

Ecosystem Services: Our Life Support System

North American Water Resources

Wilderness and protected areas located throughout the North American continent generate a wide variety of benefits for people and the environment. These benefits, often referred to as ecosystem services, include water; food; spiritual and cultural values; recreation; aesthetics; mitigation of climate change impacts; protection against flood, drought, and disease; and maintenance of biodiversity.

Benefits from Wilderness and Protected Areas

Fresh Drinking Water

- Provide the sources of a significant portion of the drinking water for about one-third of the world's largest cities.
- Provide the sources of some of the world's highest-quality drinking water.
- Prevents the loss and degradation of wetlands, securing long-term storage and a consistent water supply.

Multiple-Use Water for industry

- Ecosystems with intact groundcover and root systems remove pollutants and sediment from surface runoff and groundwater.
- High-quality water is important for food processing, bottling beverages, and other commercial uses.

Mitigation of Natural Disasters

- Mitigates the destructive and costly effects of flooding and drought.
- Helps to ensure that water is available for recreation, fishing, irrigation, and power generation.
- Protects coastal marshes, barrier islands, and mangroves that are important in reducing the impacts from floodwaters.

Recreation, Tourism and Human Well-Being

- Provides physical and mental challenges in an environment removed from modern civilization.
- Provides opportunities for boating, rafting, and other recreation activities, such as camping and hiking.
- Supports local economies through tourism and value added to adjacent private properties.

