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## Comparing risk analyses of some potential invasive mammal species in Western Europe

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Threats on native flora, fauna and ecosystems due to invasive species have been widely documented throughout the world and are considered as representing major risks for indigenous species and ecosystems. Currently, a few non-native mammal species are already established in Belgium and neighboring areas. Other species are likely to establish in this area in the coming decades. The risk associated to the introduction and establishment of those mammals was quantified using a simplified scheme elaborated on the basis of the recommendations provided by the international standard for pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms, produced by the secretariat of the International Plant Protection Convention (FAO 2004). It includes two sections dedicated to risk assessment and risk management. The species that have been taken into account are : American mink (*Mustela vison*), Sika deer (*Cervus nippon*), Muntjac (*Muntiacus reevesi*), Raccoon dog (*Nyctereutes procyonoides*), and three squirrel species, Eastern gray squirrel (*Sciurus carolinensis*), Pallas's squirrel (*Callosciurus erythraeus*) and Fox squirrel (*Sciurus niger*).

Risk assessments have been performed in evaluating establishment and spread capacities of non native mammal species together with their potential impact to native species and ecosystem functions. Biodiversity impacts in terms of competition, predation or herbivory, hybridization, pathogen pollution and effects on ecosystem functions have been reviewed through existing scientific publications. Economic and social impacts have also been assessed when information was available.

Recommendations for reducing the risks to an acceptable level and mitigate non-native species damages were provided in the risk management section of the analysis. Management options were evaluated for efficacy, feasibility and impact in order to select the most appropriate. The most important pathways of introduction in Belgium were identified together with preventive and control actions. Different 'groups of species' have been identified according the kind of management recommendations that are required. For some, prohibition of organism importation and trade appears to be the best option; for others, a reinforcement of holding conditions has been pointed out; finally some species don't seem to require specific management measures.