





Making

green and blue corridors a reality alongside ecology management



Taking

stock and enhancing knowledge



Renaturing

soils and protecting water resources



Protecting

species and their living environments



Building

nature into planning applications



Adapting to climate

change



Making

it local



Involving

the private sector at different levels



Encouraging

and supporting community involvement



Educating

and training



Competition

French capital of biodiversity



Taking action

for biodiversity



Evidence-based learning

Launched as part of a European programme, from the outset the French Capital of Biodiversity competition united numerous partners at national and regional levels.

Ten years later, the results speak for themselves: 55 awards, around a hundred workshops organised across France and its overseas territories, 90 site visits, over 500 exemplary actions published in the 10 themed annuals, available on the competition website.

Designed as an educational self-assessment tool for the participants, the competition questionnaire has inspired many regional communities to apply for recognition as a "Region committed to nature", and from 2020 the competition becomes an additional target in those regions already working towards recognition. These are the exemplary actions which form the bedrock of the French Capital of Biodiversity: by documenting what some have managed to achieve, how they did it and why, we can all see that acting for biodiversity is not only possible but it's also easy, useful and positive for all regions.



Besançon, a natural management approach

Besançon is pursuing a series of actions to conserve and enhance the connectivity between its natural and green spaces. The city constantly refreshes its management practices while drawing on a solid scientific base with strong partnerships and regular biodiversity monitoring. This synergy is perfectly illustrated by the way dry grasslands and semi-open areas on the surrounding hills are managed by fruit growers and livestock farmers, working with the Bourgogne-Franche-Comté authority for the conservation of natural areas. The local council is also studying wild pollinators in the urban environment, and has for a long time supported organic farming.



In Besançon, the council is responsible for managing grazing, enabling the semi-open environments on the Besançon hills to be restored. / Gwendoline Grandin, ARB Ile-de-France.

Versailles, pioneering in its pesticide ban



The ban on the use of pesticides in Versailles' public spaces began in 2005, starting with parks and gardens. Street cleaning services followed suit in 2006, then the woodlands in 2007 and the town's 4 cemeteries in 2009. Work then began on greening the walkways and pavements, rewilding areas, planting local perennial species, monitoring the flora and fauna (using the Propage & Florilège collaborative science grassland protocols). Les Gonards cemetery was the first cemetery to be awarded EcoJardin (Ecogarden) status in 2012 and is the most beautiful example of this initiative, forming an integral part of the urban green corridor.

View over Les Gonards cemetery at Versailles, where the council has even introduced beehives to produce honey. / Jonathan Flandin, ARB Ile-de-France.



Knowledge-sharing delivers results in Morne-à-l'Eau

Morne-à-l'Eau has worked hard to understand biodiversity, by funding surveys, monitoring and academic research projects. This solid knowledge-base has been built through the shared passion of local officials and departments, via sustainable partnerships with the State, the Guadeloupe National Park, the Coastline Preservation authority, universities and voluntary groups. As an example, the green and blue corridor was the subject of a cross-referenced analysis by elected officials, farmers and locals in order to draw up mutually agreed recommendations, which were supported by everyone and enshrined in the local town plan. The various assessment tools can be used to inform the town's management practices and environmental restoration work in equal measure.



View over the Grippon agricultural plain, where farmers helped develop the green and blue corridor. Aurore Micand, Plante & Cité.

In Val d'Ille-Aubigné, analysis drives action

The combined district council at Val d'Ille-Aubigné has been actively protecting biodiversity since 2013, weaving it into its local green and blue corridor plan. Across its 19 districts, ecological mapping and analyses form the structure for a targeted action plan tailored to local resources: the creation of a pond on a business park, the rehabilitation of former sewage lagoons, the planting of mixedspecies hedges as part of the Breizh Bocage programme, building animal corridors underneath roads, the building of educational pathways, are just some of the projects.

Adapting existing under-road corridors to make them attractive to local animals while monitoring them with cameras to assess their benefit. Marc Barra, ARB Ile-de-France.



