Collecting the Right Data for Better Road Decisions

RISKY

Global Platform for Wildlife Mortality
from Energy and Transport Infrastructures

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BIOPOLIS cibio fct Fundação para a Ciência e a Tecnologia OSCARS Open Science Clusters' Action for Research & Society Funded by the European Union

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Collision records are not enough

Collision records
Tell us what was found and where.

Systematic monitoring
Provides the information needed to estimate and understand mortality.

Good decisions require more than collision locations.

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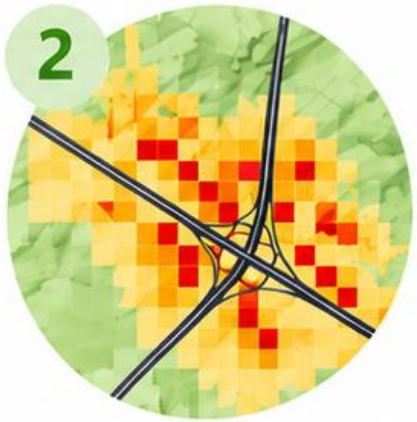
To prevent wildlife–vehicle collisions, we first need to understand the problem.

1

How much?

Magnitude of mortality

2



Where?

Spatial patterns and hotspots

3

When?

Temporal patterns and seasonality

4

Why?

Drivers and risk factors

5

Population consequences?

Impacts on populations and species viability

These questions help to support where interventions are most needed, what measures may be most effective and which impacts are most important to address.

To answer these five questions, we need to collect the right information.

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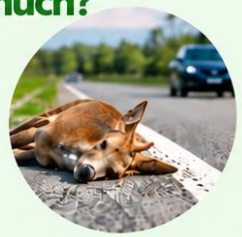
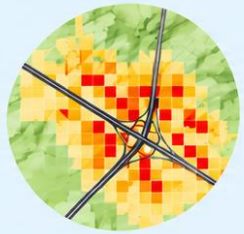
1 How much?



Magnitude of mortality

2 Where?



Spatial patterns and hotspots

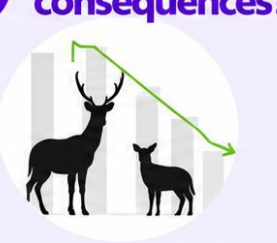
3 When?

Temporal patterns and seasonality

4 Why?

Drivers and risk factors

5 Population consequences?



Impacts on populations and species viability

Mortality data

- Number of carcasses
- Species identification
- Location (coordinates)
- Date

Survey effort

- Survey frequency and duration
- Surveyed distance

Infrastructure data

- Road type and number of lanes
- Traffic volume and speed
- Road design and features

Environmental data

- Land use
- Protected areas
- Proximity to water courses

Species and population data

- Species traits
- Species distribution and abundance
- Demographic parameters
- Conservation status

Collaboration between road agencies and researchers, experts in ecology becomes essential.

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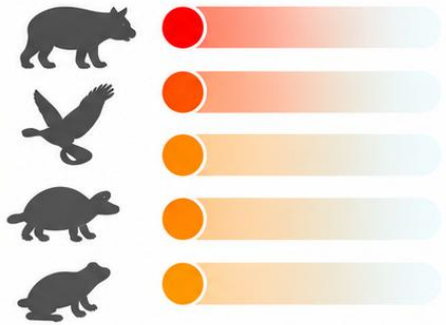
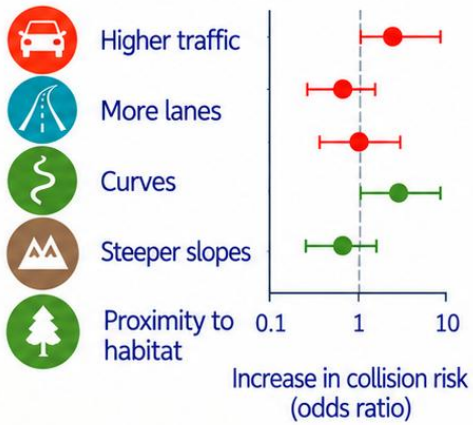
From data to actionable knowledge

