

A pulse fishery model with closures as function of the catch: Conditions for sustainability

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We present a model of single species fishery which alternates closed seasons with pulse captures. The novelty is that the length of a closed season is determined by the remaining stock size after the last capture. The process is described by a new type of impulsive differential equations recently introduced. The main result is a fishing effort threshold which determines either the sustainability of the fishery or the extinction of the resource. © 2012 Elsevier Inc.