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TITLE: Strong fisheries management and governance positively impact ecosystem status

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ABSTRACT:

Abstract Fisheries have had major negative impacts on marine ecosystems, and effective fisheries management and governance are needed to achieve sustainable fisheries, biodiversity conservation goals and thus good ecosystem status. To date, the IndiSeas programme (Indicators for the Seas) has focussed on assessing the ecological impacts of fishing at the ecosystem scale using ecological indicators. Here, we explore fisheries ?Management Effectiveness? and ?Governance Quality? and relate this to ecosystem health and status. We developed a dedicated expert survey, focused at the ecosystem level, with a series of questions addressing aspects of management and governance, from an ecosystem?based perspective, using objective and evidence?based criteria. The survey was completed by ecosystem experts (managers and scientists) and results analysed using ranking and multivariate methods. Results were further examined for selected ecosystems, using expert knowledge, to explore the overall findings in greater depth. Higher scores for ?Management Effectiveness? and ?Governance Quality? were significantly and positively related to ecosystems with better ecological status. Key factors that point to success in delivering fisheries and conservation objectives were as follows: the use of reference points for management, frequent review of stock assessments, whether Illegal, Unreported and Unregulated (IUU) catches were being accounted for and addressed, and the inclusion of stakeholders. Additionally, we found that the implementation of a long?term management plan, including economic and social dimensions of fisheries in exploited ecosystems, was a key factor in successful, sustainable fisheries management. Our results support the thesis that good ecosystem?based management and governance, sustainable fisheries and healthy ecosystems go together.

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