

45 The European Observatory of Wildlife: Continental-scale wildlife density estimation in Europe

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POSTER PRESENTATION-Ecological Modelling

The European Observatory of Wildlife (EOW), within the ENETWILD project (www.enetwild.com, funded by the European Food Safety Authority), focuses on improving European wildlife monitoring by developing international data collection standards, supporting density estimation guidance, and fostering open, collaborative data networks. To achieve these objectives, EOW implemented a protocol using the random encounter model (REM) based on camera trap (CT) data for estimating mammalian density. This protocol integrates photogrammetry, allowing the three-dimensional reconstruction of camera scenes for calculating parameters essential to the REM, including day range and detection rates. The workflow, optimised on the Agouti platform, streamlines image processing and parameter estimation. Since 2021, ENETWILD stakeholders have employed the EOW protocol to assess densities of species like wild boar, roe deer, and red fox across Europe. By 2023, 30 institutions surveyed 44 sites in 22 countries, accumulating 79,092 CT activity days from 1,722 CT deployments. Density estimates show interannual stability with refined precision across several monitored populations. In 2024, network expansion included 40 institutions across 64 sites, prioritising areas affected by African Swine Fever (ASF). Thirty-three sites now fall within ASF-affected countries, and 28 lie near the ASF frontline. Twenty sites (31%) contain an interface between wild boar and domestic pigs (i.e. high ASF risk), while 25 sites (39%) include wetland habitats, which are of possible epidemiological interest for Avian Influenza both within bird populations themselves and in relation to possible spill-over events to wild and domestic mammals. Ongoing networking links the EOW with other wildlife monitoring and disease-prevention initiatives, enhancing transnational collaboration. The refined protocol, with augmented photogrammetry and Agouti functions, has promoted data standardisation and minimised user-related error. EOW data supports continental-scale risk assessment, providing harmonised density estimates essential for disease modelling and can contribute to future schemes of biodiversity monitoring in Europe.