3.2 Rabies surveillance in Europe, 2004-2007

C. Freuling, T. Selhorst, A. Kliemt, T. Müller

WHO Collaborating Centre for Rabies Surveillance and Research
OIE Reference Laboratory for Rabies
Institute for Epidemiology, Friedrich-Loeffler-Institute - Federal Research Institute for Animal Health
Seestrasse 55, D-16868 Wusterhausen

European countries have been asked to submit data on rabies surveillance since 2003. Of 40 countries reporting rabies cases to the WHO Collaborating Centre for Rabies Surveillance and Research, 65% (N=26) have submitted rabies surveillance data regularly at the end of the year. Some countries attached their surveillance data quarterly to the rabies cases reported. We would like to thank for this effort. Unfortunately, some countries with endemic rabies, i.e. Russia, Belarus and Romania have not submitted surveillance data yet. Rabies surveillance in European countries is mainly influenced by the status of a country, e.g. rabies endemic or rabies free and whether oral rabies vaccination (ORV) programmes are implemented. In countries considered rabies endemic and not having implemented ORV yet surveillance ranged from 59 (BIH) to 32,049 (UKR) from 2004 until 2007. Of those 13 countries that did not send data on tested animals, 9 have the status "rabies free" (free from terrestrial rabies). However, it is not clear whether just data were not provided or if an effective surveillance system is not in place. Especially in rabies free countries bordering rabies endemic areas, the absence of surveillance data makes its status questionable. Other rabies free countries, viz. FRA, BEL, LUX, ITA, CHE, DNK and the UK report variable numbers of animals tested ranging from 26 (DNK) to 13,616 (ITA) during the past 4 years.
According to WHO guidelines [1], to provide and maintain the status rabies free a minimum number of samples from suspect cases belonging to the major susceptible domestic and wild animal species present in the country should be tested. Suspect cases may need be defined, e.g. as individuals of susceptible species showing encephalitis-like symptoms or dying of an unknown cause. While for dogs and cats, a sample size of 0.01% and 0.02% of the estimated population is recommended, national public health and veterinary authorities should define the appropriate sample size for the number of wildlife animals to be tested to maintain the status "rabies free" (free from terrestrial rabies).

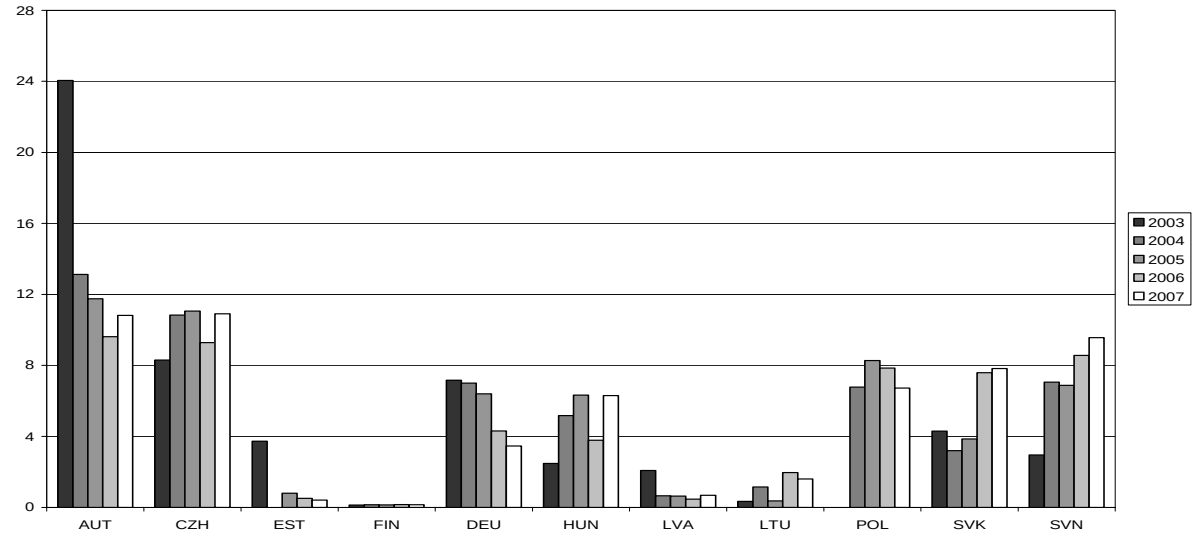

Fig. 1: Number of wildlife animals tested per 100km² in countries with ORV programmes (figures do not refer to the vaccination areas but to the entire size of the country).

