4.8.2. Research projects in Germany

The problem of wildlife collisions is also well known in Germany, both in terms of...
to road operators as well as in agriculture and forestry. The number of heavy

In 2019, there were approximately 3,000 wildlife collisions (resulting in personal injury) out of a total of 295,000 reported wildlife collisions. This contrasts with the relatively well-connected wildlife network in Austria.

Stakeholder base with a focus on the University of Natural Resources and Life Sciences Vienna (BOKU)
(Dr. Wolfgang Steiner et al.) and sustainably planned
In Germany, the focus of projects was on local areas.
conceived actions. Many of these projects followed the
Mainstream with a predominantly passive use
Retroreflective wildlife reflectors. In Austria
The use of retroreflective materials has been common for some time.
The protective elements are called into question. Therefore, it is not very
It is surprising that studies on the efficiency of passive
and retroreflective warning devices mostly too much

Fig. 36: Retroreflective semicircular reflector

unfavorable results were obtained. This subsequently led to the now widespread
The conclusion is that these protective measures are ineffective. This is exemplified by the study.
quoted from the state of Baden-Württemberg's "Wildlife Accident Prevention":

Web: *https://www.wildtierportal-bw.de/de/publication/default/detail?itemId=73&title=Wildunfallpr%C3%A4vention*

"Wildlife warning reflectors are one of the most frequently used wildlife accident prevention measures."
and have been used almost universally by hunters for around 60 years. The question is whether
Wildlife warning reflectors cause behavioral changes in wild animals, resulting in fewer
The causes of wildlife collisions were investigated in two projects at the FVA:
Research into wildlife accident prevention pursues two main goals:

The *aim is to create a scientifically sound basis for wildlife accident prevention and*
to develop practical solutions, as efficient and practical ones
Wildlife collision prevention measures will be necessary and urgently need to be developed in the future.
To protect both people and wildlife.

A second *research focus is on preventive measures such as electronic*
Wildlife warning systems, green bridges and wildlife protection fences.

Where are the wildlife warning reflectors located?

All road sections in the federal, state and county road network in Baden-Württemberg were treated with
The data was collected with the help of road maintenance depots equipped with wildlife warning reflectors.
These measures form the basis for future implementation efforts to reduce wildlife collisions.
How do wildlife warning reflectors affect wild animals?

The behavior of deer, foxes, and wild boar was studied at 14 road sections in
Baden-Württemberg documented the animals' reaction to thermal imaging cameras and the reaction of animals to
Passing vehicles were analyzed. The results show that wildlife warning reflectors are ineffective.

have an impact on the behavior of wild animals and reduce the risk of wildlife collisions.
Reflectors are not reduced."

The data for the project are:

Project number: 1754; Time period: 2020 to 2022

Head: Dr. Falko Brieger - Department: FVA Wildlife Institute

It is also striking that, among other things, the study does not use a clear definition of terms, using "wildlife warning reflectors" instead of the factually correct "wildlife reflectors" or simply "wildlife reflectors".

“Reflectors” (passive) or “wildlife warning” or “warner” (active).

A conflation of the terms is also widespread in Germany. This suggests that that no functional distinction is made between passive and active protective elements.

WEGU railway project to prevent wildlife collisions in Germany

In its March 2022 publication "DB Planet" No. 48, DB Regio reports on the installation of a WEGU "Day and Night" wildlife warning system: *"Wildlife collisions on railway lines repeatedly cause property damage and corresponding impacts on train availability. The active wildlife warning system, developed in Bavaria, counteracts this: A sensor, active day and night, reacts to rolling noises and, when triggered, emits beeping sounds via the integrated microphone and flashing lights generated by LEDs. This keeps wild animals away from the railway tracks. …"*

And the result is impressive: In 2021, we were able to reduce the number of wildlife collisions on The Weiden – Nuremberg route saw an increase of approximately 75 percent compared to the same period last year. reduce."

Unfortunately, there are no further details regarding the track length, the test period, or how the The number of wildlife collisions was determined.

Fig. 37: WEGU railway project with “Day and Night”

