

# Living under ecosystem degradation: Evidence from the mangrove fishery linkage in Indonesia

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## Introduction

Aquaculture exists to address a fundamental problem. As the population grows, the demand for fish as a food source is increasing, and the number of fish available in the wild has not kept pace [1]. Even in carefully managed wild fisheries, the combination of climate change, pollution and pressure from fishermen can lead to unpredictable fluctuations in fish supply. At worst, this could lead to the collapse of fish populations, much like cod did in his 1970s and his 1980s [2]. Expecting conventional fisheries to continue to meet the global demand for wild fish in the long term is as unrealistic as expecting networks of hunters to keep supermarket meat crates full. Or officially called aquaculture should make up for the difference [3]. The stable supply of fish is also an advantage of aquaculture. Wild catches are subject to natural fluctuations, such as increasing or decreasing by the day, month, or season. Fish farms produce a predictable harvest of fish of consistent size, making it easier for chefs, supermarkets, fishmongers and consumers to plan their purchases [4]. For restaurants and processors, this consistency translates into standard size portions. It means you can easily handle it. Another advantage of fish farming is the ability to supply fish where consumers are from inland lake pens to land-based tanks and ponds, fish farms can be built almost anywhere there is a market [5].

## Description

This reduces the economic and environmental costs of transportation and provides consumers with fresher fish. Health officials around the world are encouraging more fish consumption, including the USDA's Dietary Guidelines for Americans [3]. This is because fish is a high-quality protein source that is low in saturated fat. Salmon has the advantage of being particularly high in omega-3 fatty acids that promote heart health. Switching from lean meat to fish a few times a week is not only a healthier dietary choice, it's also better for the environment [1]. In general, fish farming is "greener"

than meat production. Another benefit of aquaculture is the potential for reducing stress on wild fisheries and native fish species. The more need-based a fish farm is, the lower the incentive to buy wild-caught fish [5]. This reduces the temptation to overfish and increases the chances of wild stocks sustaining healthy populations. Immature fish raised in captivity can also be used to reintroduce species where they have become extinct through overfishing. However, a common criticism of fish farms is that they are not always efficient suppliers of dietary protein [2]. Some farms rely on wild-caught "junk" or baitfish for the majority of their diet. Unfortunately, fish farming also poses risks to wild fish populations.

## Conclusion

This poses a threat to wild fish that can be infected. Inland freshwater systems are just as harmful as are lakes and rivers inhabited by wildlife. Onshore systems that return used water to local watersheds also pose some risks. Fish that escape these enclosures can become invasive, as can carp and tilapia, which grow rapidly inland, or Atlantic salmon farmed on the west coast. Another benefit of fish farming is that it provides opportunities for entrepreneurs to take advantage of almost anywhere. Farms are everywhere, from open shores to farmhouse "back 40s" to closed mills in Rust Belt towns. For small businesses, initial costs can be surprisingly low. This is primarily a matter of choosing the right species to grow on and providing the right environment. Salmon, trout, catfish, tilapia, shrimp and crawfish are common options. Some operators maximize productivity through compound fish farming, which breeds compatible, non-competitive species combinations in the same water body. This allows you to have more variation in your assortment and sell more fish for a small additional cost.

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### **Conflict of Interest**

The author declares there is no conflict of interest in publishing this article.

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