



Acting for Bats

The Main objectives
of the National Action Plan
2016-2025

Protect
Improve knowledge
Support the networks
Train for public awareness



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Bats : Biology

Metropolitan France hosts 34 species of bats with different social structures and habitat. Their life cycle consists of four phases, punctuated by seasons.

The absence of insects in the winter (an exclusive food resource) encourages bats to hibernate in shelters such as cellars, underground cavities, trees, bridges, viaducts, tunnels (civil engineering structures) with consistent temperature and humidity.

winter



spring



At the beginning of Spring, the bats join the transit roosts and then, in the Summer, the females settle down in their maternity roosts to give birth to their single offspring, whether in attics, steeples, large constructions, trees or underground cavities. Males use separate roosts.

autumn



summer

At the end of the Summer, individuals will build up reserves of fat and mate before entering the hibernation phase.

Each period is associated with specific needs in terms of roosts and hunting habitats. **Bats play an essential role in the functioning of ecosystems** and contribute to the maintenance of the balance of natural environments, in particular by regulating the numbers of nocturnal insects.

Their presence and their population dynamics inform us about certain ecological characteristics of our environment or about the incidence and evolution of certain practices (bio-indicator species *). Because of the varied lifestyles of the different species of bats, their maintenance contributes to the protection of numerous processions of species (so-called «umbrella» species **).

* Species whose presence and populace fluctuations reflect changes in local environmental conditions or variations in the numbers of other species in the community.

** Species requiring such habitat and surface conditions that their conservation will safeguard other rare and endangered species.



Bats : threats and protection

The threats that species experience are very diverse but mostly relate to human activities, consequently the current bat population is significantly lower than it used to be in the 1950s.

■ Modification and alteration of natural environments

The disappearance of wetlands, of alignment or isolated trees, the levelling of hedgerows, and the light pollution make hunting grounds and food resources more rare disrupting flight routes.

■ Disappearance or modification of the roosts

A number of factors have lead to the disappearance of roosts including the closure of subterranean cavities, the increase in public sports and tourist facilities (opening to the public) located around caves, the renovation of buildings or infrastructure, the felling of hollow trees and insulation works.

■ Direct Destruction or Disruption of Flight Routes

Bats are the victims of direct disturbances to their roosts, collisions (roads or windmills) and barotraumas (major wind turbine pressure variations leading to internal fatal haemorrhage). Transport infrastructure and wind farms fragment their habitats, resulting in the interruptions of the flight routes of the bats.

■ Chemical contamination

The use of certain antiparasitic agents and insecticides causes a depletion of the food resources. The treatment of carpentry has a direct impact on individuals.

■ Epizootics

Diseases lead to mortality and pose a risk to the state of conservation of bat populations. The impact of natural factors can be increased due to deteriorated physical conditions, in particular as a result of anthropogenic pressures (increased disturbances, decreased trophic resources, etc.).



The 34 species of bats are all protected by various conventions and laws :

International and European

- > *The Bonn Convention (23/06/1979) on the conservation of migratory species.*
- > *The Bern Convention (19/09/1979) on the Conservation of European Wildlife and Natural Habitats.*
- > *The EUROBATS Agreement (4/12/1991) on the conservation of the populations of European Bats.*
- > *The European Habitats-Fauna-Flora Directive (EEC N ° 92/43) annex IV indicates that microchiroptera require strict protection. Annex II lists the species of Community interest.*

National Level

- > *1976 Conservation Act: All species of bats present in France are protected.*
- > *Ministerial Order of 23 April 2007 (Amended on 15/09/2012): The following are prohibited throughout the metropolitan territory at all times: the destruction, mutilation, capture or abduction, intentional disturbance of bats in the natural environment, transportation, domestication, peddling, offering for sale, selling or buying for the commercial or non-commercial use of bats. In the different parts of the metropolitan territory where the species are present, as well as in the natural movement range of the existing populations nucleus, also prohibited are the destruction, alteration, degradation of breeding sites and resting areas of animals.*



The National Action Plan for Bats : Context and Challenges

As part of the National Biodiversity Strategy, the Ministry of the Environment has initiated national action plans for threatened species, including the National Action Plan for Bats (PNAC).

