

INTRODUCTION

Within the research program 2017 ITTECOP (Land Transport Infrastructures, Ecosystems and landscapes), Cerema, centre for studies and expertise on risks, environment, mobility, and urban and country planning, was selected to construct a European project « AMPHILTe » over several years with different partners.



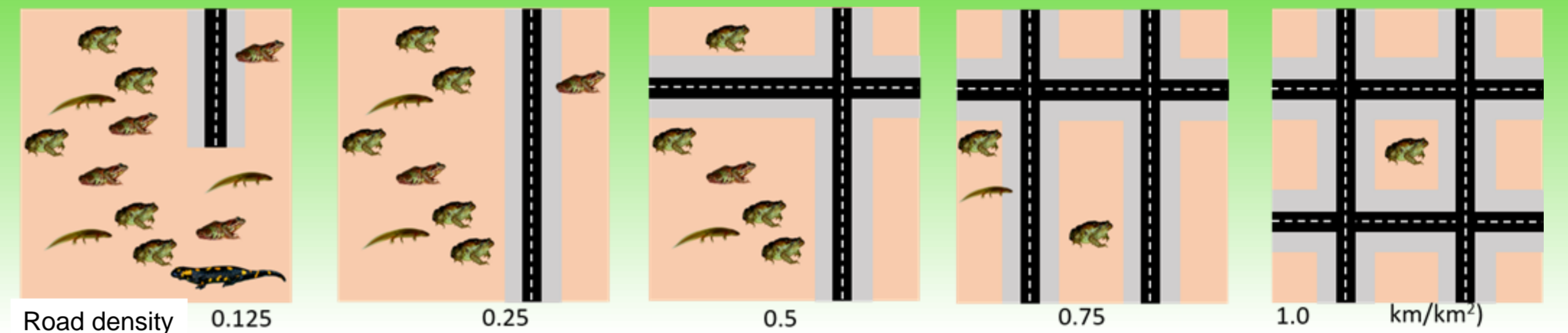
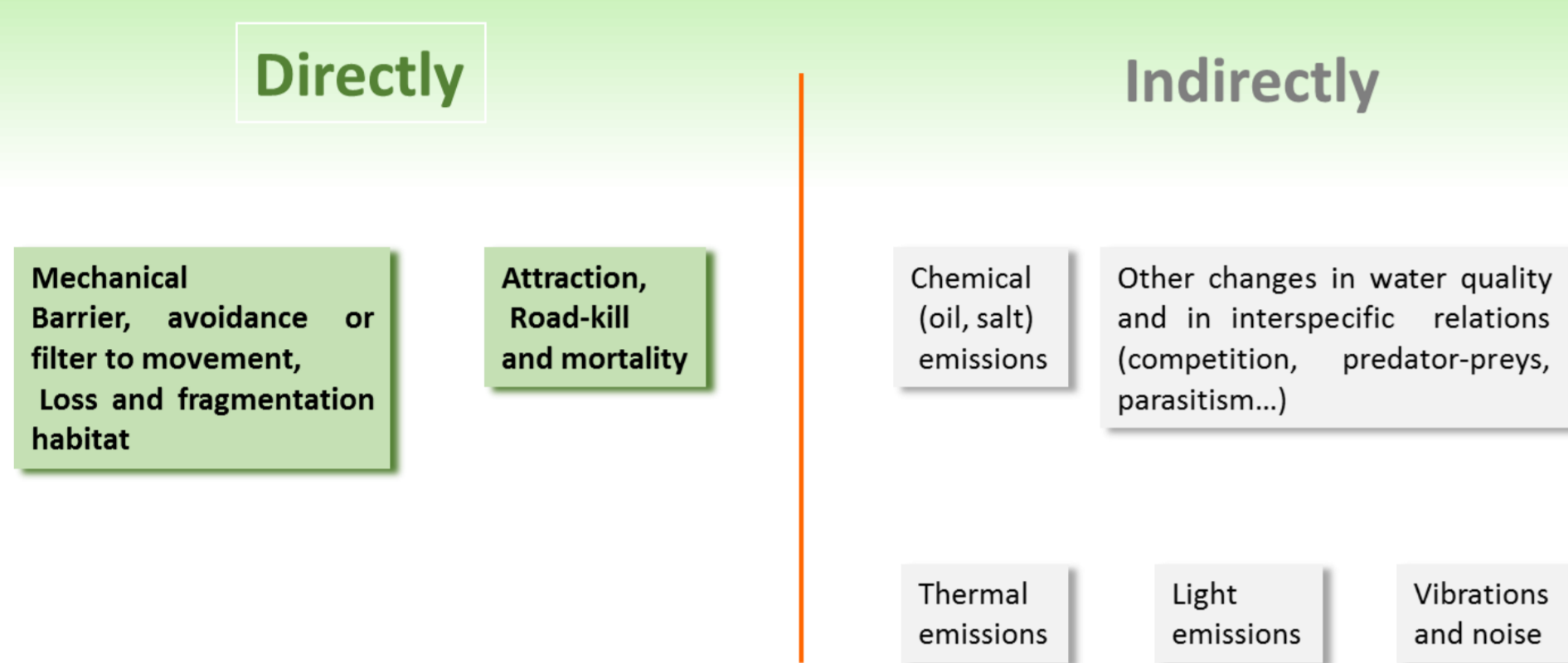
Benefits of a co-construction