List of species at risk

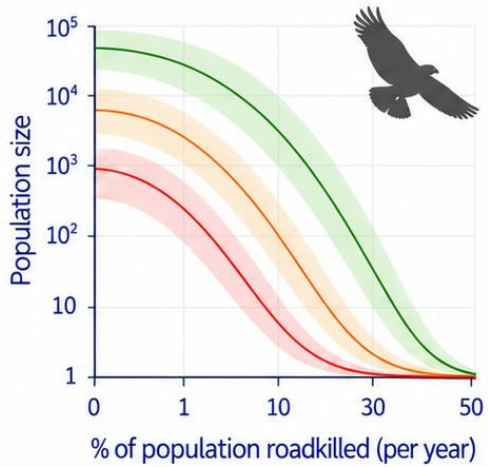


Species with higher risk of road mortality

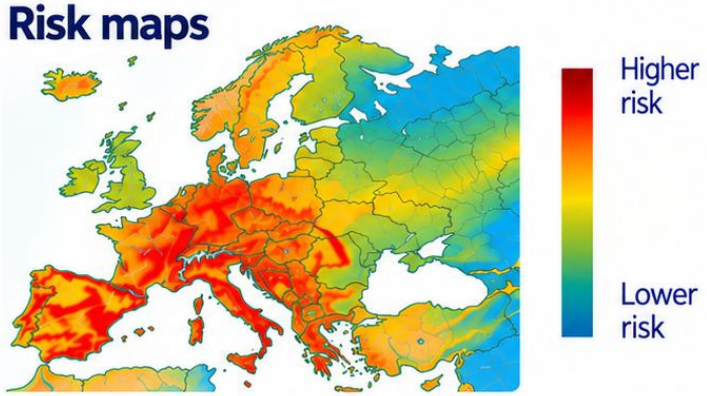
Road features increase the risk of collision



Mortality thresholds

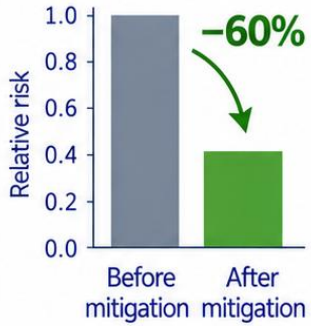


Risk maps



Areas where collision risk is higher

Effectiveness of mitigation measures



Reduction in collisions with mitigation measures

Integrate the results

Design mitigation measures

for **safer** and more **sustainable roads.**

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Global platform on wildlife mortality data from energy and transport infrastructure

