



# ECOLOGICAL AND TERRITORIAL FUNCTIONALITIES OF LINEAR TRANSPORT INFRASTRUCTURE

## Partners of the call for proposals



ITTECOP is an incentive-based research programme led by the French Ministry for Ecological and Inclusive Transition (MTES), with the support of the French Environment and Energy Management Agency (ADEME). The programme, which was launched in 2008, focuses on all kinds of linear land transport infrastructure (road, rail, river and energy) and interfaces with local territories (train stations, ports and airports). Depending on scale, the effects of linear transport infrastructures are analysed from a transdisciplinary perspective including ecological, social, economic, landscaping, heritage and other considerations.

For more information: research projects supported by the programme since 2008 can be found on the website [www.ittecop.fr](http://www.ittecop.fr). A web documentary, featuring reports and interviews with researchers, is also available at [www.ittecop.fr/webdoc4-3/](http://www.ittecop.fr/webdoc4-3/)



The Club of Linear Infrastructure and Biodiversity (CILB) is an informal group of organizations which have signed the June 2011 founding charter. It seeks to deepen businesses' commitments to biodiversity. For this call for proposals, members ASFA, Eiffage, ENEDIS, EDF DPH GRTgaz, LISEA, RTE, SNCF Réseau, TIGF and VNF have invested around € 770,000.



The Foundation for Research on Biodiversity was created in 2008 by the Ministries of Research and Ecology and by eight public research institutions (BRGM, CIRAD, CNRS, IFREMER, INRA, IRD, IRSTEA and MNHN). It brings together a range of scientific and operational stakeholders working on biodiversity. Around 260 organisations, non-profit groups, businesses, developers and local authorities have joined the FRB to pursue the common goal of promoting research and innovation for biodiversity. [www.fondationbiodiversite.fr](http://www.fondationbiodiversite.fr)



The call for proposals is supported by the Infrastructure Ecosystem Network Europe (IENE), a European research network founded in 1996. IENE brings together researchers and operational actors from more than 50 countries who specialise in interactions between infrastructure and biodiversity. [www.iene.info](http://www.iene.info)

## Contacts

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## Call for proposals 2017-2020



# ECOLOGICAL AND TERRITORIAL FUNCTIONALITIES OF LINEAR TRANSPORT INFRASTRUCTURE

Linear transport infrastructure (LTIs) interact with landscapes, societies and biodiversity. Despite the little amount of land they use, they can impact all the ecosystem by fragmenting the territory, potentially leading to the isolation of animal populations within a patch of habitat, the emergence of new pollution source and the spread of invasive species.

However, there are other roles which must be acknowledged and measured. LTIs can be considered as valuable resources in the reconstitution of ecological networks and for the protection of ecosystemic services. LTIs cover more surface than French protected nature reserves and therefore, many actors intervene in these areas, looking for ways to reduce the environmental impact of infrastructures and to develop better adapted environmental and heritage management strategies, able to comprehend the rebound effect of architectural works such as LTIs.

The projects selected following the 2017 call for proposals are characterised by high levels of international cooperation. They focus on evaluating measures seeking to assess and manage the ecological functionalities of LTIs. Linear transportation infrastructure are part of a living, ever-evolving territory influenced by landscape changes, ecological dynamics and specific social issues. These shifting relations contribute to the continuous reorganization of territories and result in surprising agreements between human made areas and natural environments.

The 2017 ITTECOP call for proposals gathered 1,3 million euros, and was co-financed by the CILB (Linear Infrastructure and Biodiversity Club), the MTEs (Ministry for an Ecological and Solidary Transition) and the ADEME (French Environment & Energy Management Agency)

## 14 PROJECTS SUPPORTED FOR THE 2017-2020 CALL FOR PROPOSALS

### Research projects

**CHIROLUM** - Comment limiter les impacts écologiques de l'éclairage artificiel nocturne le long des ILTe ? Influence des paramètres lumineux des LEDs sur les mouvements des chiroptères - Isabelle LE VIOL - CESCO UMR 7204 - Isabelle LE VIOL, MNHN - [isabelle.Le-viol@MNHN.fr](mailto:isabelle.Le-viol@MNHN.fr)

