

Natural Capital and the Assignment of Value

[Jason Doedderlein](#)

Feb 25, 2024

How do you put a dollar sign on Mother Nature?



We are a culture driven by numbers. As is commonly stated in statistics, “If it can’t be counted, it isn’t real”. Given my background in engineering, finance, and economics, I am sympathetic to this quantitative demand.

In economics how do we quantify value? With the dollar sign, of course. However, it is necessary, even for an economist, to recognize there are many things of great value to which we have not historically assigned dollar signs.

First, a review.

How do we currently identify value? We refer to the market. A service or product is provided and the forces of supply and demand create the price associated with that service or product. We can assign any iPhone an economic value by the price for which it sells. If it sells for whatever its set price is, people are valuing it at that price (and perhaps more). This is, of course, a very simplistic explanation, but it gets to the core forces at work in the market.

How does one value something provided free of charge? How does one go about valuing the benefits we receive from the natural world? What is the value of clean water flowing down a river to municipalities and farms? What is the value of a stunning view? What about the snowpack that acts as a reservoir or clean air, trails and access to [outdoor recreation](#)?

“Nature is history’s most exploited underpaid labourer”

This acute economic observation comes from Paula DiPerna in a [beautifully articulated call to economically value nature](#).

Often, we see the value of natural resources once they have been depleted. When waterways are polluted, we must build filtration plants. When we constrict rivers and remove naturally occurring flood plains, we must build manmade structures to compensate for the increased flood risk. When fish stocks have collapsed (among many, see the [Cod](#) and [Salmon](#)), the economic benefits can no longer be accessed.

