

Cost assessment of rabies eradication in north-eastern Italy

Sartore, S.¹, Guberti, V.², Mulatti, P.¹, Maltese, C.¹, Bonfanti, L.¹ and Marangon, S.¹, ¹Istituto Zooprofilattico Sperimentale delle Venezie (IZSVe), Italy, ²Istituto Superiore Protezione e Ricerca Ambientale (ISPRA), Italy; ssartore@izsvenezie.it

After more than 10 years, fox rabies was diagnosed during October 2008, in the Friuli-Venezia Giulia region of north-eastern Italy. In 2009, the infection spread to the neighbouring Veneto region, reaching part of the provinces of Trento and Bolzano in early 2010. An aerial emergency oral fox vaccination (OFV) programme was implemented for the first time in the winter of 2009-2010. Three other emergency OFV campaigns followed in 2010 and regular OFV campaigns were carried out in 2011. Rabies decreased to only 18 recorded cases in the second half of 2010, out of a total of 209. The last rabid fox was recorded in February 2011. The present study quantified the direct costs related to rabies control activities. Specifically, two scenarios were considered: the base scenario where control was based on fox depopulation until the virus extinction threshold was reached; an alternative scenario based on aerial vaccination. The targets of both scenarios were assumed to be the same, as were the area and season (winter) of intervention. Costs and outcomes were different. Fox depopulation was assumed to be conducted by gamekeepers and the costs required to reduce the population below the threshold were estimated. Vaccination costs incurred for vaccination campaigns from December 2009 to December 2011 were estimated as the sum of expenses for: lab tests to evaluate vaccination efficacy, baits, use of helicopters for bait distribution, transport and bait storage. Some costs were considered for both scenarios such as lab tests for assessing the epidemiological situation and the vaccination of domestic animals. In this analysis, fox depopulation was considered to be the only alternative to aerial vaccination. Since the present work was primarily focused on economic aspects, the importance of ethical aspects related to depopulation was not taken into account.