Protecting water and biodiversity in the Rouen Normandy Metropole

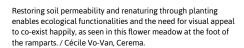
The Rouen Normandy Metropole (Seine-Maritime) has signed contracts with local farmers to prioritise chemical-free cereal production on the chalklands owned by the authority. There are two objectives here: to protect drinking water resources by preventing pesticide and nitrate pollution, while also encouraging cornfield flowers which have relied on harvesting for thousands of years and are critically endangered by the industrialisation of farming. The authority is also working on increasing the number of public and private ponds, which are routinely monitored and enhanced every year by around twenty new or restored ponds, enabling isolated amphibian populations to be reconnected.



Cereal field in the cornfield flower protection programme, at Terres du Moulin à Vent / Gilles Lecuir, ARB Ile-de-France.

Avignon regreens its ramparts

A major scenic and architectural heritage site, until as recently as 2010 the ramparts at Avignon were hemmed in by impermeable parking areas which were packed in summer. The city radically transformed all 5 km or so of its walls into a tranquil green route providing shade for pedestrians and cyclists, while affording access via a fleet of electric buses. Removing the parking areas and restoring surface permeability allowed the ground to renature, while beneath the shade of the mighty plane trees a miniature forest of flowering herbaceous perennials was planted, selected for their ability to cope with the Mediterranean climate. The way the ramparts are managed encourages biodiversity to flourish: certain areas are mowed later, the cuttings being left as mulch, while the plants are carefully chosen to suit the agro-climatic conditions.





Conserving biodiversity
is vital for natural spaces to
function as they should. This means
that existing natural habitats have to
be preserved and managed - and even
restored where necessary - with alternative
habitats sometimes being created for existing
flora and fauna. Collaborative projects
enable communities to embrace and
embolden their actions to protect areas
facing particular threats to their
biodiversity.

Sea turtles need several different habitats throughout their life cycle: coral reefs, seagrass beds, beaches, etc. For councils in French overseas territories such as this one here in the Antilles, sea turtle populations will be restored by preserving all these diverse habitats while protecting them from human activities.

Aymeric Bein, French Biodiversity Agency (OFB)

Bonnelles: standing up for nature

The nature reserve at Bonnelles is a prime example of how local people stood up to protect the wetlands. Established in 1990 as a specially designated nature reserve to protect it from development, the sustained management and restoration work led to its classification as a regional nature reserve in 2017. Throughout this period, the local council and the Haute Vallée de Chevreuse regional natural park have managed, preserved and increased the site's environmental importance while also running a range of projects to raise awareness among the local population.



Access to the Bonnelles regional nature reserve, and actions to maintain the habitats and species living there, are governed by a management plan which is overseen by an official from the regional natural park. / Jonathan Flandin, ARB Ile-de-France.

In Lille, construction goes hand-in-hand with biodiversity

The city of Lille has acquired a certain savoir-faire in how to include flora and fauna in works to renovate historically classified buildings. As an example, the work to renovate the Contregarde du Roy fortifications enabled the city to combine restoration of the walls with the preservation of some rare, sensitive flora while also providing hibernation sites for bat colonies. As each tower or belfry was restored, the council ecologist, building services, French national heritage architect and the private sector worked together to provide homes for birds of prey, starlings and bats while deterring the less welcome pigeon population.



Roost for hibernating bats at the Contregarde du Roy in the Citadelle park in Lille city centre. Gilles Lecuir, ARB Ile-de-France.



Rennes: ecology locked in at every stage

Rennes has an impressive record when it comes to including biodiversity in planning documentation. On a city-wide scale, its regional development plan draws on very targeted ecological surveys which identify "natural environments of ecological interest". These constitute a unique mechanism for incorporating biodiversity issues into the various planning stages. In the local development plan, guidance on development and planning to consider the "heritage and scenic aspects" of a project provides a bridge between the scenic considerations (geography, topography) and ecology (green and blue corridors), demonstrating the desire to create harmony between the built and natural environments.



