



Project

# Protecting cattle from wolves in the Black Forest, Germany

**Rebecca Müller<sup>1\*</sup>, Ronja Schütz<sup>2</sup>**

<sup>1</sup> Main Agricultural Association of Baden (BLHV), Freiburg, Germany

<sup>2</sup> Baden-Württemberg Forest Research Institute (FVA), Freiburg, Germany

\* Contact: Rebecca.Mueller@Herdenschutzprojekt.de



## Background

A decade ago, wolves (*Canis lupus*) began returning to Baden-Württemberg, south-west Germany, for the first time since the mid-19<sup>th</sup> century. Compared to other parts of the country and neighbouring states, their numbers are still quite low<sup>1</sup>, with confirmed presence<sup>2</sup> of two male residents in the northern Black Forest since 2018 and 2024 as well as one male in the southern Black Forest since 2020 (Fig. 1). Nevertheless, they present challenges to local farmers in terms of costs and additional workload as well as psychological impacts resulting from personal experience of attacks on their animals or hearing news of livestock disturbed, scattered, injured or killed by wolves.

Livestock farming is integral to the history of the Black Forest. Cattle<sup>3</sup> are traditionally grazed in areas without machinery access in order to keep them free of brush and tree cover, supporting high biodiversity. In recent decades, many farmers ended their work which has led to an increase in forest cover in some communities of up to 90%,

showing the importance of cattle in maintaining the area's unique landscape [1,2].

Throughout Europe, sheep and goats are more frequently killed by wolves than large stock [3–5]. Nevertheless, cattle were targeted in 6% of documented cases of wolf depredation that resulted in livestock wounded, killed or missing in Germany in 2022 [6]. In Baden-Württemberg, the first attack on cattle was documented in the southern Black Forest in November 2019. Subsequently, a total of ten animals have been killed and three wounded in ten attacks at six different farms. In nine of the ten attacks, wolves were confirmed as the cause of death or injury. All 13 cattle involved were older than 2.5 months, although in Germany overall wolves tend to attack calves less than two weeks of age (Fig. 2). Most of the attacks in Baden-Württemberg were linked to the resident male wolf by DNA analysis of samples taken from bite marks on the affected cattle.

<sup>1</sup> Wolf reproduction was documented in the Black Forest in 2023, but the female and a pup were killed in vehicle collisions in April 2024 and December 2023, respectively.