DATA SOURCES

Multiple contributors and data types

Researchers

Infrastructure operators

Public administrations

Scientific literature and reports

RISKY GLOBAL DATASET

Integrated, standardized and open data

> 240,000 records

> 2,000 species

> 50 countries

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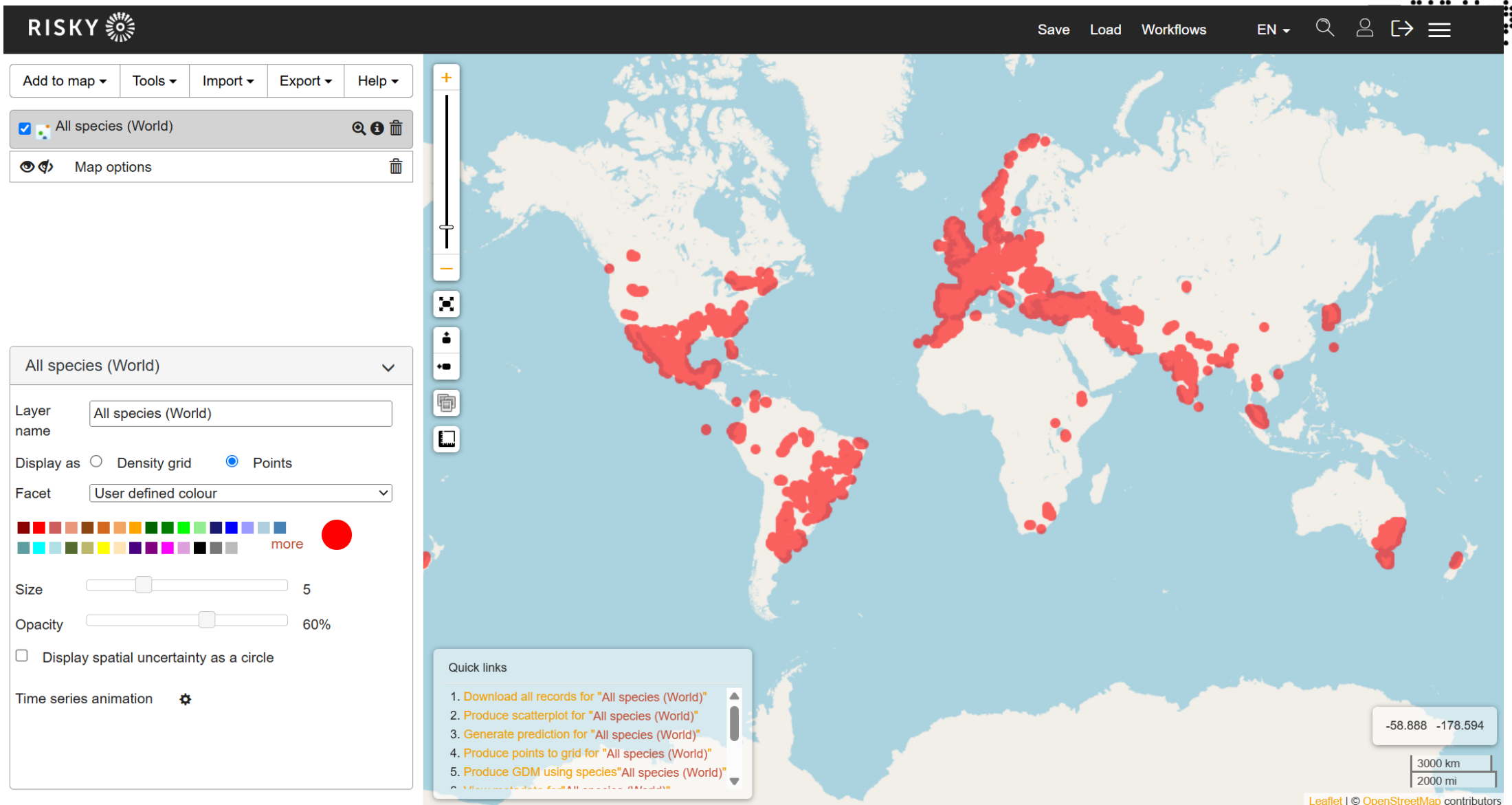