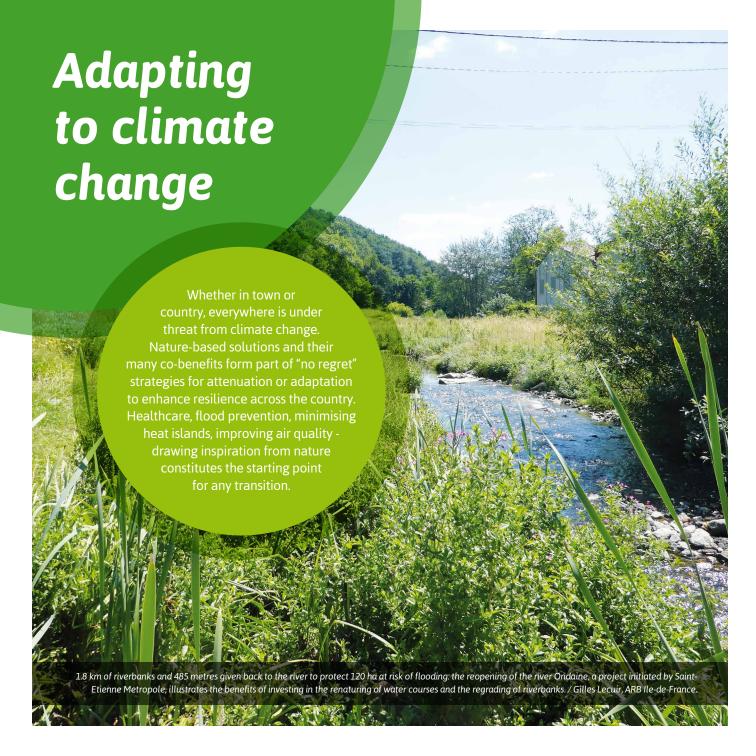
Even districts subject to special planning regulations can make use of the natural environment in urban development. Here in La Courrouze, the natural environment created from an abandoned brownfield site became an integral part of the design for the new district. / Gilles Lecuir, ARB Ile-de-France.

Muttersholtz, where dialogue and law support nature

The local development plan for the village of Muttersholtz was very closely aligned with the regional green and blue corridor. Zoning and regulation have used every tool available to make the area more accessible to nature: a total ban on building in biodiversity reservoirs, no backfilling in any agricultural or nature areas, a 6m margin between all water courses and construction within the village, classification of riverside woodlands as wooded areas, and the creation of special plots to extend ecological corridors, particularly in cereal-growing areas. This regulatory protection derives from a concerted dialogue and direct interaction with land owners and farmers, for example using France's new "ORE" legal framework to identify land covered by biodiversity protection.



by encouraging nature, for example in the SensoRied system where an educational pathway takes people on a journey to discover nature and the scenery in the flood plain, which has become a real tourist attraction. Village of Muttersholtz.



Lyon Metropole the "Canopée" project

Lyon Metropole has a long history of associating its climate initiatives with the role of trees and nature across its cityscape. In the "Canopée" (Canopy) project, Lyon has set itself some ambitious goals in adding more shaded areas to respond to the challenge of heat islands. The Metropole is also working to remove impermeability from its urban spaces and to store rainwater, and is recognising the importance of diversity by mixing the species of trees planted across its territory. Lyon is running research projects to measure and characterize the capacity of trees to offer natural cooling to residents, while also experimenting with urban soil recovery to stimulate a circular economy.



Redevelopment of rue Garibaldi includes monitoring to gauge the capacity of trees to offsetheat islands via evapotranspiration. Laurence Danière, Lyon Metropole

Saint-Paul, Réunion: restoring nature to build resilience

With its diverse natural habitats and native species, Saint-Paul on Réunion island is on the front line when it comes to climate change. Coastal erosion and the risk of coastal flooding, pollution of the lagoon, coral dieback... The council worked with tourism professionals to rethink the natural infrastructure in order to balance leisure activities with ecological functioning. An experimental mangrove was established to act as a buffer in the event of storm surges coinciding with heavy rain, which could lead to significant runoff. Away from the coast, a natural dry plain near some housing has been made more accessible. Public access helps keep these grassy areas open while preventing fire risk.

