Illegal import of meat including bushmeat into Switzerland by private air travel

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Illegal imports of meat can present substantial risks for public health and for the introduction of exotic animal diseases. Studies conducted in different European countries have estimated the volume of meat imports including bushmeat from non-EU countries into Europe by private air travel at a few tonnes weekly. The objective of this study was to estimate the amount of meat illegally imported into Switzerland by private air travel. Because meat from wild animals (bushmeat) has a great potential for the introduction of exotic diseases, the amount of illegally imported bushmeat was estimated separately. Data were obtained by participating in several intervention exercises at the two international airports of Switzerland where meat imports are regularly seized, and by analyzing data on seizures from the last four years. A stochastic model with the software @Risk was then applied to estimate the total amount of illegally imported meat. A wide array of animal species including domesticated and wild species were imported into Switzerland. The total weight of annual meat seizures was estimated at 5,500 kg from which 1.3% was bushmeat. The main contributors to illegal meat imports from domestic species were Eastern European countries and for bushmeat Western African countries and particularly Cameroon. The total annual inflow of illegal imports was estimated by the model to be 1,013 tonnes (95% CI 166-5,494) for meat and 8.6 tonnes (95% CI 0.5-88.5) for bushmeat, respectively. This study only addressed the entry for illegal meat import via private air-travel and did not look into the other channels like air or sea freight or road. To get a broader picture of the magnitude of illegal meat imports into Switzerland and to obtain an accurate risk estimate of these products for public health, a larger study is recommended which would cover all possible modes of entry.

Risk assessment scenarios to understand the persistence of Rift Valley fever in Comoros (Indian Ocean)

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Rift Valley Fever (RVF) is an arbozoonosis identified for the first time in Kenya in the 1930s. In 2000, the first apparition of the virus out of Africa was described in the Arabian Peninsula with both animal and human cases. Indian Ocean showed animal and human cases in 2008 in Madagascar where the disease was absent during 17 years while the same year the same year the first human case was diagnosed in Mayotte from a young Comorian. Lots of models described climate drivers of RVF outbreaks. These models failed to predict malagasy outbreaks. These recent spreads of the disease are likely to be also linked with animal movements. Forecasting outbreaks and managing rapid control of the disease request adapted and more flexible models. This study assessed two scenarios of risk in the Comoros Islands and compared the results with some surveillance data in order to determine the potential role of the introduction of an exogenous hazard. The first scenario explored the endemicity of the disease through insect-borne transmission and developed the probability for the disease to be spread throughout the island because of infectious mosquito bites. The second scenario developed a model with new legal introduction of cattle from Tanzania and subsequent contact and infection of bovines in Comoros (Grande Comores). A quantitative stochastic approach permitted to include variability as well as uncertainty in this quantitative risk assessment. Advanced analysis of the sensitivity of the models allowed to explore the most probable pathways of transmission and therefore to define thresholds to set priorities in the RVF surveillance and the control measures.