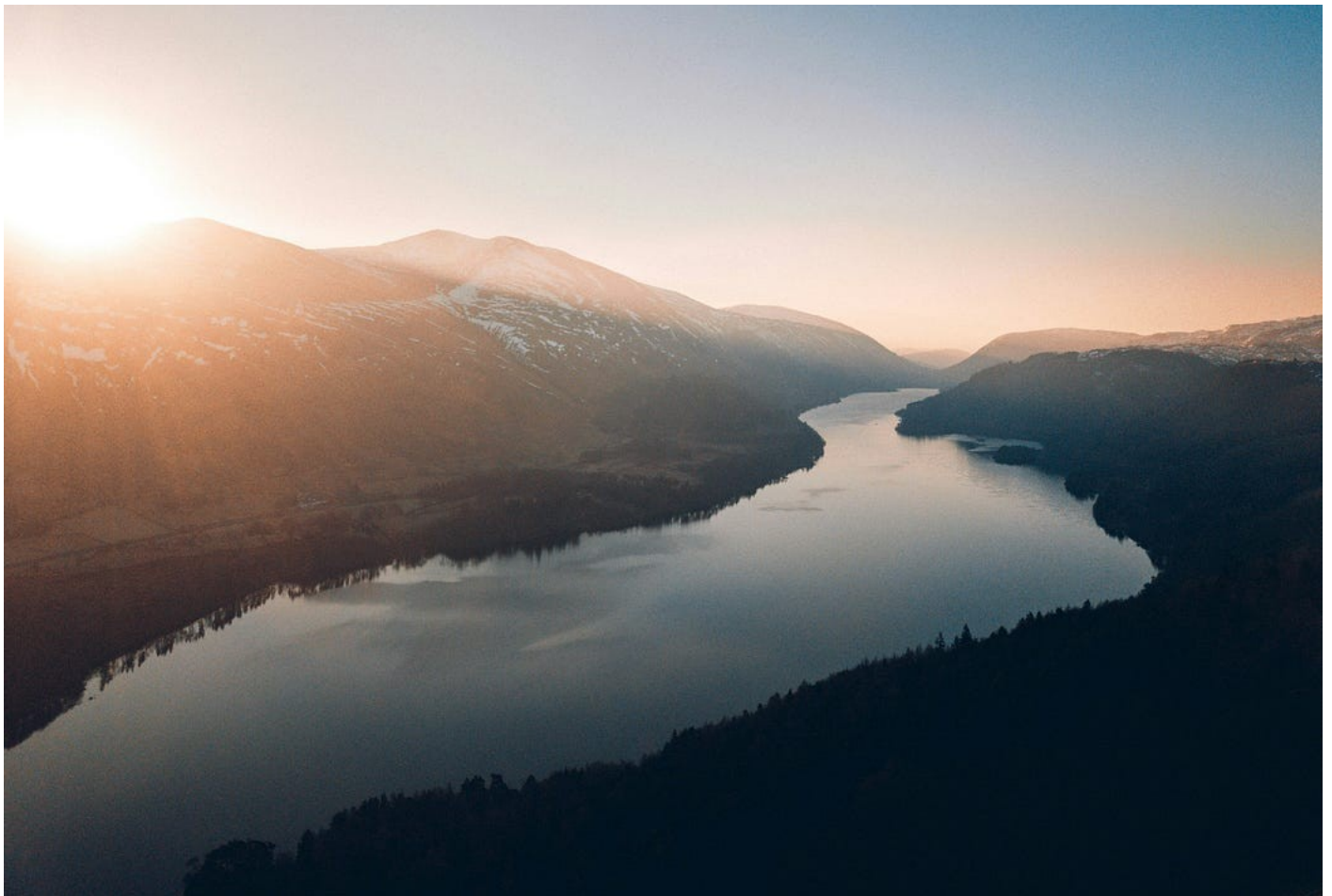


Photo by [Jack Anstey](#) on [Unsplash](#)

The costs associated with these manmade solutions are values we can apply to the capital provided by nature.

New York City was aware of this value and saved billions of dollars (yes, with a ‘B’) by choosing to protect the watershed from which it draws the majority of its water when water quality was declining, instead of building giant and expensive new filtration plants.

An economics firm I work with, [Summit Economics](#), worked with the Greenway Foundation in Denver to show the economic value and impact of the work that has been achieved along the South Platte River and Cherry Creek, transforming them from industrial and municipal dumping grounds to some of the highest real estate value in the state. Upwards of 15% of the City’s property taxes can be traced back to the improvements along the river and the subsequent explosion in real estate values ([Link to study](#))

Additionally, the EPA and the forestry service, in concert with others, is getting into the game in Colorado by creating the “South Platte Natural Capital Project”, which is a phenomenal tool that can be used to see the natural economic benefits provided by different areas of the South Platte watershed for anyone to see.

On a much bigger scale, the ‘Ecosystems Services Valuation Database’, an initiative by the Foundation for Sustainable Development, in the Netherlands, has a system containing “9,500 value records from over 1100 studies distributed across all biomes, ecosystem services and geographic regions.” This is a tool that collects the most up to date research and data on ecosystem valuation, across biomes, allowing any user the ability to get an idea of the economically ignored value provided by any area.

Understanding this value gives us a bigger and more complete view of the economy. We all do better when we have more complete information at our disposal.