On Hermitage beach, the roots of the Australian pine trees mark the level of the beach prior to its erosion. Cécile Vo-Van. Cerema.



At Couesnon Marches de Bretagne as elsewhere, road verges are routinely mown. Here however, to help biodiversity the mowings are immediately removed and recycled in a local methanisation unit. / Jonathan Flandin, ARB Ile-de-France.

Less is more at Rosny-sous-Bois

Led by a team of architects and municipal engineers, Boutours school exemplifies "frugal architecture", a learning approach economical in both materials and machines, with a strong focus on climate and biodiversity. Built with and for the students as collaborative projects, the school is designed around bio-climatic and low-tech principles to actively minimise its ecological footprint. All materials were accordingly sourced locally, while re-using structural elements from an existing hall allowed existing trees to be preserved as far as possible. Nature is everywhere, both in the form of bio-sourced materials (wood, straw, earth) and as vegetables for food grown in the school yard or on the roof.



Theschool'sload-bearingstructurecomprisesentirelycoatedstraw bales, produced from organic cereal farming in Seine-et-Marne. Marc Barra. ARB Ile-de-France.

Agricultural management at Mouans Sartoux, an international Benchmark

The municipal agricultural team at Mouans-Sartoux has in just a few years become a national and international benchmark, both for its operating principles and agro-ecological structures, and for its spillover into education and the environment. It has been the main supplier of 100% organic fruit and vegetables to school canteens since January 2012. To ensure that vegetables are available all year round, the council also has processing and deep-freeze facilities. Alongside this, each school has its own ecological compost-fed garden growing fresh produce for the school lunches.



The municipal farm employs 3 people, every year producing 24 tonnes of vegetables on 6 hectares, and has an annual operating budget of €70,000. Gilles Lecuir, ARB Ile-de-France.



Working together at Saint-Privat de Vallongue

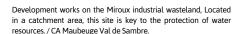
By involving both the public sector (national park, biosphere reserve, other communities) and the private sector (arable and livestock farmers, foresters), this rural community with fewer than 250 inhabitants has rapidly transitioned to being pesticide-free and managing its own ecology. It also produces a communal biodiversity atlas illustrating initiatives by the local people, schools and partners. Many actions are designed not only to foster nature conservation, but also to boost tourism. Examples include reducing light pollution from its holiday village to reveal the wonders of the Cevennes night sky; converting the old railway line that crosses the village into a nature trail and generally preserving and restoring the Cevennes agro-pastoral landscape.



"Esprit parc national "(National park spirit) is a brand that promotes the products and services of stakeholders committed to preserving the national park heritage. / Gilles Lecuir, ARB Ile-de-France.

The urban community of Maubeuge Val de Sambre turns its brownfield sites green

A former foundry that's become an industrial wasteland, the Miroux site is now being rewilded within an area subject to flooding. Achieved with the help of Nord-Pas de Calais region's public land management authority, taking back the site has allowed continuity of aquatic ecology to be re-established in the Solre catchment area to encourage fish movement (by re-opening streams and creeks, re-meandering, removing weirs etc.) In addition to its hydrological role, the site is being redeveloped to encourage site-specific biodiversity and benefit the local community. The community plans on having the area given protected status in order to secure its long-term future.





Grande-Synthe nurturing residents' participation

Biodiversity conservation continues to be a priority for the municipality of Grande-Synthe, which became the first French Capital of Biodiversity in 2010. The ambition of a fertile city is easily aligned with creating or restoring natural spaces which attract non-cultivated biodiversity for the benefit of the urban ecological network. The three-hectare educational experimental orchard planted in 1990 has since been joined by 20 more orchards, 6 public gardens, a seed library, a nine-hectare urban farm, and countless mini-projects involving the locals, particularly through citizen science.

