

**Impact of splitting decisions on reported aggregated catch of two sympatric redfish (Sebastes spp) species on stock status and harvest advice**

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The Laurentian Channel region in eastern Canada has stocks of two sympatric redfish species: *Sebastes mentella* and *Sebastes fasciatus*. Both of these species have previously attained high biomass and were the subjected of large commercial fisheries in the past but not for more than 20 years. Fisheries on these stocks are on the aggregate *Sebastes* complex although they are assessed separately and speciated in fishery independent surveys. This is a problem for assessment because assumptions must be made about partitioning commercial catch between species and this has important implications for evaluation of stock size, productivity, reference points and harvest advice. Presently, we have explored splitting the catch by applying survey proportions of each species to the commercial catch but this involves many assumptions apart from the dependence this creates between survey and catch data. Survey proportion have been used in raw form on the aggregate, smoothed on the aggregate and smoothed on length. We tested the impact of various techniques in a statistical catch at length model and the impacts of these assumptions on assessed biomass, reference points and harvest advice for these stocks. Ideally, a joint species model should be developed where species are split within the model; however, this approach is not without issues given the range of uncertainties in assessing these stocks.

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