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# Fatal shark attacks on humans : rather an individual behavioral problem than a collective ecological issue

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## Abstract

Although fatal attacks on humans remain very scarce, sharks are the most demonized and feared predators. Most of the series of agressions leading to death of sea users are followed by culling campaigns. These strategies rely on the hypothesis that the risk of attack is directly correlated with the shark densities through an ecological perspective and approach. This correlation was never demonstrated and I rather think that a behavioral approach would better explain the patterns of attacks. Along their ontogenic development, large shark species shall opportunistically and stochastically make up their own diet in which human can very scarsely and accidentally be included. This means that very few sharks concentrate a high probability of attacking humans while it is almost nil for all other conspecifics. This novative approach should carry out a shift from ecological studies toward a more orientated behavioral approach that will be implemented underwater and might be more effective in identifying and potentially eliminate the ‘problem individuals’ than blind fishing campaigns that have not proved so far any clear efficiency. Before or in parallel of the implementation of such field studies, I plan to support my hypothesis through a theoritical statistical modelization inspired by the existing data on fatal shark attacks around the world for the past decades.

**Keywords:** human, wildlife conflict, culling campaigns, top, predator feeding strategy, carnivores risk management

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