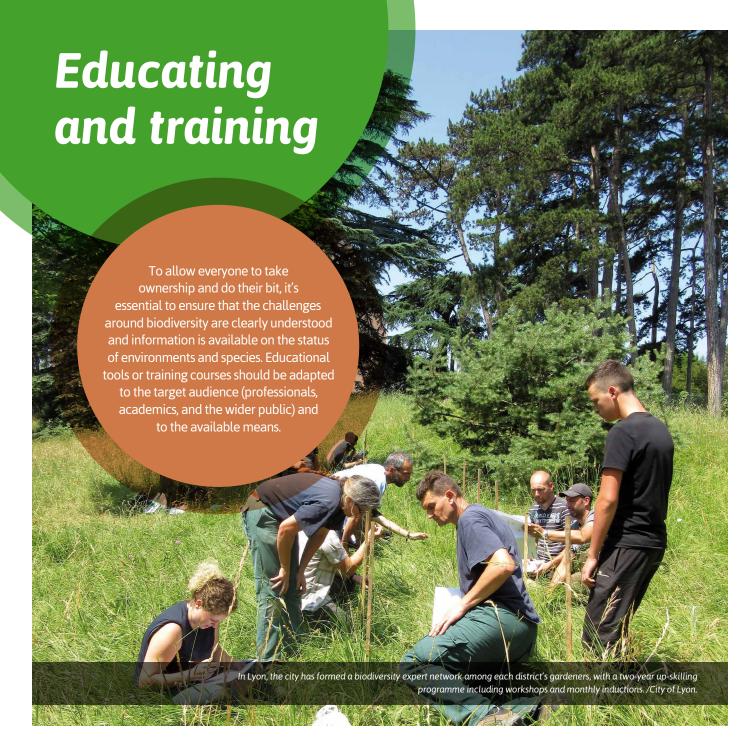


Simultaneously providing food and creating social links, the community garden can also provide a green backdrop for daily life, as here in this part of Grande-Synthe. / Florian Fournier, Cerema.

This example of improving pavement permeability and planting by local people shows the impact of these projects and how the cityscape can be softened. Gwendoline Grandin, ARB Ile-de-France.

Strasbourg, the green-fingered city

"Strasbourg ça pousse" (Strasbourg's green fingers) is the one-stop portal for urban "greening", where residents can propose their nature project for the city. It could be planting climbers or underplanting trees, or restoring permeability to pavements... The website also provides a map of the city's natural spaces where people can volunteer their time, and documentary resources to provide guidance. Communities and organisations can also pledge their commitment through the charter "Tous unis pour plus de biodiversité" (Together for greater biodiversity), and enjoy regular training and events.



Albi's educational guides

Working with local partners, over the last few years Albi has produced three impressive nature guides showcasing the birds, insects and mammals found in the local area. Distributed to schools and available in public places, these publications shine a spotlight on the local biodiversity. There are also site projects with local groups to protect swallow colonies, creating educational nature trails, helping to spot the peregrine falcons nesting high up on the cathedral, or creating "incredible edible" gardens in public spaces (with pick-your-own access).



Colour-coded labels show the public when they can help themselves to fruit, vegetables or herbs in the city centre's Rochegude park. / Gilles Lecuir, ARB Ile-de-France.

Raising awareness in the urban community of Marne et Gondoire

The urban community of Marne et Gondoire is busy awarenessraising and encouraging resident participation. As a prime example, in 2013 it produced an educational kit on farming for schools. This helped teachers educate pupils aged 6 - 11 about growing food. More widely, within the framework of its regional climate-air-energy Plan, the community formed a citizen's body to jointly devise its strategy and plan of action. This "climate club" has brought together over 150 volunteers who work within a framework of regular workshops, particularly in connection with biodiversity and nature-based solutions.



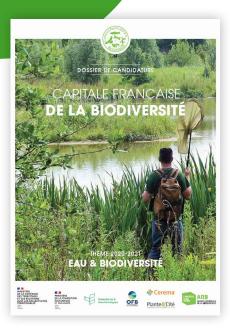
The "Climate Mural" event, with the Children's Council at Bussy-Saint-Georges. CA Marne et Gondoire.

The "French Capital of Biodiversity" competition

Biodiversity competition" is open to every French community and inter-community body. With a different theme every year, they are asked to present three exemplary actions they have taken in their locality, either by themselves or with local partners.

