LIFE IN THE FAST FOOD CHAIN: OU SONT LES POISSONS D'ANTAN?

Nigel Haggan^{*}, Cameron Ainswort^{*}, Tony Pitcher^{*}, U. Rashid Sumailaⁱ and Johanna Heymans^{*}

Abstract

We review the decline in high trophic level or 'table' fish on Canada's Pacific coast in the context of global depletion, the potential extinction of marine species and the economic and social drivers of overfishing. Impacts on Aboriginal and other coastal communities are identified. Whole ecosystem models of northern British Columbia as it was in the 1750s and present-day are used to determine the sustainable food production potential of both past and present systems under different exploitation scenarios. Results indicate that the 1750s system could have sustainably generated over twenty times the current annual food production in northern British Columbia's capture fisheries, while meeting UN food security criteria including cultural appropriateness. The present-day system could sustainably produce six times the fisheries yields extracted today if the fleet was adjusted to meet UN criteria for responsible fishing, and fisheries were conducted to make best use of the existing resources. One hundred-year simulations of the present day (2000) system incorporating natural climate and ocean regime variability indicate that the existing BC fishing fleet poses a significantly higher risk of seriously depleting and extirpating many species than an alternate fleet structured largely upon UN criteria for responsible fishing. We conclude with a review of the strengths and weaknesses of Marine Protected Areas and other conservation measures in achieving ecosystem restoration. We propose fishing strategies for northern British Columbia which would increase food production; first, in terms of total available protein, and second, in terms of high-quality tablefish production.

^{*}Fisheries Centre, University of British Columbia, Vancouver

ⁱ Fisheries Economics Unit, Fisheries Centre