This applied project takes into account the experiences and skills from different and diverse backgrounds, gathers a group of various stakeholders (public and private, NGOs – naturalist and citizens, research scientists, managers of protected area, infrastructure managers and road/transport planning experts)



CONTEXT AND TOPICS

Linear land transport infrastructure and their influence can impact amphibians in two major and different ways in human-dominated landscapes...



Road kills

- Until 1000 individuals during one night (after rainfall and high temperature during the breeding period) on a 100 meters road section
- Between 10 000 - 50 000 individuals are killed by vehicles during each breeding season at local scale of sites
- In France and at the European Union scale, respectively between 25-50 M. and hundreds of millions of adults are killed every year.

Habitat fragmentation

In France, road density 2 km per km². Roads cause a loss and degradation of habitat due to disturbance effects (grey roadside corridors) and isolation. With increasing road, density areas of undisturbed habitat (white) are reduced in size and become inaccessible. Remnants fragments of suitable may eventually become too small and too isolated to prevent local populations from going extinct

OVERALL OBJECTIVES & ACTIONS

This objective is divided into seven sub-objectives which will contribute to gain a better understanding of the mechanisms involved, to reduce infrastructure mortality, to make amphibian crossing systems more effective and efficient, to improve the surrounding environment of the most important crossing devices for concerned species:

O1 At the territory scale, reduction of the impacts and threats of LTI on amphibian populations, by increasing ecological connectivity, especially within and between Natura 2000 sites

O2 Supplementation of the methods consisting in preventing, reducing and compensating LTI impacts on amphibian populations, and improving effectiveness and efficiency of existing or planned temporary and permanent amphibian crossing systems

O3 Improving and sharing the knowledge, the experience and each other's solutions related to the problematic of amphibians crossing infrastructures, between European partners (France, Poland and Denmark) and other EU countries dealing with the same problematic (through study tours)

