KEYNOTE

The overlooked evolutionary dimension of modern fisheries

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Abstract: The past few years have witnessed a growing awareness that fishing might induce evolutionary changes in exploited stocks. With fishing mortalities sometimes exceeding natural mortalities by as much as 400%, adaptive responses to the altered selective environment caused by fishing seem inevitable. Case studies suggest that fisheries-induced evolution can occur within just a few generations, and that evolutionary recovery from the incurred changes may be slow. Many traits are likely to be affected, including maturation schedules, growth rates, reproductive investment, behavior, and morphology. As a result, fisheries-induced evolution may change a stock's yield, stability, and recovery potential. A new generation of fisheries scientists and managers will need scientific tools to cope with the opportunities and threats of fisheries-induced evolution.