Fishing Guides As Role-models To Promote Unenforceable, Pro-environmental Catch-and-release Behaviors To Recreational Anglers

Authors : Matthew Farthing\textsuperscript{1}, Amber-Robyn Childs\textsuperscript{2}, Judy Mann-Lang\textsuperscript{3}, Christopher Bova\textsuperscript{2}, Shannon Bower\textsuperscript{5}, Adrian Pinder\textsuperscript{6}, Alexander Winkler\textsuperscript{7}, Edward Butler\textsuperscript{2}, Jake Brownscombe\textsuperscript{9}, Andy Danylchuk\textsuperscript{10}, Warren Potts\textsuperscript{2}
\textsuperscript{1}Institute Of Coastal And Marine Research, \textsuperscript{2}Department Of Ichthyology Fisheries Science, Rhodes University, Grahamstown, RSA., \textsuperscript{3}South African Association Marine Biological Research, Durban, \textsuperscript{4}Infinity SES, Ottawa, Ontario, Canada., \textsuperscript{5}Faculty Of Science And Technology, Bournemouth University, Poole, UK, \textsuperscript{6}Centro De Ciências Do Mar (CCMAR), Universidade Do Algarve, Faro, Portugal., \textsuperscript{7}Great Lakes Laboratory For Fisheries & Aquatic Sciences, Fisheries And Oceans Canada, Canada., \textsuperscript{8}Department Of Environmental Conservation, University Of Massachusetts Amherst, Amherst, MA, USA

E-mail Address: matthew.farthing.rsa@gmail.com

ID: 12192

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Background
Recreational fishing is a popular pastime worldwide, with approximately 11\% global participation. Burgeoning consensus that recreational fisheries (even those exclusively catch-and-release) are not as benign as previously assumed has led many to acknowledge their role in the global fish crisis. Human behaviour is at the core of most global ecological problems, which means that changing angler behaviour is perhaps the key to achieving sustainability in this space. However, many best-practice behaviours for catch-and-release fishing are unenforceable by traditional regulatory measures, and require nuanced intervention to leverage a suite of psychological constructs and cognitive biases to achieve meaningful behaviour change. Alternative strategies to manage recreational fisheries and mitigate their impacts must be explored.

Fishing guides are respected as opinion leaders of the recreational angling community, but little is known of their influence on angler behaviour. Given their social-standing, fishing guides may be perceived as role-models by fishing clients – thereby potentially shaping the practices of many through their extensive client networks and reach on social media. This influence may promote the adoption of best and/or worst environmental behaviours, depending on their individual knowledge, attitudes and actions. Should fishing guides be perceived as role-models, an understanding of the current state of fishing guide knowledge, attitudes and behaviours is essential to shape effective interventions. While fishing guides may represent an important opportunity to intervene, they may in fact already be promoting the adoption of poor angling practices, misconceptions of best practices and setting a poor moral norm for those who admire them.

The aims of this study were to (1) determine whether fishing guides are perceived as role-models by their clients, (2) to assess the current status of fishing guide knowledge,
attitudes and behaviour, and (3) to determine whether or not their social influence could be leveraged to promote the suite of unenforceable fishing behaviours required to achieve sustainability in this space.

**Method**
To understand if angling-guides are perceived as role-models by the recreational angling community, a digital survey containing a nine-question role-model perception scale was designed to assess angling-clients’ attitudes towards angling-guides. The survey was designed to assess whether angling guides served the three role-model functions proposed in the Motivational Theory of Role-Modelling, which posits that role-models function as Behavioural models, Representations of the Possible and Inspiration. As there was no clear sampling frame, respondents were recruited using snowball sampling, scrounging, banner recruitment on social media, purposive/judgment sampling through fishing networks and direct contact by email.

To understand the current state of fishing guide knowledge, attitudes and practices, a digital survey was developed and disseminated. Fishing guides were recruited from 47 countries for survey participation using collaborator networks and social media. The survey assessed the guides’ knowledge of C&R best practices, attitudes towards environmental behaviours, attitudes towards environmental responsibility and their current practices on guided-angling trips.

**Results**
Of the 492 angling-clients (27 countries), most agreed that angling-guides were competent, skilled, and worth emulating (91.1%), suggesting they are perceived as Behavioural Models. Less agreed that angling-guides were Inspirational or Representations of the Possible (54.8%), suggesting they are less likely to motivate anglers to adopt and/or pursue new goals. Consequently, 91.1% of those fishing clients surveyed were likely receptive to some aspect of the role-model influence of their fishing guides.

Of the 342 fishing guides surveyed, most were deemed “knowledgeable” (69.0%) having answered most (≥4/7) of the best practice questions correctly. Irrespective, many had poor knowledge of key C&R practices/processes such as oesophageal unhooking. Most fishing guides surveyed were untrained (64.0%), and only 8.8% had accredited training. Respondents generally had positive environmental attitudes towards C&R behaviour (50.9 – 96.2%), suggesting pro-environmental behavioural intentions. The pool of fishing guides deemed “knowledgeable” had significantly more pro-environmental attitudes towards angling behaviours (p = 0.003), which suggests that best practice training may improve their C&R behaviours. Most fishing guides surveyed had pro-environmental attitudes towards their environmental responsibilities (87.1 – 89.5%), but these broad attitudes may have little bearing on actual behaviours when faced with a significant trade-off between client satisfaction and ecological integrity.
Conclusion
Fishing guides are held in high esteem by recreational fishing clients whom they likely influence (for better or worse) through role-modelling. This, coupled with consensus that angler behaviour is a key determinant of ecological outcomes in the catch-and-release (C&R) process suggests exploring the state of fishing guide knowledge, attitudes and behaviour on trips and their potential use in behavioural interventions is critical for effective recreational fisheries management. As Behavioural Models, angling-guide behavioural practices are likely to be emulated. These findings suggest that fisheries managers have an opportunity to influence general angler behaviour through focussed behavioural interventions with fishing guides. Despite some fishing guides’ good knowledge of appropriate behaviours, positive attitudes towards the environment and towards C&R practices, there is room for improvement to meet sustainability goals for C&R fisheries, which may be facilitated through opportunities for best practice training and Community Based Social Marketing. Given the prevalence of high-value tourist/destination fisheries throughout the WIO region, and the common pool resources shared by overlapping recreational, artisanal, small-scale and subsistence fishers, it is critical to explore innovative, alternative strategies to minimize the impact and increase the sustainability of recreational fisheries in the region.