

New Harvest Control Rules for minimizing the impact of fishing in Europe

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The new Common Fisheries Policy (CFP) of the European Union demands *maintaining populations of fish stocks above biomass B_{MSY} , while minimizing the negative impacts of fishing activities on the marine ecosystem* (Art.2 of the CFP Regulation). In this presentation we review implications of these two objectives for the harvest control rules (HCR) in European fisheries management. First, we question the current HCR by examining recent ICES stocks assessments. The mean fishing mortality, for all stocks fully assessed in European seas, decreased on the Atlantic side over the 2000-2010 period, allowing for a significant increase of the mean stocks biomass. But since 2010 not clear trend is observed, while more than 60% of assessed stocks are still outside the limits the CFP intends to reach (F_{MSY} and $B > B_{trigger}$). Then we argue that good management must also deal with gear selectivity, an option that has been neglected in the EU in the past decades, but which allows higher catches with lower impact. Using usual yield and biomass per recruit models, and taking the North sea cod as an example, we explore how changing selectivity patterns affects the management targets and should lead to modified HCRs. We finally propose an HCR where fishing takes less than nature, where fish are allowed to grow and reproduce, and where biomass is maintained at levels where populations are still likely to be able to fulfil their ecosystem functions. Such an approach is discussed in the light of the ecosystem-based approach to fisheries management.

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