**ERC-LYNX** - Avoid, reduce and compensate mortality risks of the Eurasian Lynx (*Lynx lynx*) by collision with transport vehicles - Olivier Gimenez - CEFE/CNRS - [olivier.gimenez@cefe.cnrs.fr](mailto:olivier.gimenez@cefe.cnrs.fr)

**E=RC+** - Promote 'avoidance' (in the mitigation hierarchy) in an integrative way and measure its consequences on 'minimization' and 'offset' as part of infrastructures and development projects - Thierry TATONI - OSU Institut Pythéas - [thierry.tatoni@imbe.fr](mailto:thierry.tatoni@imbe.fr)

**InSERCAT** - Integration of the mitigation sequence (avoiding, reducing and offsetting impacts on biodiversity) into land planning policies - Romain Julliard - MNHN - [julliard@mnhn.fr](mailto:julliard@mnhn.fr)

**INTERCONNECT** - Coevolution of interconnected river infrastructures and biodiversity - Andreas Huber - Institut Européen pour la Recherche sur l'Energie - [huber@eifer.org](mailto:huber@eifer.org)

**INFLUBIO** - Biodiversity management within the framework of transformation and maintenance of waterway infrastructures, in a context of ecological crisis - Gabrielle BOULEAU - IRSTEA Bordeaux [gabrielle.bouleau@irstea.fr](mailto:gabrielle.bouleau@irstea.fr)

**CREATIVE LIGNES** - The challenge of a landscape creative project for high voltage lines and road infrastructures: public action, landscape architecture and biodiversity - Patrick MOQUAY - LAREP - [p.moquay@ecole-paysage.fr](mailto:p.moquay@ecole-paysage.fr)

### Exploratory projects

**COMERCAR** - Comparative study in animal carcass survey methods on roads - Eric Guinard - Cerema DTer Sud-Ouest - [eric.guinard@cerema.fr](mailto:eric.guinard@cerema.fr)

**En PISTE** - Scientific hikes to invent descriptive methods for spaces bordering great infrastructures - Denis Deblaere - Laboratoire Conception Territoire Histoire - [d-delbaere@lille.archi.fr](mailto:d-delbaere@lille.archi.fr)

**GEDEV** - Green verges new management practices - Claire Etrillard - INRA - [claire.etrillard@inra.fr](mailto:claire.etrillard@inra.fr)

**NOTEE VA** - Highways ecological footprint - Ludovic Lecontellec - Ameten [l.lecontellec@ameten.fr](mailto:l.lecontellec@ameten.fr)

### Incubator Projects

**AMPHILTe** - Reduce impacts of the Linear Infrastructures of Terrestrial Transport on the amphibian populations - Alain Morand - CEREMA [alain.morand@cerema.fr](mailto:alain.morand@cerema.fr)

**TILT-AE** - Territories with linear infrastructures leading the agro-ecological transition - François Omnes - ONCFS [francois.omnes@oncfs.gouv.fr](mailto:francois.omnes@oncfs.gouv.fr)

### Systematic review

**Cohnecs-IT 2** - Second part - Longitudinal Connectivity and Habitat potential of green verges depending on their Nature, species and the Context: a Systematic review on Transport Infrastructure - Touroult Julien - Muséum national d'Histoire naturelle - [touroult@mnhn.fr](mailto:touroult@mnhn.fr)

## SEVERAL TYPES OF PROJECTS:

### ■ Research projects

Fundamental or applied research projects aim to answer scientific questions through a multi-disciplinary approach and the examination of linear infrastructures of different types. Research projects have a maximum duration of three years.

### ■ Exploratory and incubator projects

Exploratory projects are dedicated to the prospective analysis of emerging, controversial or not defined enough subjects. They have a maximum duration of one year.

Incubator projects aim to prepare the submission of ambitious research projects in the context of the ANR, H2020 or Life+ calls for proposal

### ■ Systematic review

There is, in the field of LTIs, and extensive literature that needs to be synthesized so all its potential can be used. The systematic review is a method which assesses the quantity and the quality (trustworthiness) of all the available literature, in order to draw clear, solid and unbiased conclusions.

