

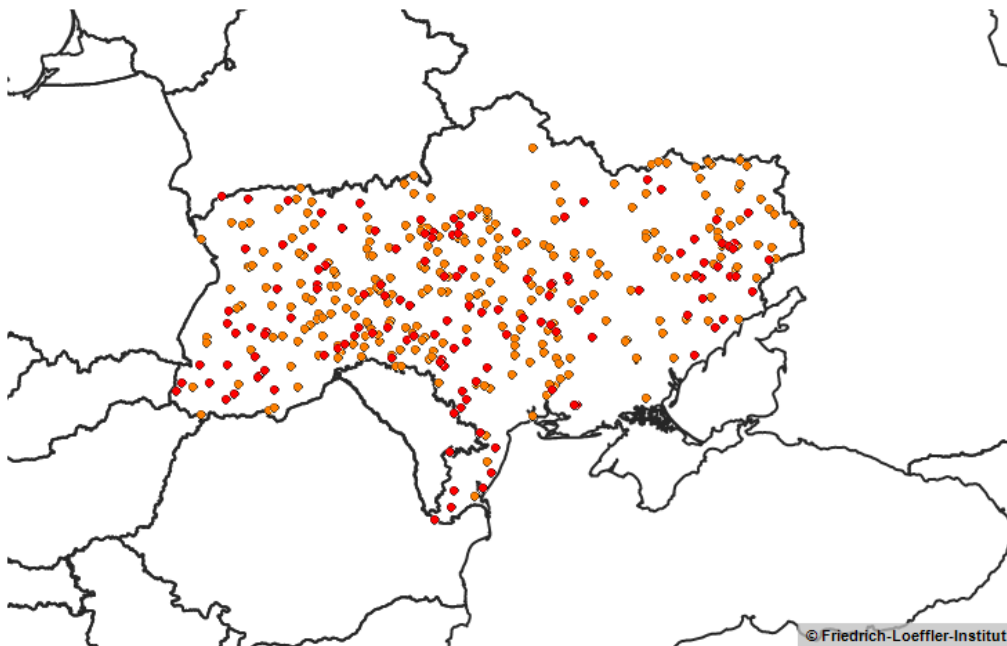


## Rapid risk assessment for Denmark, in relation to Rabies in Ukraine and the movement of refugees and its companion animals, 07/03/2022.

According to the United Nations Refugee Agency, as of March 6th 2022, around 1.7 million refugees have fled war from Ukraine to neighboring countries in Europe, and many with their pets.

Furthermore, the EU-Commission has activated the Temporary Protection Directive to offer quick and effective assistance to people fleeing the war in Ukraine. The directive includes guidelines on border management, providing flexibility to reduce formalities for refugees to enter the EU with their pets. Thus, removing the border control, as a mitigation action for the introduction of rabies into Denmark.

According to the WHO's Rabies-Bulletin-Europe, cases of rabies in domestic animals (66.2 %), mainly dogs and cats, and in wild animals (33.2%), mainly in foxes, are widespread in Ukraine (Figure 1). Ukraine has reported cases for quarter 1 and quarter 3 of 2021, with no data from 2022 reported.



**Figure 1. Map of Ukraine with cases of rabies in wild life (red dot) and domestic animals (orange dot) in 2021 reported to the Rabies bulletin Europe. WHO, 2022.**

The number of cases in dogs most likely includes both dog owned and stray dogs, as it is not reported separately. In 2021, out of the 265 (66.2 %) cases in domestic animals, 27.5 % corresponded to dogs and 32.7 % to cats, the other 6.5 % corresponded to ruminants. These proportions highlight the relevance of both dogs and cats for the risk of introduction of rabies into Denmark.

Vaccination is obligatory in Ukraine for dogs, while for cats and cattle only during outbreaks. Vaccination campaigns for wild carnivores have been implemented in western Ukraine bordering Poland and Hungary, with insufficient efficacy (Polupan et al., 2019). However, currently the Danish Veterinary and Food Administration (DVFA) has no updated information on these vaccination campaigns and its efficacy.

The DVFA assesses that the risk for the introduction of Rabies into Denmark, due to the above description, is **high**.

## References

World Health Organization. Rabies Information System of the WHO Collaboration Centre for Rabies Surveillance and Research. Rabies Bulletin Europe. (2022). Available online at: <http://www.who-rabies-bulletin.org/Queries/Surveillance.aspx> (accessed March 7, 2022).

Polupan I, Bezymennyi M, Gibaliuk Y, Drozhzhe Z, Rudoi O, Ukhovskiy V, Nedosekov V, De Nardi M. An Analysis of Rabies Incidence and Its Geographic Spread in the Buffer Area Among Orally Vaccinated Wildlife in Ukraine From 2012 to 2016. (2019). *Front. Vet. Sci.* doi: 10.3389/fvets.2019.00290