

“THE OTHER SIDE OF THE STORY”

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Wild Economics

Swirling around the issues of what do we do about our Park system is the debate about the value of wilderness. According to some, if you can't use a park it has no value. Others say that “locking” up the land in “preserves” will stifle economic development, kill jobs and make difficult times even worse. If we can't access the land, harvest resources and transform them into useful products to sell, then there is no real value, or so the argument goes. This is the way we have developed our civilization; this is how we must treat the land. It seems like a good solid argument until you look at the other side of the story.

Aside from the obvious things like fresh water and clean air, there are many ecosystem services provided by intact wilderness areas that we often don't think about. Climate regulation, breakdown of waste products, evolution of Biodiversity, most of our seafood, a host of pharmaceutical products, carbon sinks, storm and flood protection, and tourism are some of the many products and services we derive from intact wild systems.

Pricing the value of wilderness benefits is not easy. Economists assign values by estimating the cost of replacing these benefits or by assessing how many individuals and nations will be willing to pay for each service. What price clean water? What price good soil? What price new medicines? What price seafood or sustainable harvest capability?

What price indeed. A recent study published in *Nature* found that the total value of intact ecosystems was 14 to 75 percent higher than converted ecosystem values. The study estimates that by spending \$45 billion a year on habitat conservation on the land and in the oceans, the net return on investment would be between \$400 and \$520 trillion.

Larger wild areas give us the products that underpin much of our agricultural and medicinal industries. The ability to increase crop yields in the face of new pests and diseases has relied heavily on the transfer of

genetic material and natural defenses from wild stocks. Such withdrawals from the genetic storehouse account for billions of dollars annually.

Drugs are hugely dependent on natural ecosystems for production and research. Of the top 150 drugs used in the U.S., 118 are based on natural sources: 74% on plants, 18% on fungi, 5% on bacteria, and 3% on snake species. Approximately 80% of the world's population rely on the products from natural ecosystems for their medicines.

The enormous expense and difficulty of replacing lost ecosystem services was starkly demonstrated by the first "Biosphere 2" mission. In this experiment, 8 people lived inside a 3.15 acre closed ecosystem for 2 years. The biosphere had agricultural land, replicas of several natural ecosystems and even a mini "ocean". \$200 million went into the design and construction of this miniature earth, a domed habitat.

The habitat was unable to provide the necessary ecosystem services for the 8 people living in the enclosure. Oxygen levels dropped to those found at 17,500 feet, carbon dioxide and nitrous oxide levels rose high enough to impair brain functions. An extremely high level of extinctions occurred (19 of the 25 vertebrate species and all pollinators brought into the enclosure). The loss of these pollinators alone would have ensured the eventual extinction of most of the plants in the biosphere. Excesses of cockroaches, ants, katydids, algae and aggressive vines added to the suite of problems experienced by this incomplete, simplified ecosystem.

The message is clear. Ecosystem services are complex and irreplaceable; beyond our ability to create or control. They provide huge economic benefits to us both globally and locally. And while the Biodiversity exhibited from bacteria to the human scale of the landscape has great economic value, the full potential can only be achieved if the intact system is part of a local area. For example, the saving of a pine forest somewhere else in the world would not help the local economy if there were no pine forests here. The key is to provide a mix of wild and human managed systems side by side at the landscape level in our region.

We are fortunate in the Cariboo Chilcotin; we still have clean water, clean air, forests, Biodiversity and all the free services provided by wild ecosystems. Our local parks and protected areas are not "set-asides" at all.

To say that the only function of these Parks and protected areas is for recreation and that if we can't use them they are not worthwhile is simply wrong. Our parks and protected areas are local generators of irreplaceable wealth for us to day and the generations that follow us. We must provide the resources and political will to ensure that an adequate protected areas system is maintained; we must protect our wild economic heritage.

For an overview on this topic, go to your favourite search engine and type in "Ecosystem Services"

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