<sup>2</sup> <https://www.fva-bw.de/monitoring-luchs-wolf>

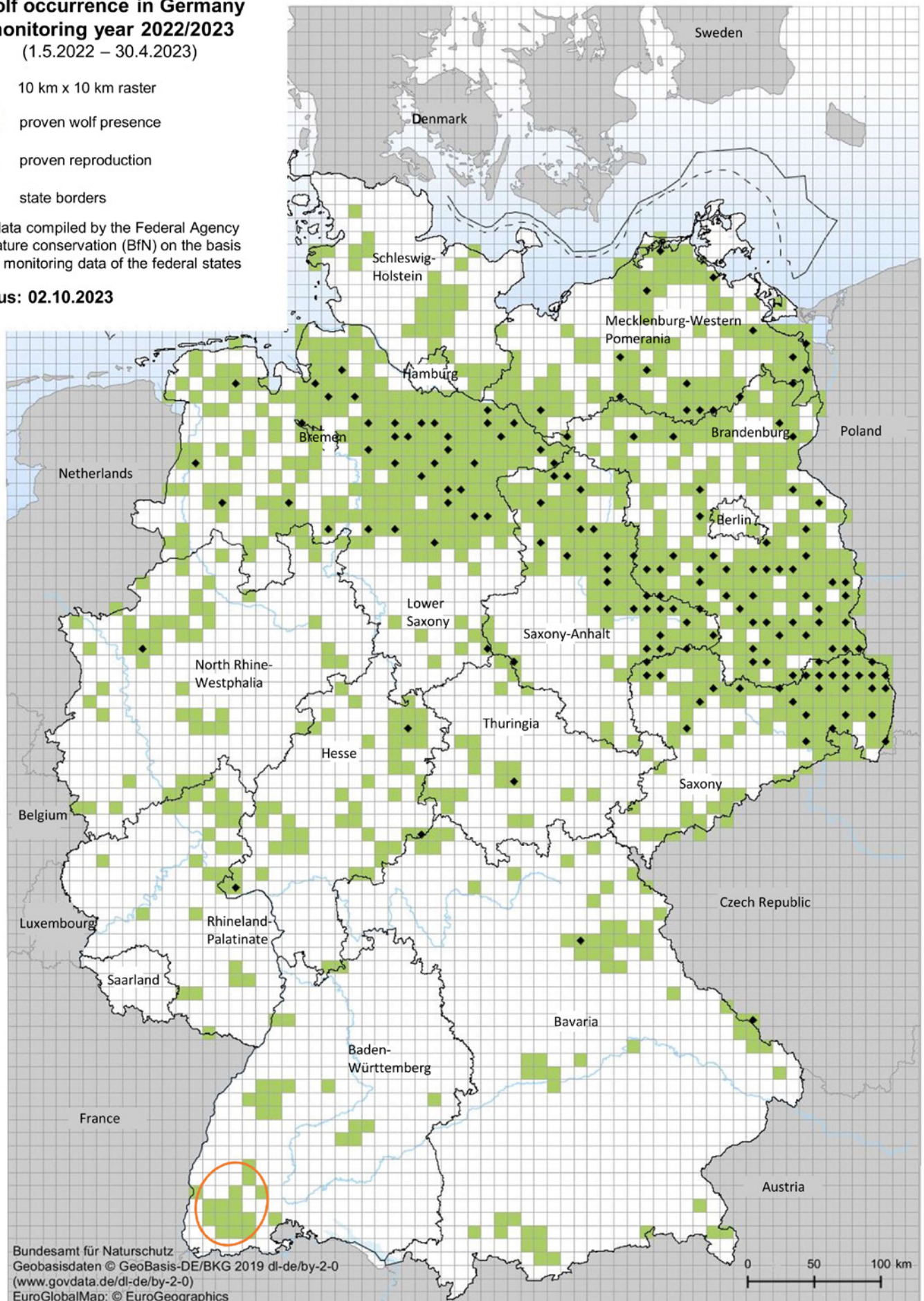
<sup>3</sup> There are many breeds in the area, from typical Black Forest Vorderwald cattle to mixed breeds with Holstein Friesians, Fleckvieh and also Highland cattle. The latter graze outdoors throughout the year; the others usually from around April until October, depending on the location (elevation) and grass.

**Wolf occurrence in Germany  
monitoring year 2022/2023**  
(1.5.2022 – 30.4.2023)

- 10 km x 10 km raster
- proven wolf presence
- ◆ proven reproduction
- state borders

wolf data compiled by the Federal Agency for Nature conservation (BfN) on the basis of the monitoring data of the federal states

**Status: 02.10.2023**



Bundesamt für Naturschutz  
Geobasisdaten © GeoBasis-DE/BKG 2019 dl-de/by-2-0  
(www.govdata.de/dl-de/by-2-0)  
EuroGlobalMap: © EuroGeographics

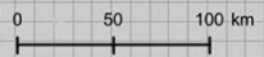


Fig. 1. Distribution of wolves in Germany during the 2022/23 monitoring year (Source: DBBW [7]). The project area is shown by the orange ellipse.

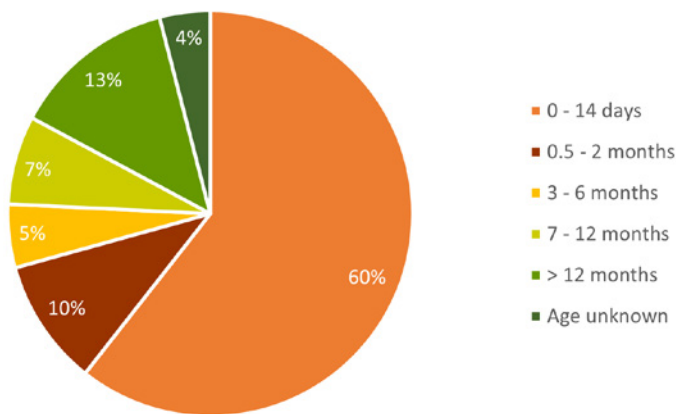


Fig. 2. Age classes of cattle killed, wounded or missing ( $n = 927$ ) as a result of wolf depredation in Germany in 2018-2022 (Source: DBBW [6]).

