Are we there yet? The impact of reduced composition data on the ability to monitor rebuilding for overfished stocks.

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An overfished declaration leads to changes in harvest limits, often dramatic, for the overfished stock. A reduction in catch while the stock is overfished, can lead to a reduction in length and age samples from the fishery. This can be especially problematic when the stock is rarely encountered by fishery independent surveys, with the primary source of composition data coming from the fishery. On the U.S. west coast, several overfished rockfish stocks fall into this category (e.g. yelloweye, canary). The dramatic reductions in catch will inevitably lead to rebuilding of the stock; however, the reduction in available composition data may lead to increased uncertainty about the estimated biomass status. A Management Strategy Evaluation was performed to address the long-term impact of reduced data on the ability to monitor a stock during rebuilding. This work simulates an overfished flatfish and rockfish stock where harvest and the collection of new data are restricted to address two questions; 1) does the increased uncertainty due to limited data impact the ability to correctly detect when an overfished stock is rebuilt, and 2) is there a degradation of ability to detect status correctly with limited data and if so how does this change as the amount of data increases?

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