

# The Economic Value of Ecosystem Services in Pudacuo National Park, China

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The paper [1] discusses the economic value of ecosystem services provided by a forest in China's Pudacuo National Park, focusing on services such as soil retention, nutrient preservation, water conservation, carbon sequestration, and air purification. Among these, carbon sequestration, water conservation, and forest health are identified as particularly valuable. The study underscores the importance of this information for governments in making decisions about compensating for the protection of these critical natural areas.

The assessment of these services involved three methods: contingent valuation, shadow project, and alternative market value methods, with Pudacuo National Park as the primary unit of measurement and forest stands classified according to the Chinese plant classification system and Yunnan botanical principles.

The study reveals that the total value of forest ecosystem services in the park amounts to an impressive 4.49 billion yuan per year, almost three times the 2019 GDP of Shangri-La County, underscoring the park's ecological and economic significance. It excels notably in carbon sequestration, water conservation, and forest health [1].

In addition, the paper delves into the concept of forest ecological compensation, where individuals or groups contributing to either the benefit or harm of forests must contribute to compensation funds. This practice relies on ecosystem service valuation, rooted in market theory, to quantify non-market ecosystem values and determine Payment for Ecosystem Services (PES). However, it acknowledges the difficulties in identifying compensated areas and ensuring equitable fund distribution, which can impact the efficiency and fairness of ecological compensation, thereby affecting both financial and ecological outcomes [1].

By utilizing the mindsponge mechanism and fostering an eco-surplus culture to estimate ecosystem service values, we emphasize the importance of preserving and sustainably managing natural resources for society's benefit. This approach underscores the influence of societal beliefs, perceptions, and environmental conditions on the valuation of these services [2,3].

Two scenarios that can significantly alter the perception of the value of ecosystem services:

1. **Disappearance of Ecosystem Services:** This scenario envisions the consequences of ecosystem services, like clean air, water, and fertile soil, disappearing due to environmental degradation. When ecosystem services like clean air, water, and fertile soil are no longer available, we quickly notice health problems and have to spend more on healthcare and pollution control. In this context, these services are perceived as considerably more valuable.
2. **Culture of Ecological Surplus:** In this scenario, a culture of ecological surplus emerges, emphasizing environmental conservation and sustainability. Ecosystem services like clean air and water are deeply appreciated for their essential role in well-being and quality of life. People invest in conservation without immediate economic returns, recognizing the long-term, invaluable benefits for future generations.

Both scenarios indicate a shift in our perspective. For the second scenario to happen, society must appreciate ecosystem services more and understand that they are vital for our well-being and the environment. In other words, people work to protect these services, and it could bring sustainable economic benefits. Otherwise, what we will face is the first scenario. We also need to realize that not everything can be given a price tag, and we need new rules and investments to support this change. It's a significant change in society's beliefs and value systems, in which ecosystem services are perceived as crucial for our overall well-being and maintaining a better-functioning society [2].

## References

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