

Risk screening tools for non-native marine species

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There have been numerous adaptations of the Pheloung *et al.* “Weed Risk Assessment (WRA)”, including five screening tools for marine and freshwater fishes and invertebrates. These tools are comprised of 49 questions within two subject themes (Biogeography/History and Biology/Ecology) and eight sections (Domestication/Cultivation; Climate and Distribution; Invasive elsewhere; Undesirable traits; Feeding guild; Reproduction; Dispersal mechanisms; Persistence attributes). Assessments result in an outcome score, ranging from –11 to 54, with which to categorise the potential risk of a species being invasive as low, medium, or high. Of these tools, the freshwater Fish Invasiveness Screening Kit (FISK) has been applied in at least 15 countries on five continents and was the highest scoring assessment tool in a recent evaluation study by the Canadian Science Advisory Secretariat (Research Document 2012/097), which recommended that the ‘sister’ screening tools for non-native marine fishes (MFISK) and marine invertebrates (MI-ISK) should be applied and evaluated. Also available is a taxonomically generic version (GISK) of the WRA, developed for the EU Regulation on the use of alien species in aquaculture, which consists of 45 questions within four sections (Domestication/Introduction History, Risks of Establishment/Persistence, Risks of Dispersal, Risks of Impacts/Undesirable traits). All three of these screening tools for marine non-native species benefit from the same attributes that made FISK popular (self-explanatory, easy to use). In this communication, the potential application and further development of MFISK, MI-ISK and GISK will be examined within a North-East Atlantic context.