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Overfishing – what is the future of wild caught fisheries?

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Industrial Fishing is one of the most significant drivers in oceanic wildlife population and health decline. Over-fishing is characterised by the act of catching too many fish to the extent that the ecosystem cannot recover and repopulate. Catching fish itself is not harmful to oceans and can keep the habitats balanced, but it is when large fishing vessels, illegal or legal, fish more than what the ocean ecosystem can handle, and that is when mass industrial fishing becomes a serious environmental issue. So how has and how will overfishing affect us and aquatic ecosystems? In this essay I will discuss the detrimental impacts of the problem, ones that have occurred and ones that are bound to, and ways we can resolve and minimise the negative effects, by reflecting on the causes.

Over-fishing is a result of mostly unregulated fishing vessels fishing illegally. These boats and illegal fishing expeditions are often a by-product of corrupt governments and come from developing countries where fishing is, in most cases, peoples' only way to earn money. Unreported and unregulated fishing profits approximately \$36.4 Billion from the activity and makes up for 30% of the entire fishing industry profits. The fishing industry lacks traceability with its product/catch, therefore illegal fishing can go entirely unnoticed, making it harder to stop because the initial problem is difficult to locate. Large technological advances in fishing equipment have also contributed to the rising. It is proven that the global fishing industry catches roughly 2 and half times the amount of marine life than is required to sustain the global populations' reliance on seafood. Since 1970 the aquatic life population has halved whilst our demand has more than doubled. The trouble we are heading into goes unrecognised by many governments and is merely talked about when it comes to "saving the ocean".

Environmentally, the effects of widespread and prolonged overfishing are going to be disastrous. Over-fishing impacts entire marine ecosystems, examples of the withering ecosystems are becoming more and more prominent. The increased amount of species that are becoming endangered and extinct is certainly terrifying, especially when it is the worlds most consumed fish and profited fish, Tuna. The yellowfin tuna and the Bluefin tuna are becoming increasingly rare to catch and harder to find throughout oceans due to the

diminishing populations of the species. The total oceanic population of the fish has decreased by 96% in the last century (Global citizen, April 2016). The major absence of marine life creates an imbalance in the ecosystem and erodes the food web over time and can lead to a loss of other marine life, every single aquatic plant and animal has a role to play when it comes to balancing the ecosystem. In order to thrive, marine life needs certain nutrients in an ideal habitat, without the optimal ecosystem, marine life will diminish, eventually destroying the habitat to such an extent to where the ocean cannot absorb and make use of the excess carbon dioxide (of which aquatic life use to reproduce and photosynthesise) that humans produce. In the long term, this cycle will eventually lead to accelerated global warming and complete destruction of not only the marine ecosystem, but the terrestrial ecosystem that humans thrive in. (WWF 2020).

Another contributing factor to the destruction of the marine ecosystem due to over-fishing is by-catch. By-catch is the excess aquatic life that is caught in the process of industrial fishing but is not needed or profited for. The act of catching unwarranted aquatic life can happen when nets are grasping and waiting for schools of the desired fish to approach and other marine life is trapped with them, when nets scrape the ocean floor and detain every living thing that happened to be there or when marine life is killed due to discarded fishing gear. By catch is the main reason the food chain is deteriorating, as aquatic plants are so often destroyed and smaller fish are no longer able to sustain themselves in the tampered environment. Over 300,000 whales, dolphins and sharks are killed in the process of bycatch every year. Evidently, by-catch contributes to a large percentage of the amount of aquatic life that is 'over-fished' and causes impacts greater than what humans generally expect. More efficient fishing methods are heavily required to enable a stop to by-catch being hauled out of oceans and killed/destroyed in their own habitat. (Ian Somerhandler Foundation, 2020).

The economic impacts from degraded ecosystems and fish populations will have an adverse effect on humans and the money flow between countries and will leave a massive gap in the economy of the globe. As the demand for seafood increases rapidly, the pressure on fishermen to supply fish increases also. Fish ranks is one of the most highly traded food commodities in the world, and fuels a \$362 billion global industry. Millions of people in largely developing, coastal communities depend on the fishing industry for their livelihood

and income. Half of the world's population rely on fish as a source of protein in their diet, making it critical to supply the demands needed. When fish disappear so do millions of jobs and third world coastal communities. The high demand for seafood continues to drive overexploitation, exacerbating this circular problem.

The solution to this problem is not yet clear and is predicted to be immensely complex and will be a slow process, but there are steps we can take to ensure we have the time to develop a strong plan to solve the issue and the devastation we are heading into. Some ideas for resolving the over-fishing issue include, first and fore-most, addressing the issue at hand. It is very important to spread awareness about the dangers and to let people of higher authority know so they can take major action. Ending illegal fishing is one of the main priorities but if this occurs, millions of developing countries lose their income. Another considered solution is expanding protected ocean boundaries. This would mean less ocean is available for industrial fishing and would allow over-fished oceans to begin to re-flourish. Nurturing damaged ecosystems and marine life populations is one of the only ways to fully diminish the downwards spiral of problems and is one of the most considered solutions. Marine research centres that are aware of the circumstances, such as WWF, RESET and the Rob Stewart fund are striving to reach a conclusion in which sustains fish for the population but also ensures ecosystems and copious amounts of fish are able to thrive.

To conclude, the act of over-fishing due to industrial and illegal fishing are causing adverse effects on the marine environment and, eventually, the terrestrial environment. The economic disaster that would follow will effect most countries and the population as a whole. The effects are going to be lasting and time is a major factor in how bad this gets, action to minimise the damage is needed immediately and shouldn't be questioned or argued against as the evidence is clear. The ending of the crisis is unclear, but if it's not acted against soon economically and environmentally, the earth won't be the same. Spread awareness where you can and only support businesses and purchase fish that has been supplied from certified fisheries.

### **Acknowledgements**

Mr Coad – Teacher – Introductory planning

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