

Diversity, spatial distribution and relative abundance of reef sharks using stereo baited remote underwater video around the windward islands of the Caribbean Netherlands

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The most likely cause for the decline of many elasmobranchs is the combination of high fishing pressure and slow reproductive life-history characteristics. A key ambition of the Dutch Caribbean Nature Policy Plan 2013-2017, is the effective implementation of shark protection. The first step towards effective protection is to conduct a base-line survey and to develop robust, quantifiable objectives and reference points for conservation (and fisheries) in order to be able to evaluate the performance of management actions. Stereo Baited Remote Underwater Video Survey (BRUVS) is a non-invasive method to study species richness, relative abundance and accurate length frequency of fish species such as sharks. In this study we used BRUVS to conduct a base-line survey of sharks on St Eustatius, Saba and the Saba Bank. Shark assemblages were structured by habitat complexity, depth and to a lesser extend management zone. Overall, the shark populations appeared to be in reasonably healthy state. Relative abundance of the different shark species was higher than reported for similar BRUV studies within the Caribbean. A possible explanation for the current status of the shark populations in the Caribbean Netherlands is the lack of destructive industrial-scale fishery practices (directed shark fisheries, shark finning, long-lining or gillnetting). The establishment of a formal shark sanctuary in the Caribbean Netherlands would prevent the future development of such destructive fishery practices without completely restricting the occasional landing of sharks as by-catch in the existing artisanal, small-scale fishery.

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