This third PNAC has been implemented for the period 2016-2025. Written by the Federation of Conservatories of natural areas in close collaboration with different partners, it is animated by this same structure and managed by the Regional Direction of Environment, Planning and Housing of Bourgogne-Franche-Comté.



The objective of this PNAC is the protection and conservation of the nineteen so-called priority bat species throughout the French metropolitan area. Ten actions were identified. Regional variations will make it possible to adapt actions to local contexts to the best advantage, in favour of species with high stakes for the region.

The 19 priority



Cave dwelling species



Schreiber's bat



Lesser mouse-eared bat



Mediterranean horseshoe bat



Mehely's horseshoe bat



Forest species



Bechstein's Bat



Escalera's bat



Giant Noctule



Nathusius's Bat



Lesser noctule



Noctule Bat



The 19 priority species of the National Action Plan

A monitoring committee has based itself on European and national reports to select the species that will benefit from the conservation actions of the NAP. Thus, the 19 priority species identified correspond to at least one of these criteria :

- The conservation status is assessed as unfavourable in at least one biogeographical region (according to the Habitats-Fauna-Flora Directive and its six-yearly reporting under Article 17);
- The state of conservation is assessed as unknown in all biogeographical areas where the species is present (according to the Habitats-Fauna-Flora Directive and its six-yearly reporting under Article 17) ;
- Species whose improvement in knowledge is required (according to the Eurobats Agreement and Resolution 7.12 ratified by France in September 2014) ;
- Species classified as Critically Endangered, Endangered «,» Vulnerable «or» Near Threatened «in the National Red List of Endangered Mammals of Metropolitan France (2009) ;
- The trend of population change is judged to be decreasing (according to the diagnosis of the 34 species, established during the review of the National Action Plan for Bats 2009-2013).

species identified



Anthropophilous species



Lesser horseshoe bat



Serotine Bat



Common Pipistrelle



Northern Bat



Species of the agro-pastoral environment



Greater Horseshoe bat



Alpine Long-eared bat



Wetland species



Pond Bat



Maghrebian mouse-eared bat



Long-fingered bat



The 10 actions of The National Action Plan

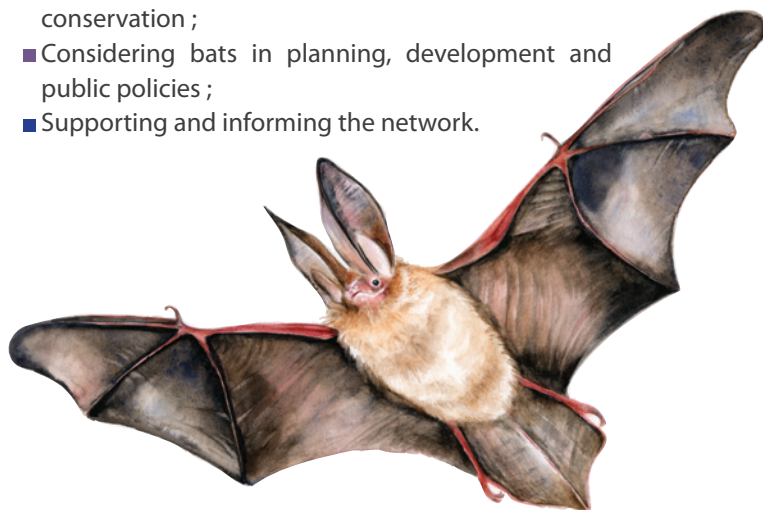
Three areas of work have been identified including ten steps to be taken to improve the conservation status of the 19 priority species.

Each step or action is guided by a reference structure :

Federation of Conservatories of natural areas (FCEN), French Society for the Study and Protection of Mammals (SFEPM), National Museum of Natural History (MNHN), Centre for Studies and (CEREMA), Ministry of Culture, Natural History Museums of Bourges and Geneva, Office National des Forêts (ONF), National Office for Hunting And Wildlife (ONCFS), CNPF (National Centre of Forest Property), Ministry of Agriculture, Agroalimentary and Forestry and the National Agency for Food Safety, Environment and the work of Nancy (ANSES).

These actions have been defined in order to meet three main objectives :

- Improving knowledge and follow-up for population conservation ;
- Considering bats in planning, development and public policies ;
- Supporting and informing the network.