In general, the highest numbers of wildlife animals tested per 100 km² during 2004-2007 were reported from those EU member states that have currently implemented ORV programmes. As seen in Figure 1, the majority of those countries fulfil the recommendations of WHO for the monitoring of the efficacy of vaccination campaigns and test a minimum of 4 target animals per 100 km² annually. However, in some countries the proportion of vaccinated areas to the entire area of the countries is not reflected. For instance, FIN, AUT and CZH only maintain a *cordon sanitaire* along the border to neighbouring countries not considered free from terrestrial rabies, whereas in the Baltic countries, POL, HUN, SVK and SVN the entire country is vaccinated (see Map of OIF in Europe 2007, this issue). A dynamic adaptation can be seen for instance in DEU, where the number of tested animals decreases proportionally to the size of the vaccination area (Fig. 1). Data on bats tested for rabies were submitted from 20 countries. According to the submitted data, of 6,361 bats examined 0.02% (N=141) tested rabies positive during 2004 - 2007. However, no information is yet available on the species involved. Interestingly, 5 countries (UK, FRA, NED, POL, DEU) account for 91% of all bats tested (Fig. 2). Sixty three percent (N=4,033) of the bats were exclusively tested in the UK during the reporting period with only sporadic cases of EBLV-2 found in Daubenton's bats (*Myotis daubentonii*), which might have resulted in the very low prevalence of bat rabies obtained. Bat rabies surveillance should be based on guidelines provided by the EU Med-Vet-Net Workpackage 5 (RBE, 4/29, 2005) adopted by the EUROBATS agreement.

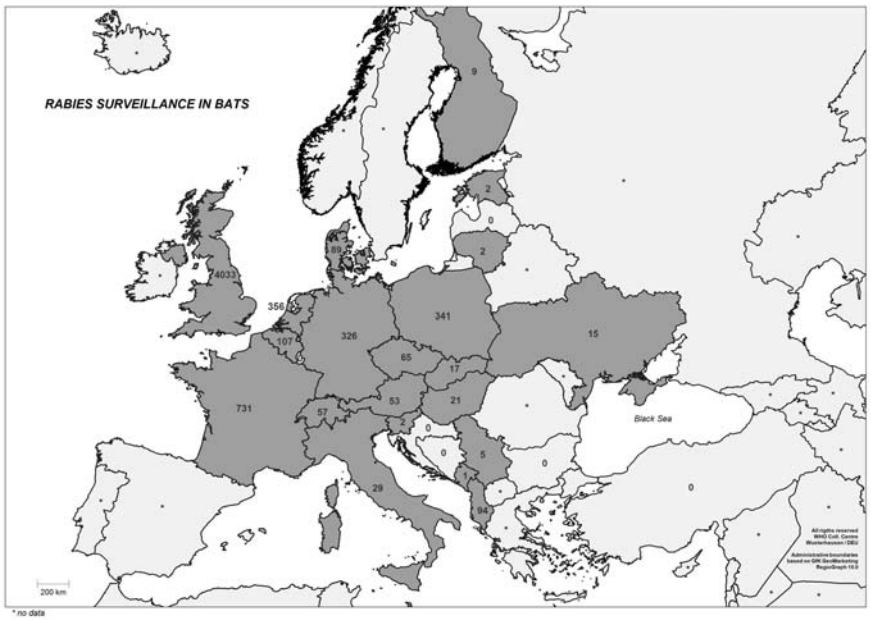

Fig. 2 Reported number of bats tested for rabies 2004-2007 (* no data)

In general, the availability of rabies surveillance data greatly improves the assessment of the rabies situation in the respective countries and promotes transparency in disease reporting. Therefore, we would like to encourage continuous reporting of such data to the Rabies Bulletin. If the surveillance data is provided quarterly in a same way as for the rabies data, similar maps and figures could be accessed via the online database. As this would mean additional work and expense the RBE intends to provide online submission of data in the near future.

References:

1 WHO Expert Consultation on Rabies, 1st report (2004, WHO technical report series; 931, Geneva, Switzerland)

2 EUROBATS agreement (Resolution 5.2, Bats and Rabies in Europe).