

What is the value of a wave? How changes to our coastline could wipe out surfing's benefits

January 10 2022, by Ana Manero, Alaya Spencer-Cotton, Javier Leon, Neil Lazarow



Credit: AI-generated image ([disclaimer](#))

Before COVID-19, global [surf tourism spending](#) was estimated at up to A\$91 billion per year. And since the start of the pandemic, demand for surfing [has boomed](#) as people increasingly [turn to outdoor](#) activities.

But [surfing](#)'s benefits to human well-being aren't often studied in economics terms. This is a major knowledge gap we are now trying to fill.

Such research is important. Changes to the coastline—such as from sea walls and groins—can dramatically reduce the quality of surfing waves. But the consequences of coastal developments [on surfing](#) are often [poorly understood](#) and rarely quantified before projects start.

It's crucial we understand the real value of surfing, before we lose the myriad of benefits they bring—not only to Australia's [1.2 million active surfers](#), but to hundreds of coastal towns where surfing underpins the [local economy](#) and lifestyle.

Surfing economics

There are many [studies](#) on the economic value of Australian beach pastimes such as [fishing](#), [swimming](#) and [diving](#). But not for surfing.

Internationally, we know surfing is a major direct contributor to [the economy of wave-rich places](#). However, until recently, the value of surfing to human well-being has been largely unaccounted for.

This is despite recent evidence pointing to surfing's positive [social](#) and [health](#) outcomes, including among [war veterans](#) and children with [chronic illnesses](#).

[Surfing Economics](#) is an emerging field of research that documents and quantifies the total economic value of surfing. This can include, for example, [increased house prices](#) near good quality breaks, or social welfare [benefits](#) people derive from visiting surf beaches.

Building on the few previous [surfing economics](#) studies in [Australia](#), our

research aims to calculate the total economic value of surfing.

Our forthcoming study on the Noosa World Surf reserve, so far, demonstrates that the local economic contribution of surfing is in the order of hundreds of millions of dollars. This in terms of surfers' welfare, as well as direct spending on surf gear and travel.

Overseas, the economic contribution is a little clearer. A [2017 study](#) used satellite imagery to demonstrate that economic activity grows faster near good-quality surf breaks, particularly in developing countries such as Indonesia and Brazil.

In the UK alone, the [overall annual impact](#) of surfing on the national economy is calculated at up to £5 billion (over A\$9 billion).

How coastal projects make or break waves

Swell waves are [typically formed](#) by winds blowing many kilometers offshore. It's perhaps easy to think that this natural, [distant origin](#) means there's nothing we can do about the formation of waves.

But the truth is surfing waves are the product of complex interactions between waves, tides, currents, wind and the [shape of the seabed](#). Shallow coral reefs, headlands and sand banks are responsible for making highly sought-after waves.

By directly or indirectly impacting any of these factors, wave quality has been changed for [better](#)—or for [worse](#).

The world-renowned Mundaka wave, in northern Spain, temporarily disappeared because dredging of the nearby rivermouth [changed ocean dynamics](#). This resulted in a [decline in economic activity](#) and the cancelation of the Billabong Pro World Championship in 2005 and

2006.

In the Portuguese island of Madeira, the construction of a rock-wall severely [disrupted](#) the formation of the Jardim do Mar wave in 2005, and a fall in local economic growth rates followed. In Peru, the extension of a fishing pier negatively impacted [Cabo Blanco](#), one of Peru's best barrelling waves, by shortening its length.

Closer to home, the [Ocean Reef Marina](#), currently under construction in Perth's north, will significantly impact three local surf breaks. About 1.5 kilometers of mostly unmodified beaches are being redeveloped into a brand new marina.

Studies have shown that well planned coastal management interventions can dramatically increase benefits to surfers and non-surfers alike.

One of the most iconic examples is the "Superbank" at Snapper Rocks in the Gold Coast. There, a world class wave forms thanks to river [sediment being relocated](#) through the [Tweed Sand Bypassing Project](#).

The project is costly to operate, but its expenses are outweighed by improvements to surf quality and beach amenity, which underpin the [local economy](#) and the nature-based, active lifestyle the Gold Coast is famous for.

Giving waves legal protection

Building on efforts nearly 40 years ago to [protect](#) Victoria's iconic Bells Beach wave, [Peru](#) and [New Zealand](#) have granted statutory protection to their surf breaks under environmental protection laws.

In practice, this means threats to surf breaks by coastal activities, such as [sewage discharges](#) or building offshore structures, must be avoided or

mitigated.

Similar recognition and valuation of surfing resources is necessary and would be highly beneficial for Australia.

A rigorous, science-based evaluation of surfing's total economic value could serve to inform cost-benefit analysis of coastal management programs. These may include [fighting erosion](#) to protect the coastline, or building [artificial surf reefs](#).

In these uncertain times of COVID-19, many of us cannot yet travel far away. But with [85% of Australians living by the coast](#), many of us can still catch a wave at our doorstep—and that is priceless.

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Provided by The Conversation

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