

## Research project IZS VE 19/10

### Definition of a procedure to evaluate and optimize rabies control measures in Veneto

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The recent re-emergence of rabies in foxes in the North-Eastern Italian regions has raised concern about the measures needed to control the disease.

In December 2009 and June 2010 two emergency campaigns were carried out to orally vaccinate foxes in the infected and surrounding areas. The methods most commonly used to evaluate the efficacy of control measures are still impaired by lack of information pertaining to the demographic parameters of the host population and some other epidemiological parameters.

The aim of the project is to define a procedure to evaluate the efficacy of both oral vaccination and other control measures. Statistical and mathematical models will be used to define the critical community size (CCS) for the persistence of rabies in North-Eastern Italy. CCS represents the functional epidemiological unit in which the efficacy of the control measures can be assessed.

Field studies will be needed to collect data on the host population in the study area, allowing the CCS to be used to identify the minimum area required for circulation of the rabies virus in a given time period.

Once defined, the procedures will permit the control measures, particularly aerial vaccination strategies, to be fine tuned to prevent poorly vaccinated or unvaccinated areas from being large enough to maintain the disease. The surveillance activities (sampling unit, sampling intensity) will be defined by the data collected during the studies in the field.