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Shark Fin Soup – A Dangerous Delicacy for Conservation

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Sharks belong to the subclass *Elasmobranchii* and are characterised as being cartilaginous fish with five to seven gill slits on each side. Sharks are an apex predator whose presence in the ocean is believed to help keep other species in balance. A decline in shark species could result in populations of their prey increasing, which causes termination of populations of marine animals further down the food chain (Cunningham-Day 2001; Myers *et al.*, 2007). One of the most significant concerns for their survival has been the growing trade in shark fin soup (Clarke *et al.*, 2007), a luxury food item in China that signifies good fortune and hospitality (Ho Shea & Wai Lun To 2017). This article is an intended as an evaluation of current shark conservation methods.

The Convention on the International Trade in Endangered Species (CITES) currently lists twelve species of shark in Appendix II (CITES, n.d.). Whilst this is arguably only a positive step toward conserving shark species it also presents challenges, one of which is the difficult task of identification using only the fin. Usually identification requires the dorsal and pectoral fins together, a situation that rarely occurs when faced with a significant number of fins during the confiscation of suspected illegal products. Some species are similar in morphology and the process of drying fins can alter their diagnostic features notably enough to make visual identification impossible. However, there has been recent progress in using molecular techniques of identification such as DNA barcoding which can be produced in a good quality laboratory in a few hours (Clarke *et al.*, 2006; Steinke *et al.*, 2017). Whilst this method will help to identify illegal shark products the limitations include its reliance on the traders being caught and samples of sharks being analysed, along with the issue that although illegal traders can be prosecuted the endangered sharks have already been fished and their body parts harvested.

An article in *The Guardian* touched on the differences in legislative control internationally with countries enforcing one of the following: an outright ban on all shark fishing and trade; a ban on shark fishing whilst still allowing trade of shark meat and fins, or no legislative control at all (Smith 2006). Whilst many are campaigning for an outright ban on the shark fin trade, Clarke *et al.*, (2007) deduce that a ban does not succeed in eliminating the number of sharks killed for their meat. They state that although it should succeed in discouraging shark carcasses being discarded when only harvested for their fin, (a practice where the remainder of the carcass is disposed of back in to the ocean), that it will not reduce shark mortality due to there still being a demand for shark meat.

Yeo (2017) discusses the consideration by the US congress to impose a national ban on shark fin trade and state that some marine biologists believe this could lead to further conservation concerns rather than eliminating any. The latest FAO statistics on the global value of shark meat imports are said to be conservative yet are still valued at USD239.9 million per year, with the fin alone being valued at USD377.9 million per year (Dent & Clarke 2015). Banning the highly valued fin could potentially have several negative effects including the fishers catching more sharks to make up for the shortfall, or other countries without legislative control simply filling this gap and catching more sharks themselves. A report by Oceana (2016), an international organisation established to protect and restore oceans, disagree with such arguments and believe that influential countries such as the US need to send a “message” to governments, traders, and consumers. They state that it has a significant effect when a country of influence such as the US bans trade in a certain product. It seems to come down to two opposing sides, one believing that you can protect a species by allowing controlled trade in its products, and the other believing that only total elimination of a trade in high risk products is the answer.

Although shark products have a significant price tag on them not all the people involved in harvesting these products are benefiting (Kroll 2012). Due to declining shark populations the fishers have to travel larger distances in order to locate their catch. They often borrow money for fuel and equipment from people further up the market chain that is then deducted from their income (Jaiteh *et al.*, 2017); this becomes a vicious circle as they resort to fishing more in an attempt to make up for this shortfall. Whilst there seems to be a significant amount of research on the benefits of educating the consumer there seems to be little work on solutions for the fishers; perhaps more work in this area to educate and find viable solutions for fishers and traders would help reduce the number of fishers making a living from catching sharks.

WildAid led a campaign in 2006 encouraging people in China to significantly reduce their consumption of shark fin soup. They released an advert featuring a basketball star that they claim led to a 50-70% reduction in shark consumption in China (WildAid n.d.), a significant step in conserving sharks. However, Jeffreys (2012) suggests that the decline was in fact down to Government austerity in 2012 after they banned the serving of shark fin soup at state events. They state that a government led cease of demand for a product is more effective than environmental campaigns as it leads to an instant drop in supply and demand. Rather than attributing the decline to one factor it is likely a combination of environmental campaigns; legislative control; government austerity and a change in culture that is leading to a decline, and each one is important in reducing the impact humans currently have on shark populations.

There is a clear conflict of interest between shark conservation and the trade in shark meat and fins. Whilst it is undoubtedly important for governments to 'lead by example' and implement a correct level of legislative control on the trade of an endangered species, such legislation will inevitably face implementation challenges. Progress is being made regarding the genetic identification of shark products which could act as a deterrent to illegal shark fishers and may have some impact on reducing illegal shark fishing. However, perhaps a solution lies in the education of shark fishers and traders in finding alternative income for them. Providing solutions to the fishers for making money through other means may prevent them from simply switching from sharks to another species that will then be over harvested. Nevertheless it seems that at the root of the issue is the current demand for these products. It therefore seems that legislative control and enforcement of such laws will only work alongside a culture change and through the power of supply and demand. If consumers can be effectively educated to discourage them from buying shark products the fishers will naturally decrease the amount of sharks that they fish. If it is indeed a culture change that is needed most people will no doubt agree that it needs to happen soon, and if there is no successful and timely change this apex predator is likely to be fished to extinction.

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