

No paper  
available

Theme: Modelling

Session: WeC2 - Bioeconomic modelling 1

Title: **Protecting fish habitat - what is it worth?**

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Abstract: In recent years there have been increasing concerns that fishing activities might degrade the ability of the environment to support the long-term biological productivity of exploited fish stocks. Fishing gear that contacts the bottom may disturb the seafloor and the benthic organisms dwelling therein. The disturbance, in turn, may reduce the ability of the habitat to sustain the resident fish. This study develops a simple bioeconomic model that incorporates fishing effects on the environmental carrying capacity. Two cases are examined: (1) open-access fishing, in which there is free entry and exit of fishing effort to the fishery and no external control over the level of fishing, and (2) sole ownership of the fish resource and seafloor habitat. The system of equations for fish productivity, habitat productivity and fishing effort entry and exit is solved to determine the long-run equilibrium level of fishing effort that will maximize the sole owner's undiscounted profit flow.