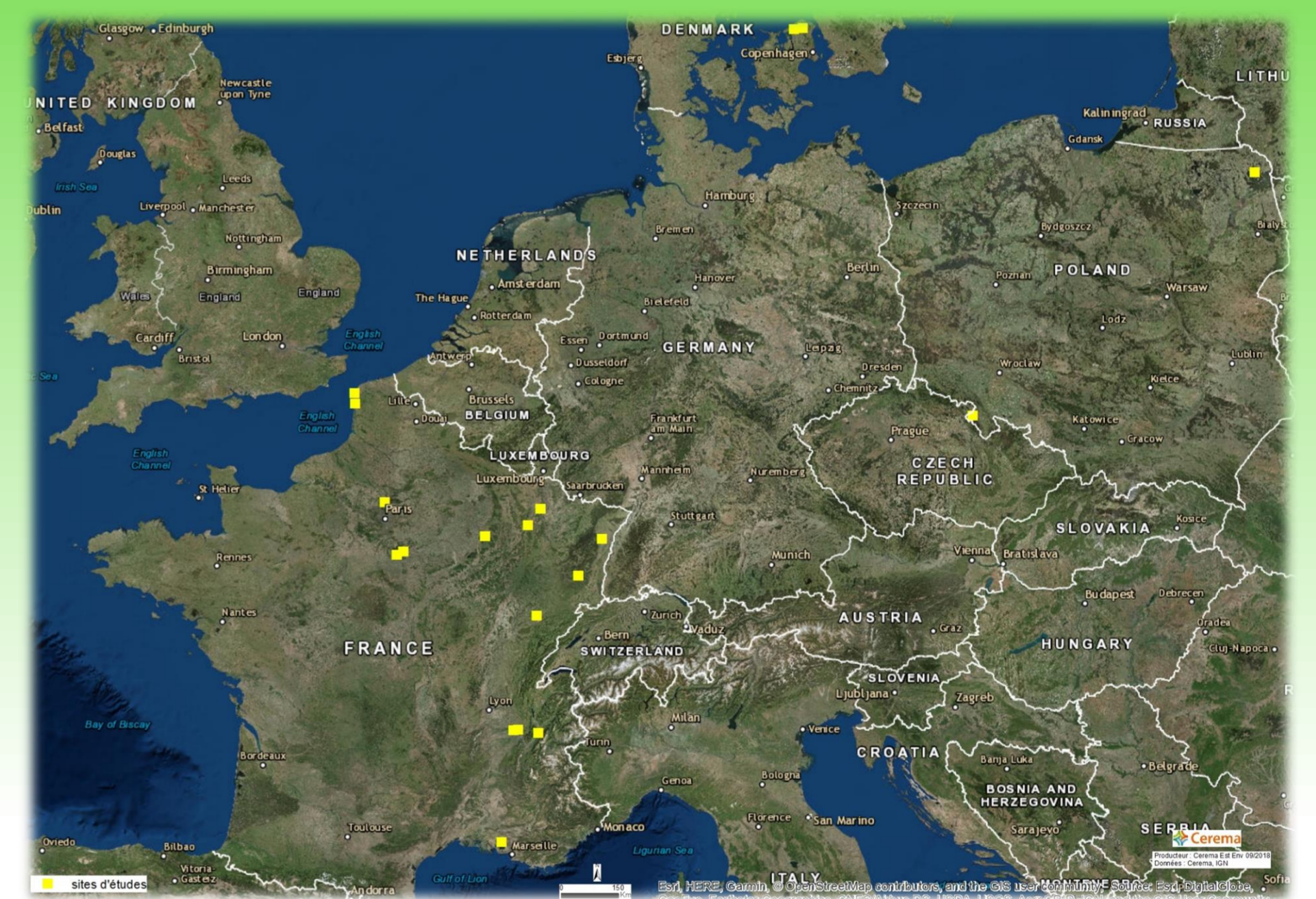
O4 Improving methods used to quantify and assess mortality, for selecting the best locations when installing crossing systems for amphibians, and for collecting data on wildlife use of the crossing

O5 Ensuring land purchase on strategic sites where the problematic of crossing infrastructure is a major challenge, managing these areas to improve their ecological functionality

O6 Contributing to the improvement of the environmental governance by promoting the participation of all interested stakeholders through actions of exemplary value

O7 Enabling the problematic of crossing of infrastructure by amphibians to be considered, educating different target groups : LTI professionals and managers, elected representatives and decision makers, adult and children users and citizens

GREEN INFRASTRUCTURE - ENHANCING EUROPE'S NATURAL CAPITAL



Some study sites in four biogeographical regions from the UE (Atlantic, Continental, Alpine and Mediterranean)

The project contributes to the objectives of the Environment, Nature and Biodiversity subprogram, including:

- the EU Biodiversity Strategy for 2020 (Target 2 "maintaining and enhancing ecosystems and their services ") and Directive 92/43/EE
- to support the development, implementation and management of the Natura 2000 network. Our project contributes to the application, the elaboration, the experimentation and the demonstration of integrated approaches, concerning 14 species in Annex II and/or IV of Habitats Directive
- to improve the knowledge base for the development, implementation, assessment, monitoring and evaluation of Union nature and biodiversity policy and legislation, and for the assessment and monitoring of the factors, pressures and responses that impact on nature and biodiversity within and outside the Union

More generally, the project contributes to European environmental policy

"Provide guidelines to support the deployment of Green Infrastructure to better interconnect Natura 2000 areas"

PROJECT PARTNERSHIP

A multi-national and multi-partnership project:

