

The International Union of Railways (UIC) is the worldwide professional association representing the railway sector and promoting rail transport. UIC leads an innovative and dynamic sector, helping our members find opportunities and build success. The purpose of UIC's Ecological Effects of Railways on Wildlife (rEVeRse) project is to understand railway's role in the loss and gain of biodiversity and its habitats in Europe. It will seek to set out how railways can manage land in an ecologically sensitive way, providing solutions and best practice examples.

ECOLOGICAL EFFECTS OF RAILWAYS ON WILDLIFE
REVERSE

UIC is seeking solutions and best practice to manage rail lineside in a way that can help **halt and reverse the loss of biodiversity.**

This poster provides information about Theme 3:
“Mitigation for impacts of operation on species (collision, electrocution, etc.)”

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Vehicle wildlife collisions (WVC) on railroads and roads. In railway networks and high-speed roads, current systems still are not applicable. The main limitations are the missing functionality during daytime and higher speed operation capability for road and rail traffic.

THE SOLUTION

Crossing a R&D project call has been launched in 2017 by ÖBB-Infrastruktur AG as the manager of the major part of the Austrian railway network, together with ASFINAG as the manager of the national highway-network. The research platform used has been provided by the Austrian Research Promotion Agency in the course of the so-called transport-infrastructure research facility.

The call was awarded to a consortium made up by a company developing wildlife deterring devices (iPTE Traffic solutions), the Austrian Institute of Technology (AIT), responsible for the laboratory testing of light and sound effects of the devices and WWN-Forstner, an acknowledged expert for wildlife and biosphere projects, in charge of the field work and monitoring.

WiConNET brought together all the relevant stakeholders (government, road, rail and highway operators, wildlife experts, industry and research) to tackle the subject. Additionally, an international board of experts. R&D project started in 2018 and should have been finalized in 2021.

The WiConNET project is basically a WVC research and development project, but also includes a test and certification laboratory for WVC equipment and finally deploys 16 large test sites all across Austria. Five of these test sites are located at the railway network at different types of lines from regional lines with a maximum speed of less than 100 km/h to so called high-performance lines with a maximum speed of 230 km/h.

The main goal of the WiConNET Project is to improve the efficiency of today's WVC systems by implementing a wireless communication and networking capability and to extend the applicability WVCA systems towards railways and highways. The system should also be cost efficient to enable a large-scale deployment. Wildlife monitoring was planned to be performed by physical observations, by monitoring with IR-illuminated wildlife cameras, by thermo cam and, as an option, with a special wildlife tracking collar.

Outcomes

Due to delayed installations of the devices and the complicated circumstances of the C19 pandemic, the project progress did not develop as has been planned. Only at the end of 2022 all the 16 test-sites have been equipped with the wildlife deterring devices WDD. Therefor the consortium offered to prolong the project period and will continue their survey until the end of 2022.

Keywords: Collision, Mitigation



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