

Data for conservation: Towards the exchange of road kill and wildlife observations in Europe

Dennis Wansink¹, Diemer Vercayie², Glenn Lelieveld³ and Michal Bil⁴

¹ The Habitat Foundation, Netherlands, dennis.wansink@thehabitatfoundation.org

² Natuurpunt vzw, Belgium, diemer.vercayie@natuurpunt.be

³ Zoogdiervereniging, Netherlands, glenn.lelieveld@zoogdiervereniging.nl

⁴ Transportation Research Centre, Czech Republic, michal.bil.cz@gmail.com

Roads form barriers for traveling and commuting animals. If animals try crossing a road, they might end up as road casualties. Many measures are invented to diminish these conflicts between human and animal commuting routes. To be effective, these measures have to be constructed in the right places. We need data, e.g., about hotspots of road casualties among animals to find the right places. Data about road casualties can also help to evaluate the effectiveness of measures taken: do they solve the problem or do they create new hotspots?

Currently, citizens are involved in recording sightings of animals in several European countries, in some cases with a particular focus on road kills. In Belgium, the Netherlands, Austria, and the UK citizen scientists record road kills on a continuous basis. Other countries, such as Sweden and the Czech Republic, base road kill monitoring systems on car crash data and make efforts to combine this with citizen science data from national nature observation platforms. However, many European countries don't monitor road kills, despite the many advantages of research and mitigation of road effects on wildlife and increasing driver safety. Existing monitoring systems differ. Some record incidental sightings of road kill, some record sightings along regularly travelled transects, and other countries do both. Earlier, data collected by drivers in the UK and the Netherlands lead to the identification of hot spots. The data could also be used to evaluate the effect of roads on the viability of local species populations.

To learn more about the effects of roads on animal species, by identifying hotspots as well as by evaluating mitigation efficacy, we want to upgrade the citizen science projects on road casualties to a European wide level. Ideally, we plan to have a wildlife registration system in every European country in a couple of years. The systems can differ per country but the data collected should enable research on a European level. For example, to analyse differences between road kill hotspots, mitigation solutions, or scientific questions connected with the EU Green Infrastructure Strategy. In essence, the systems should collect more than just road kill data because the effects of roads on species populations extend further into the landscape than the road itself.

In this workshop, we will discuss the practical aspects of implementing registration systems in countries without such a system. It will also explain the exchangeability of the data from these systems to answer European wide road ecological questions. The aim is to come to road kill and wildlife observation systems in all European countries that deliver data for road ecology research on a European level. For a successful workshop we need participants with different backgrounds and different nationalities: (1) Scientists: for criteria to get useful data for scientific studies; (2) Volunteer managers: to suggest ideas for recruiting and motivating volunteers; (3) Tool builders: to discuss tools that facilitate the collection and sharing of data; (4) Road managers: for road management criteria; (5) Road authorities: for funding criteria.

The workshop will be structured as following:

1. Introduction
 - Short introduction round.
 - Short introduction to the goal(s) of the workshop and the used discussion methods.

- Presentation of 'Dieren onder de wielen' (road kill monitoring in Belgium). The presentation describes the registration system, fundamental success factors, the people involved and the scientific questions that can be answered with the data.
2. Listing issues to tackle
- Short discussion in small groups to find the main problems that the participants expect in (1) the establishment of national wildlife registration systems used by citizen scientists and (2) the exchange of data at a European level. The discussion will focus on practical aspects of setting up a national system. For example, whether to create a new registration platform (website and app) or to adopt an existing one, establishing a user community (citizen scientists), keeping citizen scientists engaged, guaranteeing the reliability of data, warrant the exchangeability of data, collecting enough data for statistical analysis, the cooperation of national road authorities, multiyear funds to keep the systems operational.
 - In a plenary session, we create two lists of primary issues to tackle based on the feedback of the groups: one for national systems, one for research with data from different observation systems.
3. Listing solutions
- The participants will brainstorm in small groups about possible solutions for (a selection of) the main issues listed in the previous session. Each group treats one issue.
 - Plenary session where each group presents the possible solutions.

The participants will be asked to take part in a project group. The project group will use the outcomes of the workshop to set up a strategy for the establishment of national observation systems and the use of the data for European wide scientific questions. The first two actions of the project group will be to find organisations that want to participate in the implementation of the strategy and to find funds to make this possible.

The results of the workshop, for example, the onset of a strategy plan, will be published on the IENE (conference) website and on the websites of the organisations that take part in the follow-up and implementation of the strategy. It will also be published on social media, including the LinkedIn and Facebook pages of IENE. Follow up activities might be organised under the umbrella of IENE, such as supported workshops and meetings, which will be announced on the IENE website and in emails sent to the members.

The goal at the end of the workshop is to create a team of people that will elaborate and carry out the strategy to come to a road kill and wildlife observation registration system in every European country that delivers data for research on (green) infrastructure and its effect on wildlife (populations) in Europe. Most likely the two first steps after the workshop will be:

1. Finding organisations that want to collaborate in as many European countries as possible;
2. Finding funds.