## Recommendations for reasonable herd protection

To reduce the risk of depredation as well as to create practical and implementable guidelines for farms in Baden-Württemberg, the Ministry of Environment, in cooperation with the Main Agricultural Association of Baden (BLHV)<sup>4</sup> and the organic producer association Schwarzwald Bio-weiderind (SBW)<sup>5</sup>, developed a concept for protecting herds with reasonable measures. This was published in early 2023 and the actions subsidised and made available to cattle farmers. These measures now form the basis for making decisions to remove wolves that repeatedly attack protected cattle within a limited period of time and distance.

The herd protection concept is split into two age classes according to the relative risk of wolf depredation according to nationwide statistics (Fig. 2). For calves up to eight weeks of age, the same methods used to protect small stock according to existing federal guidelines [8], such as electric fences and livestock guarding dogs (LGDs), were deemed to be appropriate. For cattle from the age of nine weeks, a combination of three measures is applicable:

- Herd size: keep them in herds with at least five adult animals.
- Pasture management: to strengthen herd bonding and integrate new animals, compact pasture management can be implemented through one of the following:
  - year-round strip grazing;

- pre-grazing in a small section of the grazing area; or
- shared stabling in a loose-housing stable before turning the herd out to pasture.
- maintaining perennial herds without new animals.
- Risk reduction measure: options to implement this component are the integration of older, more experienced cattle (minimum 24 months), keeping mothers with calves, turbo fladry or, in specific cases and regions without wolf pairs or packs, guard llamas.

## Herd Protection in the Southern Black Forest

In order to support farmers to implement protection measures and to analyse to what extent they can be included in the daily work of local farmers, the Herd Protection in the Southern Black Forest project started in 2023. The project was initiated by BLHV, SBW and the Southern Black Forest Nature Park. It is supported by the Baden-Württemberg Forest Research Institute (FVA) and Agricultural Education Centre (LAZBW).

At the heart of the project is the close support of farms in planning and implementing herd protection (Figs. 3 and 4). In addition to technical measures, the focus is on adapting pasture management. A dedicated livestock protection advisor is available for this purpose, with extensive experience in cattle farming, who works together with experts from the FVA livestock protection advisory service. A second aim is to transfer knowledge from the project and partner farms to livestock farmers throughout the southern Black Forest. Numerous events and training courses will be offered for this purpose during the project along with the implementation of damage prevention measures.

Many farms have applied to be part of the project, of which 15 were selected (Fig. 5). They were chosen to represent the diversity of farming practices in the southern Black Forest. There is a balance between full-time and part-time farms as well as conventional and organic farms. Farms with dairy, beef and sucklers as their main lines of business are all represented. Some of them also have sheep and goats, which needs to be considered when planning herd protection. The 15 farms will work closely

<sup>4</sup> <https://www.blhv.de>

<sup>5</sup> <https://www.schwarzwald-bio-weiderind.de>



Fig. 3. Setting out the line of a new electric fence  
(Photo: Rebecca Müller).



Fig. 4. A movable night pen with external electric wires for protection and shelter of cattle with free access from the pasture. The farmer closes the gate each evening after checking his cows  
(Photo: Rebecca Müller).



Fig. 5. Young cattle at one of the farms participating in the Herd Protection in the Southern Black Forest project (Photo: Rebecca Müller).

with the project team for the duration of the project until September 2027.

An important output of the project will be whether the herd protection measures classified by the Ministry as reasonable are found to be sensible and practicable for cattle farmers in the Black Forest. It is also hoped to determine how effectively the measures protect cattle from wolf attacks. For further information see the project website: [www.herdenschutzprojekt.de](http://www.herdenschutzprojekt.de).

## Acknowledgements

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