FFG Programme: Transport Infrastructure Research VIF2016

Instrument: Research and Development Service

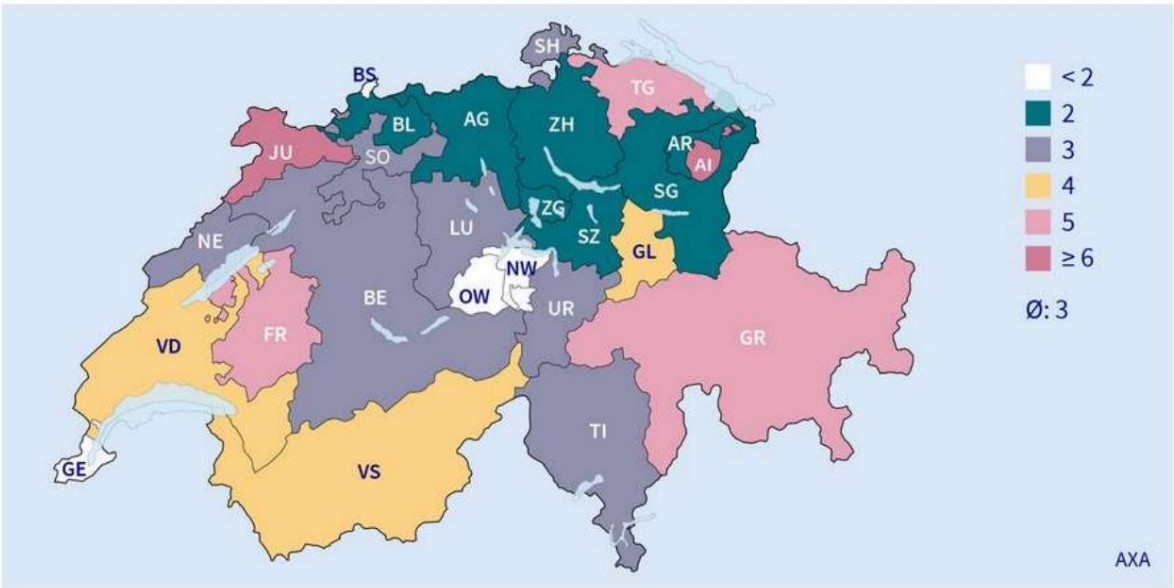
Further projects to prevent wildlife collisions in Germany

The BMVI-funded project **“WilDa”85** produced, during the reporting period, based on Wildlife accident data, and taking into account wildlife behavior, a model to To better define and predict risk areas. For this purpose, mobility, Infrastructure, weather, and environmental data are interconnected. Furthermore, a Wildlife warning service developed with a user-friendly interface for motorists, which Location- and time-dependent awareness of the potential danger situation is raised. WilDa is also intended to... as an improved planning basis for protective measures (e.g. fences and Green bridges). The project results will be published during 2020. Available. Note: The results are not publicly accessible.

4.8.3. Research projects in Switzerland

Information from AXA Insurance, 2021:

"In the cantons of Jura, Graubünden, Fribourg and Thurgau, the probability of The risk of a collision with a wild animal is particularly high, according to AXA's damage statistics. The estimated damage across Switzerland amounts to more than 50 million Swiss francs. Millions of francs. AXA alone, the largest motor vehicle insurer in Switzerland, More than 3,000 wildlife collisions are reported every year, with this number increasing last year. The year has decreased slightly, which is due to the reduced traffic volume resulting from the The pandemic is likely related.



Datenquelle und Diagramm: AXA (Datenbasis: Sämtliche bei der AXA gemeldeten Wildunfälle im Jahr 2020 nach Kanton)

Fig. 38: Wildlife accidents in Switzerland

The risk of a wildlife collision exists at any time of day and year. "However, particular caution is advised in October, November and December. Because if As the days get shorter, wild animals are more frequently on the move at the same time as

Drivers. Furthermore, it is dark during morning and evening rush hour.

"This is why animals on the road are often only seen at the last minute," says Michael Pfäffli, head of the AXA Accident Research.

During morning and evening rush hour, and especially in wooded areas and near warning signs. Drivers should therefore adjust their speed and be prepared at any time "Brake," advises the AXA accident researcher.

The prevention project "Fewer wildlife accidents!"

Sources: ***https:// www.svv.ch/ de/ praeventionsprojekt-weniger-wildunfaelle-abgeschlossen*** as well as ***https:// www.svv.ch/ sites/ default/ files/ 2017-12/ abschlussbericht_weniger_wildunfaelle_15.10.2012.pdf***

From 2006 to 2012, the Swiss Insurance Association (SVV) worked with its partners on the pilot project "Fewer Wildlife Accidents!". The project aimed to reduce the number of collisions between motor vehicles and wild animals, thereby increasing road safety on Swiss roads. With the "Fewer Wildlife Accidents!" project, the Swiss Insurance Association (SVV) (project sponsor), the Zurich Cantonal Department of Construction, RevierJagd Schweiz (Swiss Hunting Association), and the Swiss Animal Protection Association (STS) aimed to significantly reduce collisions with wildlife in the Canton of Zurich and later in other cantons.

Excerpt from the project report:

The project "Fewer wildlife accidents!" is based on two complementary approaches:
Motorists are informed about the dangers posed by animals in the road.

Traffic awareness is increased, while wildlife is warned of approaching vehicles by a technical measure and prevented from crossing the road.

The whistling sound of the wildlife warning devices, which are installed along roads with wildlife crossings, is heard when...

The wildlife crossing is activated at dusk and at night by car headlights.

Safe moments are still guaranteed.

Since 2006, approximately 6,000 wildlife warning devices have been installed along the canton of Zurich. Wildlife crossings have been installed. These are also located in the Seetal region of the canton of Lucerne. Already 1,300 wildlife warning devices are in use, 550 of them in the canton of Schaffhausen. The acoustic

Wildlife warning systems have proven effective. Scientific monitoring of their success in the canton of Zurich has shown this.

It has been proven that on the road sections equipped with warning devices a

A decrease in wildlife accidents of 32 percent to 43 percent has been recorded.