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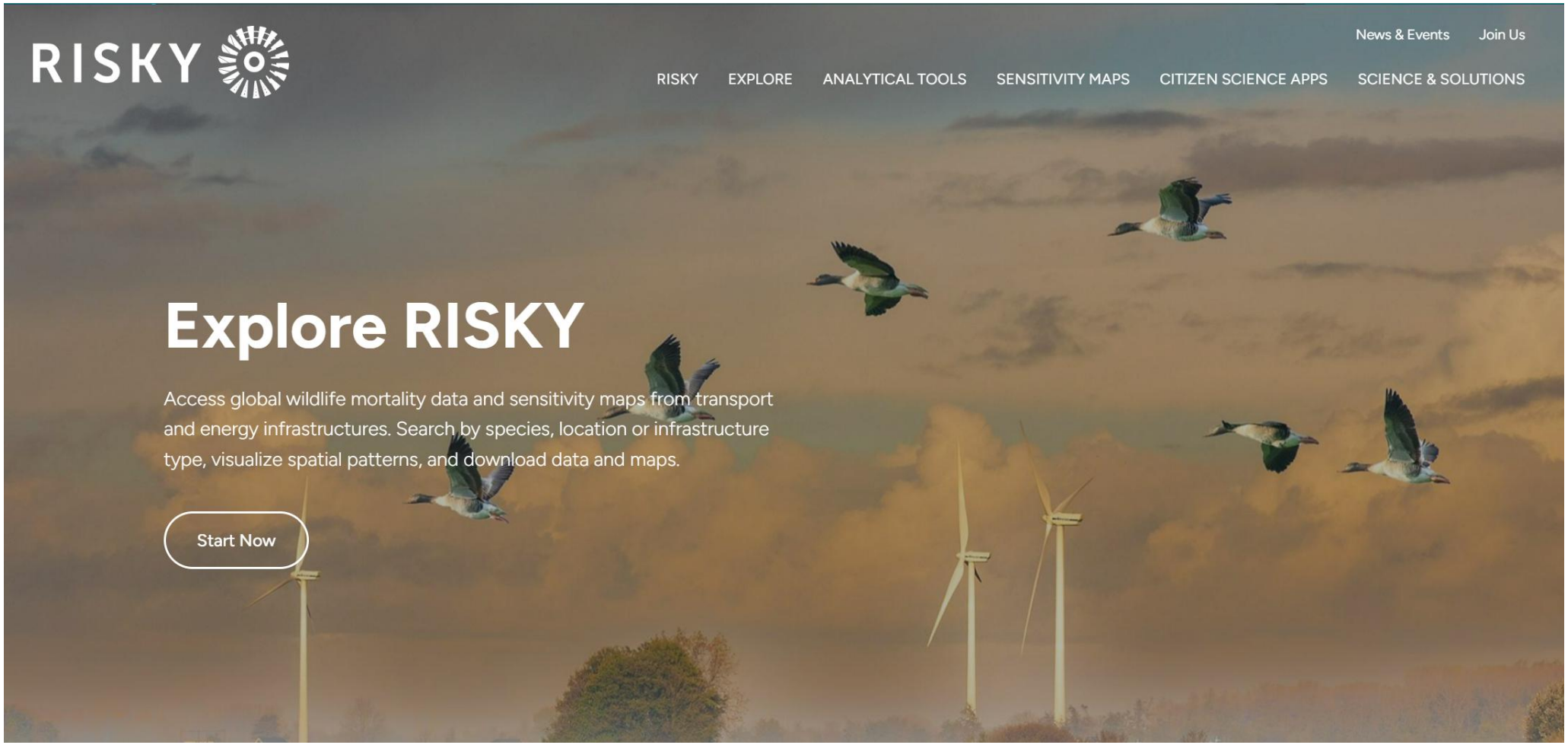
Global platform on **wildlife mortality data**
from **energy** and **transport** infrastructure



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Search Mortality Data

Find and filter wildlife mortality data by species, location, infrastructure type and other criteria, and download the data for further analysis.

Search data

Explore the Map

Discover spatial patterns of wildlife mortality and sensitivity through an interactive global map. Search, visualize and download mortality data and sensitivity maps.

