Title:  Assessing Risk and Uncertainty in Fisheries Rebuilding Plans

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Abstract:  This paper deals with risk and uncertainties that are an inherent part of designing and implementing fisheries rebuilding plans. Such risk and uncertainties stem from a variety of sources, biological, economic and/or political factors, and are influenced by external factors like changing environmental conditions. The aim of this paper is to characterize such risks and uncertainties and to assess the importance of it in relation to the performance of fisheries rebuilding plans, to give some examples where uncertainties have negatively affected the ability of rebuilding plans to reach their intended targets and to give some guidelines how to deal with risk and uncertainties. The conclusion is that when designing fisheries recovery plans, it should be taken into account the availability of relevant information, such that progress is (indisputable) measurable, and causes of potentials failure can be clarified. Recovery plans need to consider both biologic and economic consequences in order to reduce uncertainties and to ensure successful implementation of the plan. Risk communication is also valuable in the process, since it gives transparency of the objectives and means to meet these objectives, elucidates crucial information from stakeholders and legitimates the whole process of designing and implementing the recovery plans, which is essential for the success of these plans. To that end the plans should be as simply and realistic as possible. It is recommended to apply risk analysis and to use the precautionary principle only in cases where large uncertainties cannot be resolved. Two fisheries rebuilding plans are analysed and how they address risk and uncertainties are evaluated.