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Screening potential costs of Invasive Species – Methodology and Results

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Invasive species is defined in the UN Convention on Biological Diversity as “organisms which successfully establish themselves in, and then overcome, otherwise intact, pre-existing native ecosystems.” Further, the Convention notes “Each Contracting Party shall prevent the introduction of, control or eradicate those alien species ...”.¹ In the EU this is implemented by a list of Invasive Alien Species of special concern. The species included on the list are subject to restrictions on keeping, importing, selling, breeding and growing, and Member States are required to implement measures addressing pathways of introduction and detection, eradication and management of species already introduced.² Thirty-seven species were on the list in 2016 and additionally 12 species were added in 2017. Currently the EU member states negotiate the third revision. Introduction of a species on the list are of dual concern to the member states. First, a member states may want a species included to avoid the potential effects on biodiversity, health, infrastructure and production that may follow an introduction. Secondly, a country a member state may want not to get a given species included on the list if the species are already introduced, unintentionally or as part of an economic activity. Therefore, member states do a screening of the potential effects of including new species on the EU list by doing a risk assessment covering the risk of introduction and establishment, the potential biological and health effects, and the associated economic effects.

For evaluating the economic effects of including new species on the EU list, we have developed a method for screening for the potential private economic costs in terms of costs to authorities of enforcement and mitigation and costs to producers and consumers. We use the methodology for screening the 20 species currently under consideration for the EU list, and find that for 11 species no economic effects will occur primarily as the species are not able to establish under Danish conditions. For the remaining 9 species minor or larger economic costs can be expected. Of special attention are *Arthurdendyus triangulatus* (Newzealandsk fladorm), *Trichosurus vulpecula* (Rævekusu), *Lespedeza cuneata* (Kinesisk buskkløver), and *Cortaderia jubat* (Purpur pampasgræs) with potential large negative effects if introduced. Thus, adaption on the EU list are desirable for Denmark. For *Neovison vison* (Amerikansk mink) and *Lepomis gibbosus* (Solaborre) witch are introduced for fur production and for recreational fishing a ban following adaption on the EU list may lead to large costs to Danish producers and/or consumers.

¹ <https://www.un.org/earthwatch/biodiversity/invasivespecies.html>

² http://ec.europa.eu/environment/nature/invasivealien/list/index_en.htm