

Saving the oceans can feed the world

On land there is a constant struggle between conservation and food production. With a finite amount of space, these interests often compete for limited resources: conservationists want to preserve the land and the species that inhabit it while farmers want to cultivate it. As in a real war, in the end only one side can win – for every acre of land that’s preserved, one less acre is available to produce food. And when forests are leveled to plant corn or graze livestock, precious habitat is compromised so that people can eat.

This struggle between two very different interests will only intensify as efforts to protect the environment are complicated by the very real need to increase global food production to feed the nine billion people that are expected to live on Earth by 2050. Everyone agrees that with finite resources like arable land, increasing the area devoted to agricultural production proportionally to population growth simply won’t be an option.

But in the oceans, this struggle doesn’t exist. Instead, conservation and food production can go hand in hand. Ecosystem management efforts (like no-take zones and gear restrictions) can protect habitat while also increasing the availability of wild fish. The same fisheries management tactics that restore wild seafood sources can also protect ecosystems, so conservationists and humanitarians can support the same policies without compromising their individual goals.

This is good news, especially as we look for new ways to feed an additional two billion people by mid-century – while at the same time facing the devastating effects of climate change, including drought, which will increasingly strain our land-based resources. The oceans have the potential to be an important answer to the food security problem, but only if we start using them more sensibly.

To date, we haven’t done a very good job with either marine conservation or fishery production. We’ve fished so fiercely and with so little regard for marine ecosystems that global fish catches have been declining since the 1980s and a tremendous amount of biodiversity has been destroyed in the process. We’ve been guided by a very shortsighted business model, the limitations of which are finally catching up with us. But that can change, and here’s how.

About 75% of the world’s marine fish catch comes from the “Exclusive Economic Zones” (EEZs) of only 25 countries. Since the fish that we catch are, in large part, found within the 200 nautical miles from shore that each of these nations claims as their own, policies to restore fish stocks (ie setting and enforcing scientific quotas, protecting habitat, and reducing bycatch) can be enforced on a country-by-country basis. These policies are science-based, low-cost, and proven to be effective. If they are put in place in the EEZs of those 25 countries, not only will they make the oceans healthier, they will allow us to rebuild most of the world’s fisheries – that is, allow them to produce even more fish than they do today. The collective efforts of these 25 countries will have nearly the same impact as a global policy while being much easier to achieve, given the difficulties of establishing international conservation agreements.

There are many examples of fisheries responding positively to science-based management in a short amount of time. For instance, the US National Oceanic and Atmospheric Administration has reported that 27 fish stocks in US waters have been rebuilt in little more than a decade. Similar stories can be found in other parts of the world. When proper fisheries management policies are put in place, depleted fish stocks can rebound – often relatively quickly.

A fully productive ocean can provide more food than it does today – perhaps as much as 20% more. As we take the steps needed to feed more people with wild fish (which is cheaper, healthier, and more environmentally responsible than land-based animal protein), we’ll see the health of the oceans improve as well.

This will take a change in the way we think about our oceans and our fisheries. We need to push for science-based management together with meaningful enforcement programs, with penalties that provide a real deterrent to overfishing.

Food production and conservation may be at war on land, but in the oceans they can get along just fine. By encouraging policy changes that improve fisheries management, scientists can advocate for ecosystem protection and food security at the same time.



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