Nature Provides the Foundation for Our Economy and Well-being





"Some old-fashioned things like fresh air and sunshine are hard to beat," wrote Laura Ingalls Wilder, author of Little House on the Prairie. Indeed, nature provides us with much more than fresh air and sunshine. Our connection with nature is deep and intricate, and to describe it, some refer to the direct and indirect benefits people obtain from nature as "ecosystem services." To help us understand the diversity of benefits nature provides to us, the ecosystem services can be grouped into the following categories:

Category	Description	Examples in Florida
Provisioning services	Ecosystems provide material benefits and energy supplies.	Drinking and irrigation water provided by Florida's aquifers; fish to supply local restaurants; transportation routes provided by rivers; future opportunities to use ocean waves for power generation
Cultural services	Ecosystems provide experiences that shape our culture.	Recreation opportunities; artistic inspiration; education opportunities through outdoor citizens science programs; sense of place and community created around springs or coastal resources
Regulating and Supporting services	Ecosystems regulate processes that move water, nutrients, and energy in the environment and thereby support the other ecosystem services.	Exotic species invasion resistance (an example of a regulating service); nutrient cycling (an example of a supporting service that is important for water purification and drinking water provision)





Do you know how the economic value of ecosystem services can be measured?

Human activities can impact water resources and aquatic ecosystems, and, as a result, change the flow of ecosystem services and the benefits we receive from nature. For example, leaky septic tanks can contribute to water quality degradation, reducing tourism activity.

Economic valuation is based on people's assessment of the utility or worth of goods and services. The total economic value comprises three parts:

Total economic value = Use values + Option values + Non-use values

The benefits we derive from ecosystems can be much more significant than just the value of using an ecosystem directly, such as the revenue collected from entrance fees for a spring site. Very often these benefits outweigh the cost of restoring or preserving ecosystems, because of the value people place on the services, connections, and existence of nature, today and for future generations.

Type of value	Description	Examples in Florida
Use values	The worth of direct or indirect uses of the ecosystems by people	People spending time and money to enjoy spring-based recreation
Option value	Reflects the willingness to pay to preserve an option to use the ecosystem service in the future	People's willingness to pay for the preservation of a spring site that can be open for recreation in the future
Non-use value	The value people assign for preserving or improving a resource that they will never use	Existence value: The value Floridians assign to preservation of an endangered aquatic animal such as a sea turtle
		Bequest value: The value Floridians assign to preserving a resource for future generations



References

Borisova, T., Wade, T., Bi, X., Oehlbeck, K., & Grogan, K. (2019). Valuing Florida's Water Resources: Ecosystem Services Approach. FE1064. Gainesville: University of Florida, Institute of Food and Agricultural Sciences. https://edis.ifas.ufl.edu/fe1064

Grizzetti,B., Lanzanova, D., Liquete, C., Reynaud, A., & Cardoso, A.C. (2016). Assessing water ecosystem services for water resource management. Environmental Science & Policy, 61, 194–203

Millennium Ecosystem Assessment (MEA) Board. (2005). Ecosystems and human well-being: Synthesis. http://www.millenniumassessment.org/documents/document.356.aspx.pdf