Monetizing Nature

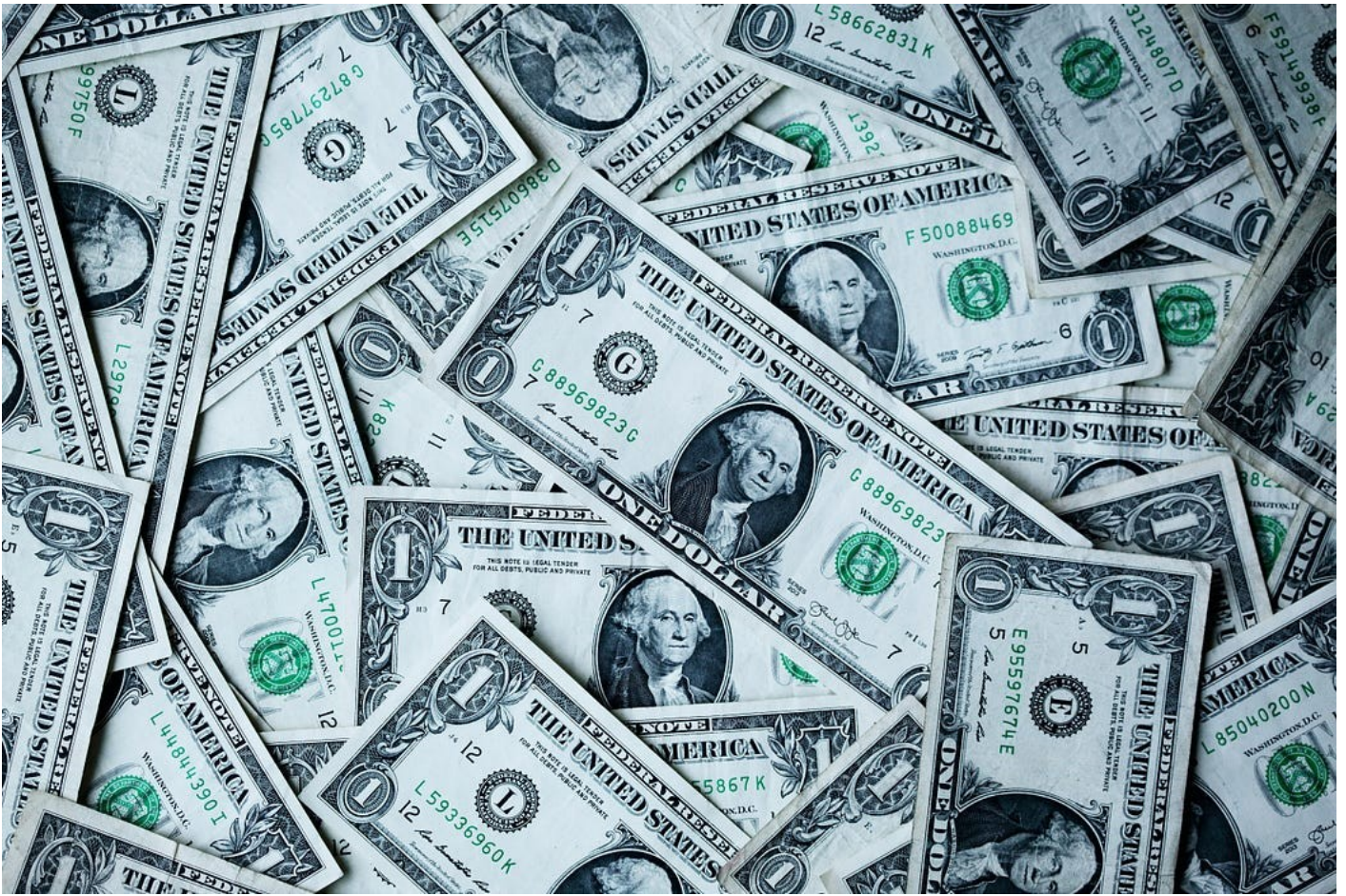


Photo by [Alexander Grey](#) on [Unsplash](#)

One of the reasons it is so pressing to identify value is to provide a means for monetizing this value. This is what was done with carbon credits. Many people in the environmental space, me included, bristle at the idea of reducing nature to a dollar amount. However, I am also a pragmatist and know that this is a mechanism to direct money to the preservation and rehabilitation of the earth's ecosystems.

Carbon credits have run into their issues, as would any new mechanism (and one so myopically focused). However, the concept is sound and needs to extend out to include ecosystem services and/or biodiversity. There are a large number of offset projects that have been done and "payments for ecosystem services" (PES) have been around for many years. Despite this, until these are commodified in a transparent, tradable way, the costs, time, and uncertainty will keep them from maturing into anything that can have a transformative effect.

There is a lot of movement in this direction and more people need to become aware of the opportunities and benefits of valuing nature as a means to, ultimately, take that value into decision-making processes and drive capital flows toward those areas that are in dire need of being saved.

This piece is largely taken from an article I wrote for Colorado Biz Magazine way back in 2017 ([LINK](#)). The need to appropriately value nature such that financial mechanisms and markets can be created to drive capital into the preservation and rehabilitation of nature has only grown since the original article was first published.