Explore map

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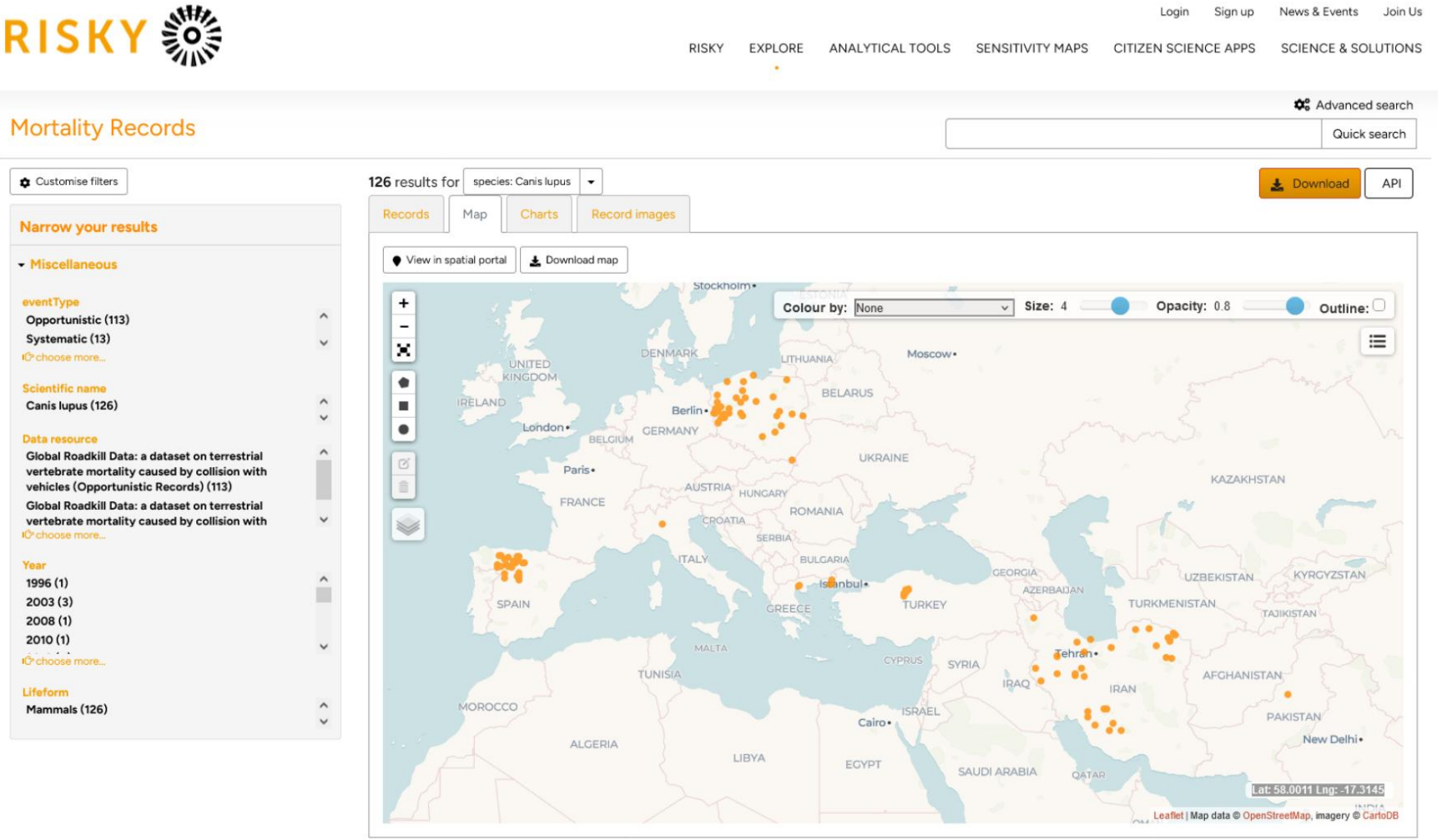

Search

by species,
by region,
by survey
by dates

Detailed

records

Download

records

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Occurrence record: a874ecbf-0626-4ba6-a0c3-063711478456

Human observation of *Canis lupus* Linnaeus, 1758 | Grey Wolf recorded on 2013-04-25

Flag an issue | Contact curator | Compare "original vs processed" values | Copy record id | API

- Dataset
- Event
- Taxonomy
- Geospatial
- Additional properties
- Data quality tests (0 , 4 , 90 , 5 , 25)

Date loaded: 2026-08-14
Date last processed: 2026-08-14

Dataset

Data resource	Global Roadkill Data: a dataset on terrestrial vertebrate mortality caused by collision with vehicles (Opportunistic Records)
Institution code	*Supplied institution code "CIBIO"*
Occurrence ID	a874ecbf-0626-4ba6-a0c3-063711478456
Record type	Human observation *Supplied basis "HumanObservation"*
Collector	Colino-Rabanal, V.J
Individual count	1
License	CC-BY 4.0 (Int) *Supplied as https://creativecommons.org/licenses/by/4.0/*
Modified	2025-03-26
Dataset name / Survey name	[Global Roadkill Data: a dataset on terrestrial vertebrate mortality caused by collision with vehicles]

