Voluntary angler logbooks reveal long-term changes in a lentic pike, *Esox lucius*, population

Sixty-two years of voluntarily collected angling logbook data from a large natural Danish lake were used to study variation in pike, *Esox lucius* L., CPUE (expressed as no. of captured per boat trip) as an index of stock size. Pike CPUE was positively related to pike release rate by anglers and negatively affected by certain commercial sheries. The stocking of young-of-the-year pike and a shery-dependent index of perch, *Perca fluviatilis* L., abundance (which may be pike prey or predator depending on size) did not correlate with pike CPUE. Analyses of the size distribution of pike, based on sizes of annual record trophy pike captured by anglers, confirmed the negative impact of commercial pike shing and revealed a positive influence of air temperature. It is concluded that high-quality angler logbooks that record effort and catch can be a cost-effective tool to inform lake fisheries management by revealing long-term population trends. Further, state space modelling, a statistical technique not yet seen in recreational fisheries science, is recommended as a tool to model proxies for population dynamics from angler logbook data.
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.864 SNIP 0.819
Web of Science (2010): Impact factor 0.798
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.807 SNIP 0.957
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.844 SNIP 0.854
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.823 SNIP 1.232
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.868 SNIP 1.006
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.777 SNIP 0.918
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.423 SNIP 0.669
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.405 SNIP 0.58
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 0.484 SNIP 0.663
Scopus rating (2001): SJR 0.508 SNIP 0.643
Web of Science (2001): Indexed yes
Scopus rating (2000): SJR 0.466 SNIP 0.677
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 0.516 SNIP 0.556
Original language: English
DOIs:
10.1111/j.1365-2400.2012.00866.x
Research output: Research - peer-review › Journal article – Annual report year: 2013