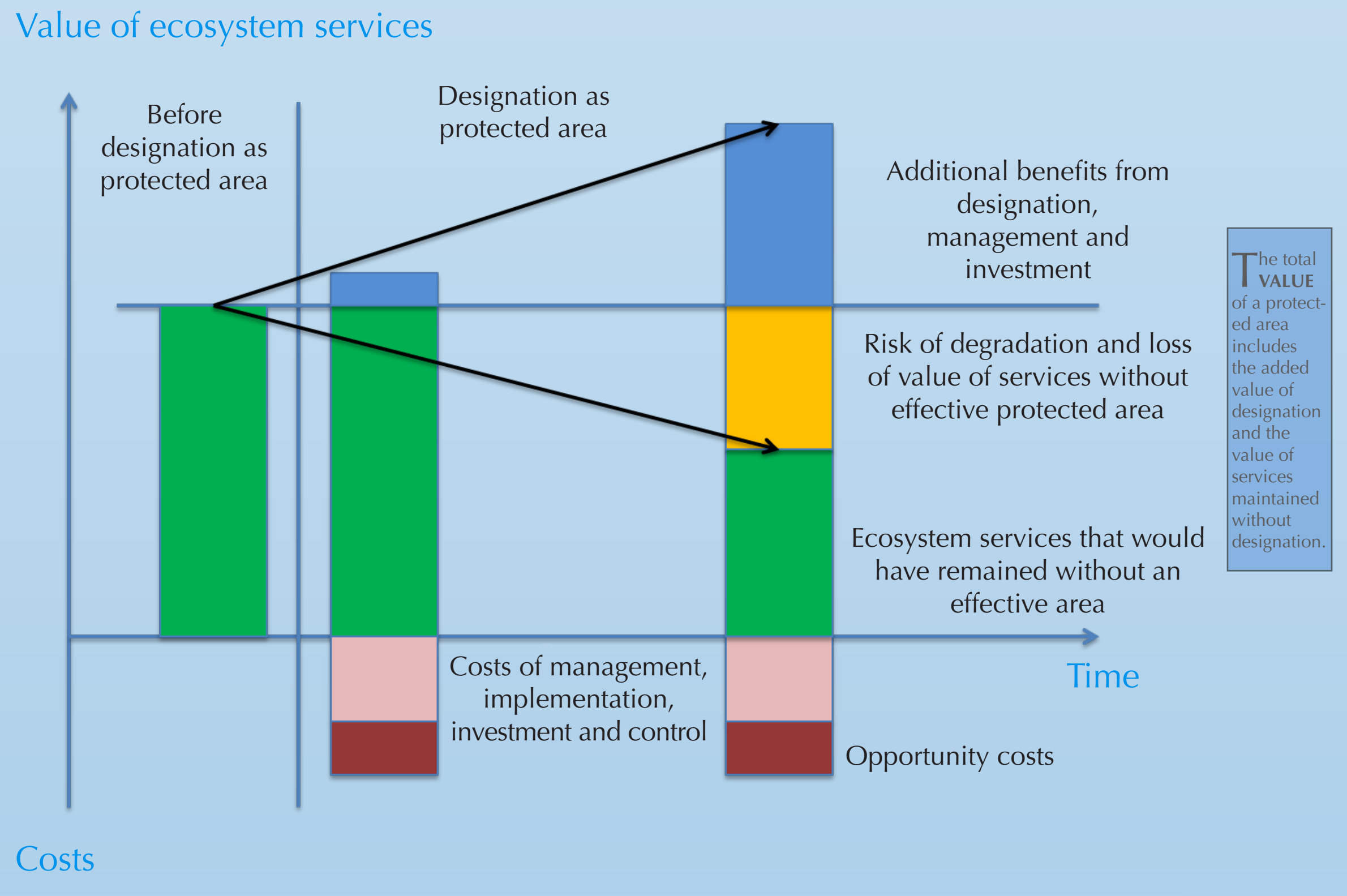
Cultural Values and Practices

- Ensures that wetlands are available for artistic and spiritual inspiration.
- Protects sacred cultural sites, subsistence uses of natural materials, and traditional practices.

Climate Change Adaptation and Mitigation

- Contributes to knowledge gained about the effects of global climate change on natural water ecosystems.
- Provides a baseline for comparing climate-induced changes in various world locations.

Protection Increases the Benefits Received From Nature



Kettunen, M., Dudley, N., Burner, A., Berghöfer, A., Vakrou, A., Mulongoy, K.J., 2009. Chapter 8: recognising the value of protected areas. TEEB – The Economics of Ecosystems and Biodiversity for National and International Policy Makers, 50p.

North American Water Treasures



Fundy National Park,
New Brunswick, Canada
51,151 acres (20,700 hectares)
Designated 1948
Parks Canada



Reef System of Veracruz National Park,
Veracruz, Mexico
29,085 acres (52,239 hectares)
Designated 1992
CONANP-Mexico



Gulf Islands National Seashore Wilderness,
Mississippi and Florida, United States
4,000 acres (1,619 hectares)
Designated 1978
US National Park Service



Lake Superior National Marine
Conservation Area,
Ontario, Canada
2,471,053 acres (1,000,000 hectares)
Established 2007
Parks Canada



Steens Mountain Wilderness,
Oregon, United States
170,166 acres (68,863 hectares)
Designated 2000
Bureau of Land Management



Shoshone National Forest
Wyoming, United States
2,400,000 acres (971,245 hectares)
Designated 1891
USDA Forest Service



Okefenokee Refuge Wilderness
Georgia, United States
353,981 acres (143,256 hectares)
Designated 1974
US Fish & Wildlife Service

Ecosystems for People

Protected ecosystems are important to people because they:

- Ensure availability of some goods that people use or harvest (provisioning services);
- Mitigate the negative impact of natural processes like floods and droughts (regulating services);
- Are the foundation for many services to humans and nature, including water purification and soil formation (supporting services); and
- Protect the relationship between humans and nature through spiritual, aesthetic, and recreation benefits (cultural services).

People for Ecosystems

- Wilderness and protected areas play a critical role in providing a variety of benefits that people depend on, including key wetland and watershed ecosystem services.
- As human populations continue to grow and urbanization further expands, more people will rely on ecosystem benefits to meet their most fundamental needs.
- In both rural and urban areas, marginalized populations are likely to suffer most when the availability and quality of water and food are reduced, whether due to failures in infrastructure and trade networks or to the demise of wetlands.



Banff National Park, Parks Canada

“The degradation and loss of wetlands is more rapid than that of other ecosystems. Similarly, the status of both freshwater and coastal wetland species is deteriorating faster than those of other ecosystems.”

Millennium Ecosystem Assessment (2005) Ecosystems and human well-being: Biodiversity synthesis: Synthesis.Washington D.C.: Island Press



North American Intergovernmental Committee for Wilderness and Protected Areas Cooperation

<http://nawpa.net/>

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