Perceptions and risk behaviors regarding biological invasions in inland aquatic ecosystems

Filipe Banha a,∗, António M. Diniz b, Rosa Olivo del Amo c, Fransisco J. Oliva-Paterna c, Pedro M. Anastácio b

a MARE – Marine and Environmental Sciences Centre, Departamento de Paisagem, Ambiente e Ordenamento, Escola de Ciências e Tecnologia, Universidade de Évora, Évora, Portugal
b Departamento de Psicologia, Escola de Ciências Sociais, Universidade de Évora, Évora, Portugal
c Departamento de Zoologia, Universidad de Murcia, 30100 Campus de Espinardo, Murcia, Spain

1. Introduction

Invasive alien species (IAS) are defined as species introduced by humans into places out of the natural range of distribution, where they establish, disperse and cause negative impacts, on biodiversity, socio-economy and human health (CBD, 2002). Evaluation of the impacts of IAS depends on both objective scientific evidence and subjective value definitions of impact. Disagreement over impacts, leads to disagreement in classification of an alien species as an IAS and perception uncertainties regarding negative impacts may weaken the legitimacy of distinguishing invasive from other alien species (Russell and Blackburn, 2017). Currently, this is a growing challenge in biological invasions science, making scientific consensus fundamental face to an increasing science denialism (Russell and Blackburn, 2017). IAS (i.e. established alien species with significant negative impacts) are a minority among alien species but a precautionary approach to all alien species is needed (Essl et al., 2011), since there is a wide consensus that IAS are a major threat to biodiversity (e.g. Emery-Butcher et al., 2020; Ricciardi and MacIsaac, 2011; Sala et al., 2000) and to the economy (Lovell et al., 2006; Vilà et al., 2010), especially in inland waters (Flood et al., 2020).

A large number of non-native species (Hulme, 2009), have established in European freshwater and terrestrial ecosystems, along with...