Survey

Dataset name / Survey name	Global Roadkill Data: a dataset on terrestrial vertebrate mortality caused by collision with vehicles
Occurrence date	2013-04-25 *Supplied as year:2013 month:4 day:25*
End day of year	115
Date precision	DAY
Start day of year	115

Taxonomy

Search
by species,
by region,
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Detailed
records

Download
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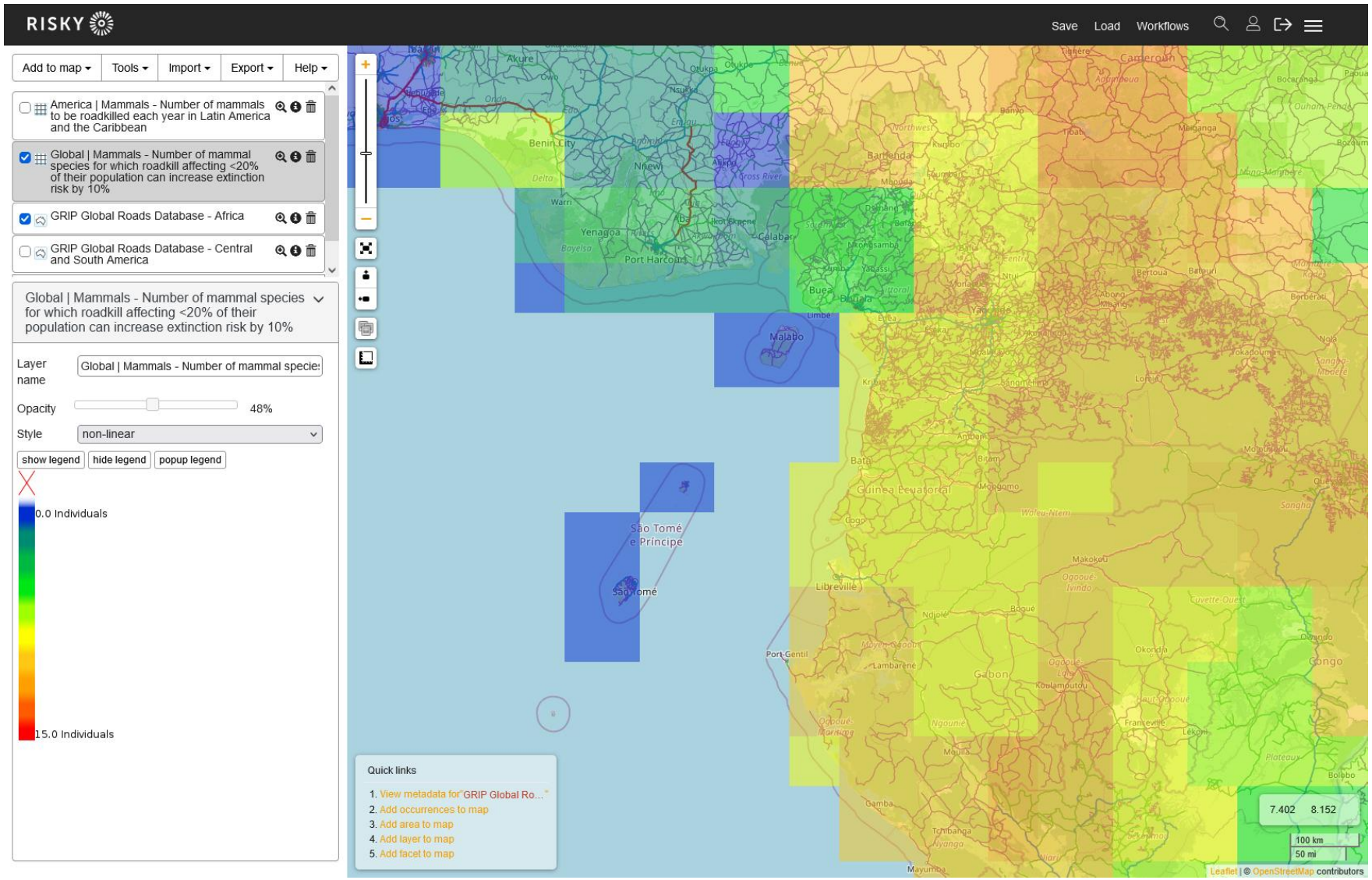