Main objectives	n°	Title of the action	Pilots
IMPROVING KNOWLEDGE AND ENSURING THE MONITORING OF POPULATION CONSERVATION	1	Establish a national observatory of bats and acquire the knowledge necessary to improve the conservation status of the species	SFEPM with MNHN
	2	Organise a health watch	ANSES, ONCFS, SFEPM
CONSIDERING BATS IN PLANNING, DEVELOPMENT AND PUBLIC POLICIES	3	Integrate bats into land use planning and re-establish ecological corridors	FCEN
	4	Protect underground and rock deposits	FCEN
	5	Protect roosts in buildings	FCEN with the support of Ministry of Culture and CEREMA
	6	Consider bats in transport infrastructures and civil engineering structures	CEREMA
	7	Integrate bats issues during the installation of wind farms	SFEPM
	8	Improve the consideration of bats in public and private forest management	ONF, CNPF, SFEPM
	9	Integrate bats into farming practices	FCEN in partnership with Ministry of Agriculture
SUPPORTING AND INFORMING THE NETWORK	10	Support networks, promote exchanges and raise awareness	FCEN with Museum of Geneva, Museum of Bourges, MNHN, SFEPM



Action 1

Establish a national observatory of bats and acquire the knowledge necessary to improve the conservation status of the species

The challenge of a national observatory is to monitor the spatial and temporal evolution of populations and their habitats, as well as the pressures and threats to which they are subjected to, contribute to assessing their state of conservation.

Collecting, synthesizing and enhancing the data of the regional associations will make it possible to monitor the state of populations and to target conservation actions.



Improving knowledge

Unknown and migratory species with strong conservation stakes, the Great Noctule is one of the species targeted as a priority for this action. The research of roosts, population genetic analyses, the study of migration or the impacts of wind development are all tools that will improve knowledge about the biology of the species.

Action 2

Organise a health watch

Epizootics represent a major challenge for the bat populations. Health surveillance is part of the objective of conserving the populations of priority species, by setting up epidemiological surveillance networks for abnormal mortalities, rabies or white nose disease.

Training in epidemiological surveillance

The training of referents in epidemiological surveillance is a priority that allows a high reactivity in case of Mortality, by collecting data and determining causes of death.





Action 3

Integrate bats into land use planning and re-establish ecological corridors



Landscape structures (hedgerows, alignment trees, etc.) play an important role in the movement of species. Land use planning may result in landscape changes that may affect species, their breeding sites, hunting grounds and travel corridors.

One of the objectives of this action is to prioritise bat issues in the preparation of urban planning documents or in landscape charters and to issue recommendations to planning professionals (urban planners, landscapers ...).

Limiting light pollution

Nocturnal lighting disturbs some so-called luciferous species (which leak light) such as the Great Rhinolophe, forcing them to turn away from their usual path, thus preventing them from reaching their hunting ground. Constant lighting on the lodge delays the time of exit for females to go hunting, preventing them from benefiting from the peak of insects at dusk and inducing a lower growth rate in the juveniles. Scientific studies reveal the problem of light pollution for the bats. Events such as the Day of the Night in October, raise awareness of light pollution. Communities are beginning to propose extinguishing night lighting. All these actions benefit the bats species and nightlife as a whole.

Action 4

Protect the underground and rocky roosts

The cavernicola species (Schreibers' bat, Long-fingered bat) and cave dwelling (Savi's Pipistrelle) suffer from the loss of their habitats and the disturbance to their dwellings. Whether in physical, regulatory or contractual terms, the protection of breeding sites is a priority for the conservation of cave-dwelling species. In 2016 in France, 1757 roosts were protected by land or legal protection. Continuing efforts to preserve a network of roosts and establishing a sustainable strategy, such is the stake of this action. Disseminating recommendations aimed at municipalities and individuals to take into account bats in these environments, and to raise awareness amongst the users of these environments will also have to be developed.



Points to consider before closing any abandoned mines

A 2009 ministerial circular allowed for the consideration of bats populations before the closure of any abandoned mine (a mine whose owner has disappeared, and which is now the responsibility of the State). Thus, a faunistic study over a life cycle of one year has now been imposed, allowing the recommendation of specific developments according to the species present.



Action 5

Protect roosts in buildings

Building works can cause disturbance for species using this type of environment, leading to the loss or abandonment of their roosts. The aim of this action is to protect the shelters in the buildings, by issuing recommendations for the consideration of bats during the construction, renovation, insulation, lighting or demolition of buildings, by developing training and promoting cohabitation.



Respect the protection of bats during insulation work

The law n° 2015-992 dated 17 August 2015 concerning the energy transition for green growth aims to renovate the whole park to the standard «low consumption building» by 2050. France has committed, by means of the resolution 7.11 of the Eurobat Agreements, regarding bats and the insulation of buildings, to ensure that insulation works comply with legislation for the protection of bats, finding solutions to reconcile both issues.

Action 6

Account for bats in transport infrastructure and civil engineering structures



Transport infrastructure is one of the main causes of bats' mortality leads to changes in corridors and hunting grounds. Their implantation can also cause the loss of roosts. Evaluating the impacts of transport infrastructure and the maintenance of civil engineering structures is essential in order to offer the most appropriate measures to take populations into account in these projects.

A technical synthesis «Chiroptera and civil engineering structures» written by CEREMA

The objective of this practical document is to provide the contracting authorities, designers and managers of land transport infrastructures with clear and concise information on the use of civil engineering structures by the bats. The aim of the future information note will be to provide information on favourable habitat conditions and the characteristics required for their installation in structures (eg within compensatory measures) and on the requirements for their consideration in the context of maintenance operations.



Action

7

Consider bats issues during the installation of wind farms

Wind farms affect bats populations. To limit these impacts, it is necessary to implement practical actions in order to remedy the lack of consideration over recent years. The challenge is to reconcile these renewable energies with the preservation of the populations of species directly and indirectly affected by wind turbines.

Support

The National Action Plan will accompany the ICPE services (installations classified for the protection of the environment) to take into account the impacts of wind farms on bats by providing training, in connection with the training organisations for civil servants, for state officers within departmental services and by drawing up a summary of the impact monitoring carried out in France.

Action

8

Improve the awareness of bats in public and private forest management



Improve the awareness of bats in public and private forest management. Forest management generates significant positive and negative impacts for the populations of forest bats. The aim of the action is to better integrate the recommendations for bats into practice, by improving the knowledge of their breeding sites and hunting grounds, by training Forest stakeholders and by offering simple contractual tools.

Training

For forest stakeholders to be aware of bats in forestry practices, training is required. The PNAC will promote interventions on the ecology of the bats in the initial training of engineers, technical and scientific patents, NFB agents but also owners through training courses or awareness days.