Participation in the "French Capital of

For 10 years,
the French Capital of
Biodiversity competition
has recognised and
rewarded the best French
community and intercommunity practices
helping nature.



The actions taken are assessed through peer review by the competition's Scientific & Technical Committee before being published in the actions yearbook. The best applications receive a site visit, documented in a report, and the communities considered the best examples for that year's theme may see themselves receiving an award, such as the French Capital of Biodiversity.

www.capitale-biodiversite.fr



Showcasing best practice



As well as a competition to identify the French Capital of Biodiversity for the year, and the best communities by category (village, small towns, mid-sized towns, large towns, inter-community), this is primarily a means of raising awareness and educating, identifying

and rewarding good practice, regional activities and knowledge-sharing between the local stakeholders. Every year the competition organisers publish a collection of the best actions identified for that year's theme as a source of inspiration to others.

www.capitale-biodiversite.fr/liste-experiences

Inspirational visits and workshops



Site visits, technical workshops, talks and webinars all provide opportunities to show all of France the innovations, progress, and exemplary actions by French communities and their public and private partners. The organisers of the French Capital of Biodiversity competition are also looking to disseminate and promote the biodiversity know-how of French communities to an international audience.

www.capitale-biodiversite.fr/ateliers

Complementary tools

The blue and green network, ecological engineering, invasive alien species, wetlands, Natura 2000 and even overseas... The resource centres of the French Biodiversity Agency are vital complementary tools for taking that step further, making projects a reality, developing skills and providing technical support to stakeholders in effectively implementing public policies favourable to biodiversity across a wide scale.

https://professionnels.ofb.fr/fr/centres-de-ressources



Taking action for Biodiversity

Several other tools are available nationally to help communities take action for biodiversity, to understand the specificities of their neighbourhoods, then devise and run impactful projects.





The community or intercommunity biodiversity atlas comprises a decision-making aid to help preserve France's natural heritage. Accurate

and often community-based knowledge can be used to map-out the habitats, fauna and flora of a region. Involving everyone in collecting data and assembling suggestions promotes understanding of local issues, the preservation of regional biodiversity and its integration into regional planning documents. The tool is coordinated by the French Biodiversity Agency.

https://abc.naturefrance.fr



Regions committed to nature: an action plan for biodiversity



The "Regions committed to nature" initiative recognisees and assists communities in developing and implementing a biodiversity action plan over a three-year period. To

work-up this regional project they can seek support from an array of environmental players, particularly the regional biodiversity agencies. Once recognised, the communities benefit from personalised support in implementing their project, as well as help with access to funding. The programme is run nationally by the French Biodiversity Agency.

https://engagespourlanature.biodiversitetousvivants. fr/territoires

Ecoquartier building the sustainable town



Constructed around 4 dimensions, with 20 commitments, the Ecoquartier approach guides and promotes exemplary sustainable planning at city district-level. The

toolkit lists the right questions to ask developers, and the accreditation is awarded step-by-step through the duration of the development project. Biodiversity conservation is part of the accreditation requirements, woven into the project right from the outset and regularly evaluated throughout the lifetime of the district. A guide to evaluating biodiversity has also been devised specifically for the ecological monitoring of eco-districts.

www.ecoquartiers.logement.gouv.fr

"EcoJardin" accreditation: the benchmark for ecological management



The EcoJardin (Eco garden) initiative is underpinned by scientific ecological principles to adapt manage-

ment practices to biodiversity. As a technical guide, the toolkit assists managers and sets out detailed recommendations on implementing ecological management. The EcoJardin accreditation, cited in the Biodiversity plan along with the Terre Saine accreditation (pesticide-free communities) promotes the quality of gardeners' work within a continuous improvement approach.

www.label-ecojardin.fr

What financing is available for bigger projects?

While some biodiversity-positive projects can be implemented with a set budget, others need some additional financial or technical assistance. Locally the Regions, water authorities and regional biodiversity agencies are the primary actors in providing this support.

The State has also launched a platform to centralise all the aid tools (calls for proposals, financial and/or technical assistance) at European, national or local scale.

https://aides-territoires.beta.gouv.fr