Interactive maps

- GIS layers
- Sensitivity maps
- Hotspots of mortality
- Upload your data
- Spatial Analyses of collision risk

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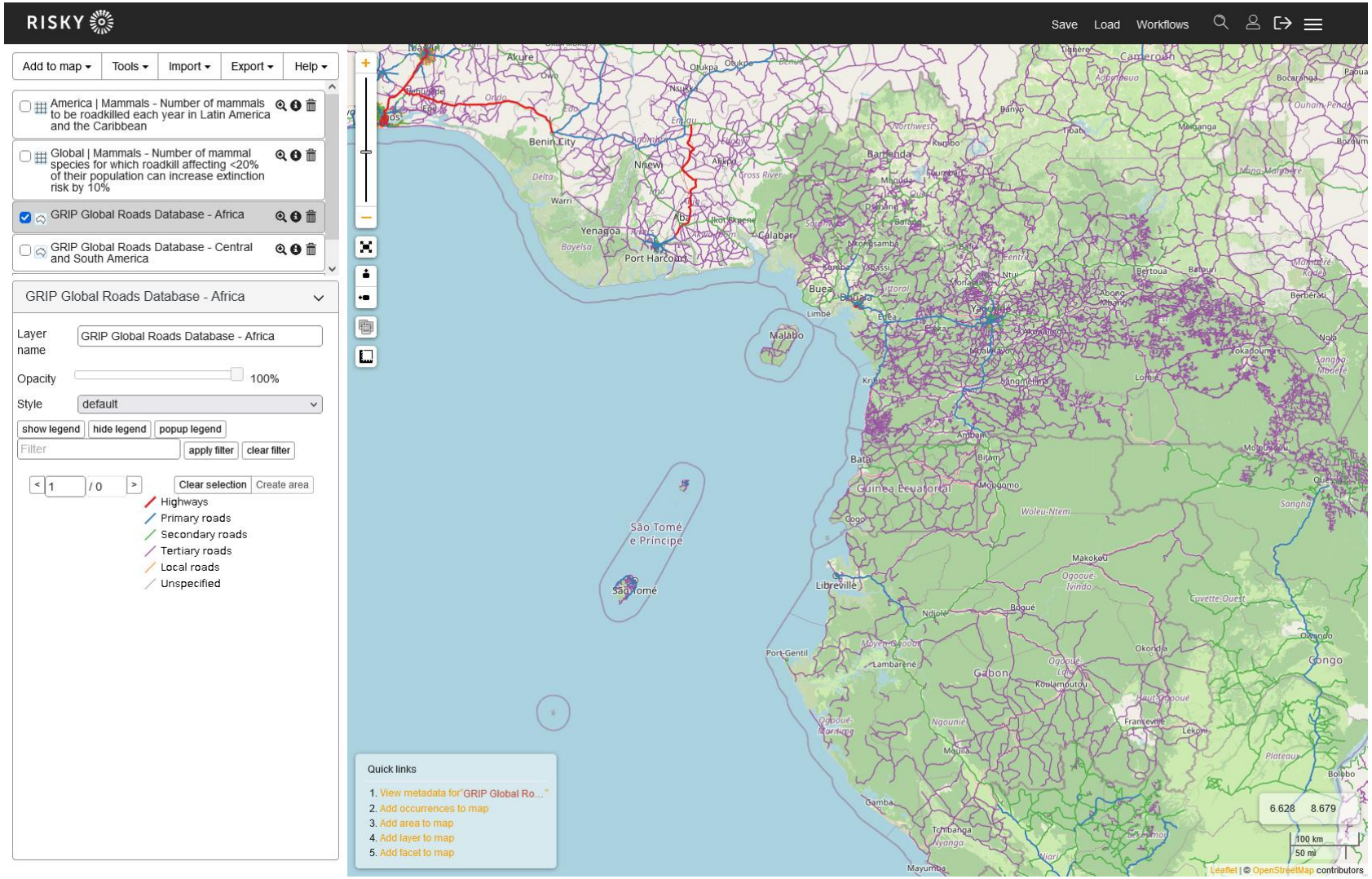