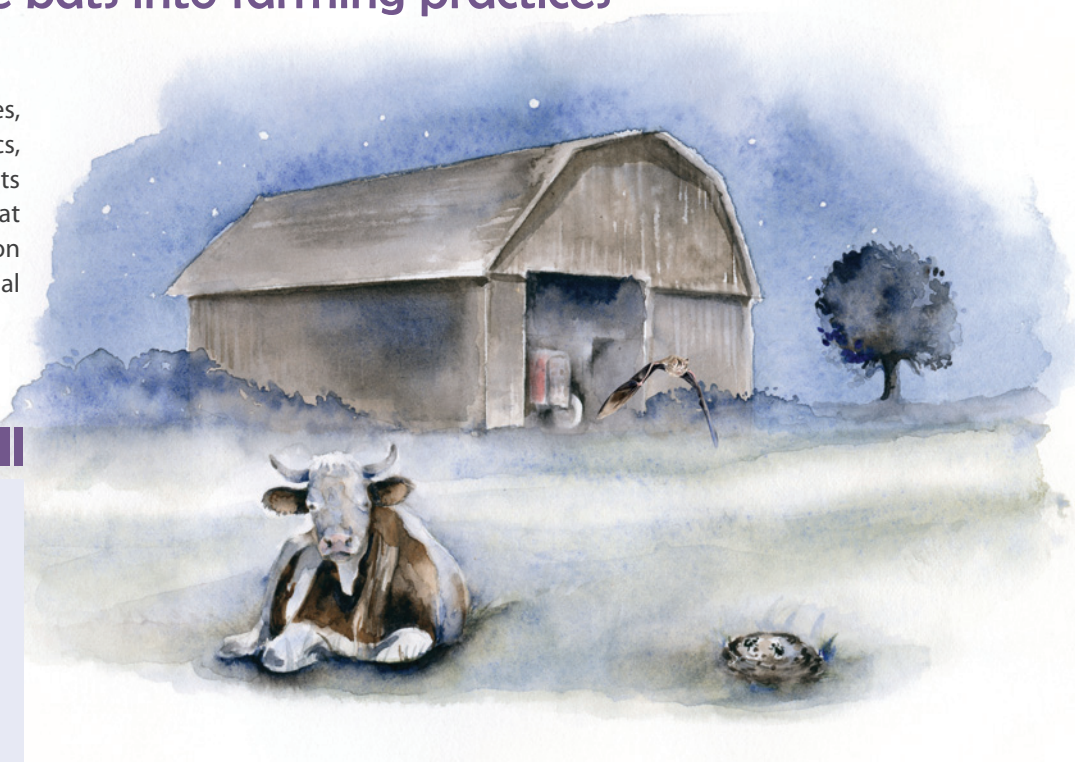
Action 9

Integrate bats into farming practices

Certain agricultural practices, through the use of antiparasitics, pesticides and via reparation, puts at risk the conservation status of bat populations, which are reliant on agricultural land and are essential allies against crop pests.

Collection of experiments

The drafting and dissemination of the compendium of experiments on «farming practices favourable to bats» will help maintain Bats populations in farms and to integrate measures into the agroforestry development plan 1.3).



Project « Bats shelters »

The « Operation Bats shelters », launched by the Mammalogical Breton Group, was made available at national level by SFEPM in 2011, within the framework of the PNAC 2009-2013. In 2016, 523 shelters were counted. Over the next 10 years, communication will be developed to expand this network for the preservation of bats breeding roosts and hunting habitats.

Action 10

Support networks, promote and raise awareness

The strong dynamism of the network launched during the 2009-2013 National Action Plan for Bats made it possible to involve a multitude of individuals from various backgrounds who have all contributed to the study and conservation of bats. Thus, exchanges and the dissemination of experiences within this network make it possible to pool actions highlighting the effectiveness of projects. It is therefore essential to continue to support and stimulate this network of individuals in order to maintain current actions and to create new ones.

In addition, for an improved protection of the bats' populations, it is essential to maintain public awareness of the biology and conservation of these species.



The leaders and partners of the actions of the National Action Plan for Bats



■ The National Action Plan for Bats coordinated by :



in collaboration with :



■ The actions are led by :



■ in partnership with :



Photographs and illustrations credits

ILLUSTRATIONS : Lysandre Blondeau

PHOTOS :

Front Cover : Bechstein's bat > Yoann Peyrard

Page 2 : Lesser horseshoe bat > Yoann Peyrard

Pages 6 / 7 : Schreiber's bat > Ludovic Jouve • Lesser mouse-eared bat > Raphael Colombo • Mediterranean horseshoe bat > Boris Baillat • Mehely's horseshoe bat > Yoann Peyrard • Bechstein's Bat > Ludovic Jouve • Escalera's bat > Yoann Peyrard • Giant Noctule > Laurent Arthur • Nathusius's Bat > Daniel Sirugue • Lesser noctule > Boris Baillat • Noctule Bat > Sébastien Puechmaille • Lesser horseshoe bat > Ludovic Jouve • Serotine Bat > Ludovic Jouve • Common Pipistrelle > Ludovic Jouve • Northern Bat > Olivier Sousbie • Greater Horseshoe bat > Ludovic Jouve • Alpine Long-eared bat > Sylvain Dejean • Pond Bat > Vincent Cohez • Maghrebian mouse-eared bat > Jean-Yves Courtois • Long-fingered bat > Clément Lemarchand

Page 9 : Training for referring actors from SMAC (Surveillance of Abnormal Bats Mortality) > Audrey Tapiero

