduce soil erosion by catching rainfall on leaves, branches, and bark, slowing the flow of water as it hits the ground. This allows the water to seep into the soil and enter the aquifer or the tree's root system.
- **Reducing Energy Costs** - As trees shade buildings in the summer and block cold winds in the winter, the need to use cooling and heating systems is reduced.
- **Improving Air Quality** - Trees reduce the impacts of air pollution by absorbing pollutants through their leaves, intercepting particles in the air such as dust, ash or smoke, and releasing oxygen we need to breathe.
- **Increasing Property Value** - Research indicates that home buyers are willing to pay more for a home with more trees versus few to no trees.¹
- **Reducing Carbon Dioxide (CO₂)** - Trees help to reduce atmospheric carbon by sequestering (locking it up) in their roots, trunks, stems and leaves. Trees retain this carbon even after being harvested for lumber to build homes and furniture. CO₂ is a greenhouse gas which contributes to climate change.

These are just a few of the ecosystem services provided by our natural systems. Trees also provide enormous benefits to other plants and animals such as food and shelter which are not discussed in this factsheet. To learn more about ecosystem services, refer to the sources below. UF/IFAS Extension of Pinellas County also developed the Traveling Tree Walk, an educational tool focused on the ecosystem services of trees. This tool can be reserved for your community online at: <http://travelingtreewalk.eventbrite.com/>.

Sources:

<http://treeutah.org/programs/urban-forest> ⁻¹

http://www.fs.fed.us/ecosystems-services/About_ES/index.shtml

<http://www.earthgauge.net/> (Photo Source)

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