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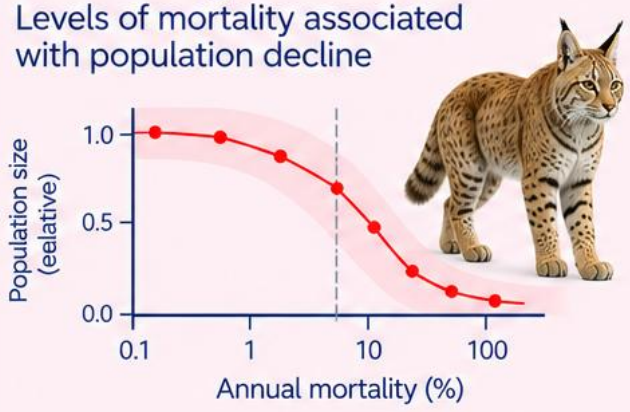
Species traits
associated with higher risk

Body size | Mobility | Diet | Habitat use | Flight ability

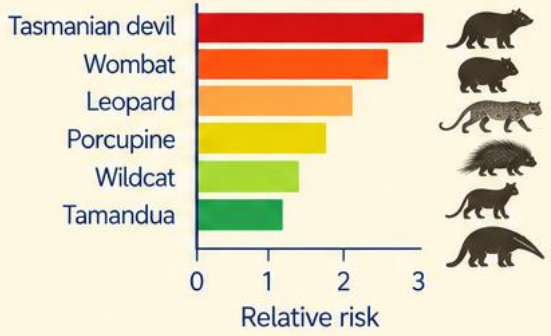
Road features
that increase collision risk

- Higher traffic
- More lanes
- Curves
- Steeper slopes

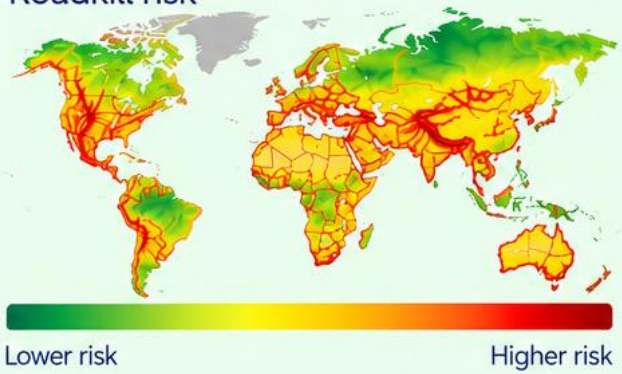
Mortality thresholds
Levels of mortality associated with population decline



Ranking of mammals at risk
Species with highest predicted risk of infrastructure-induced mortality



Sensitivity maps
Roadkill risk



Let's work together for better road decisions

IRF | INTERNATIONAL ROAD FEDERATION

Engage and connect the road sector

ROAD AGENCIES

Collect and share the right data

RISKY

Standardise, integrate and analyse local and global wildlife mortality data

GRID

Support biodiversity integration into infrastructure planning

Better information for decisions

BETTER DATA

More and standardized wildlife collision data

BETTER EVIDENCE

Data-driven knowledge and analytical tools

BETTER ROAD DECISIONS

Wildlife-friendly and more sustainable roads

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Thank you for your attention!

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