Page 10 : Former underground secured mine > Audrey Tapiero

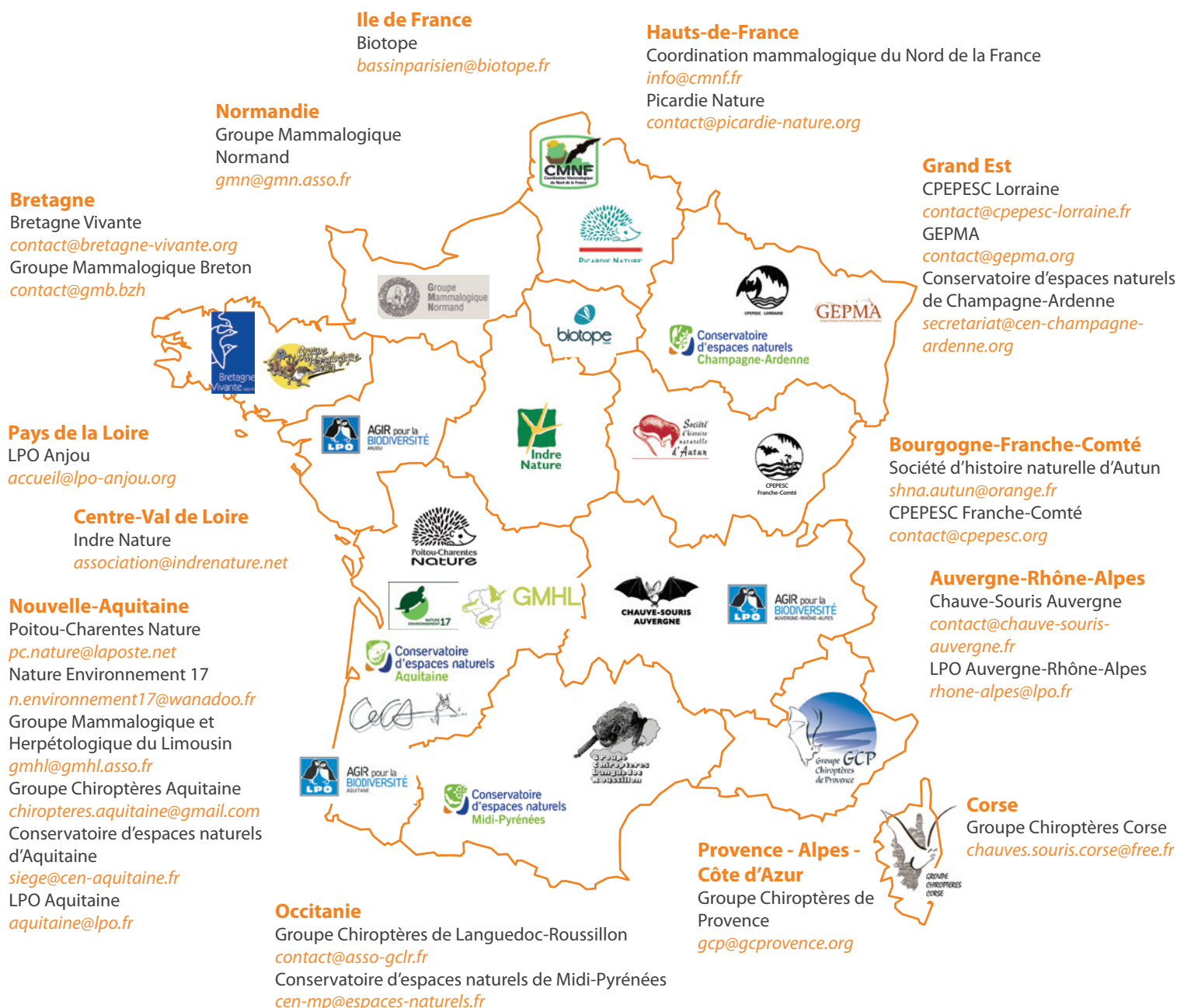
Page 11 : Building exit > Tangy Stoecklé

Page 12 : Arboreal roost exit > Yoann Peyrard

Page 13 : Technical Training day for chiropterologists and ONF > Audrey Tapiero



The referral structures of the national plan within regions (June 2017)



All the contacts of the National Action Plan for Bats are updated on the website :

www.plan-actions-chiropteres.fr



www.plan-actions-chiropteres.fr

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