



Le Pinail

ZONE HUMIDE
d'importance
mondiale

Ramsar

*An exceptional natural,
historical, and cultural heritage*

*An area committed
to protecting and promoting it*

The Ramsar Convention and Le Pinail

Le Pinail is one of the last unspoilt areas of “Poitou heathland.” Man-made, these moors are unique in terms of their size and the presence of several thousand ponds created by the centuries-old extraction of millstone. This unique area has become an emblematic reservoir of wetland biodiversity. Located at the head of a

watershed, Le Pinail overlooks the Vienne and Clain valleys, to the north of the department’s largest forest, Moulière. Paradoxically, the poor soils of this clay plateau are a source of ecological wealth: more than 2,700 species of plants, animals, and fungi find refuge in this mosaic of moors, meadows, ponds, peat bogs, and deciduous and coniferous woodlands.

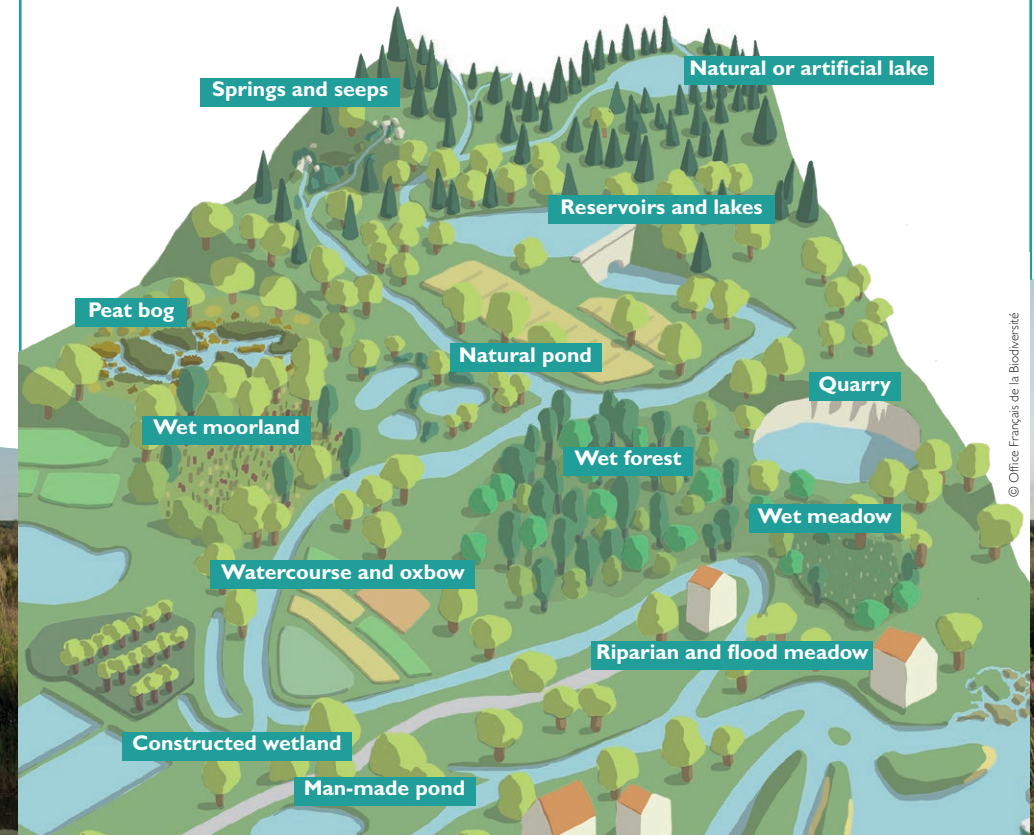
Le Pinail is a major centre for the protection of our natural heritage, and a scientific and educational reference point for environmental issues. Protected and yet under threat, the site unites all the local actors around the Ramsar label, a worldwide recognition of the ecological value of the wetlands and the commitment to sustainable development.

The Ramsar Convention



The Ramsar Convention is an intergovernmental treaty for the conservation and wise use of wetlands and their resources. Adopted in 1971 in the Iranian city of Ramsar, it involves more than 170 countries around the world, where regional initiatives have been launched to preserve and enhance emblematic sites such as Le Pinail, the 51st site to be appointed in France, on 21 October 2021.

DIVERSITY OF WETLANDS in the Vienne basin



What are wetlands?

These are natural or artificial environments characterised by the presence of water. Their soil is gorged or covered with shallow, running, or stagnant water for at least part

of the year. Like ponds, the water may be permanent or temporary, but all the vegetation that grows in these environments, if they are not cultivated, are adapted,

from water-loving plants (hygrophilous such as rushes or willows) to those that live in the water (aquatic such as water lilies).

Wetlands and Humans

Wetlands provide valuable goods and services to humans, known as ecosystem services. They regulate the water cycle, which is essential for supplying potable water and preventing floods and droughts. They also have an impact on the climate by storing more carbon than forests, and on agricultural production by providing a home for wild pollinators. This means that they can be used to produce not

only food, but also materials, energy, medicines, and so on. Finally, wetlands are at the heart of educational, scientific and leisure activities...A source of inspiration and well-being for mankind, but also the home of countless living creatures. In particular, these environments are home to 100% of dragonfly and amphibian species, most fish, 50% of birds, and 30% of protected plants in France.

What does “nature-based solutions” mean?

These are actions that rely on the preservation or restoration of ecosystems to meet societal challenges, such as the fight against climate change, natural hazards, water supply, and health. Resilient, functional, and diversified ecosystems, such as wetlands, provide a wide range of ecosystem services that are based on the good state of biodiversity and on which our societies depend.



STATE OF WETLANDS IN MAINLAND FRANCE IN 2023

50%
of wetlands
disappeared between
1960 and 1990

6%
of remarkable
wetland ecosystems
are well conserved

16%
of wetland
species are
threatened with
extinction

89%
of wetlands
are affected
by climate
change

Despite this priceless value, mankind has destroyed between 65% and 90% of wetlands in France since the beginning of the 20th century. Intensive agriculture (*drainage, pollution, cultivation, etc.*), urbanisation (*towns, transport infrastructure, etc.*), land-use planning (*filling*

in, rectification of watercourses, etc.), biological invasions (*primrose willow, American crayfish, etc.*)... are all factors impacting on the condition and resilience of wetlands, which are all the more affected by climate

change (drought, storms, fires, etc.). As the culprits of this destruction and the victims of this degradation of ecosystem services, humans have a responsibility to protect and

restore wetlands. Le Pinail is an illustrative example of the evolution of this ambiguous relationship between humans and nature, which is both protective and destructive.

Wetland services to mitigate and adapt to climate change

Like sponges, they **ABSORB** and **STORE WATER**, reducing the intensity of floods and heatwaves.



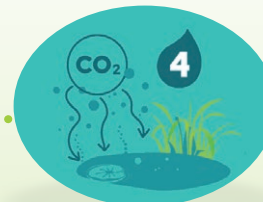
They replenish groundwater and watercourses, **DELAY** the effects of drought, and **PRESERVE** water resources.



They **REDUCE** the effects of storms and **PROTECT** coastlines.



They **CAPTURE** large quantities of carbon, even more than forests do.



They create small **ISLANDS OF COOLNESS** in an urban environment.



They are **BIODIVERSITY RESERVES** on which many species depend.

From exploitation to protection of Le Pinail



Neolithic

Humans become sedentary, forests are cleared for the first time and agricultural development

826

1st written document attesting to the extraction of millstone and the eponymous name of the Moulière forest

1205

Moulière Forest becomes a royal forest

1692

Segmentation of the Moulière forest to protect the massif from over-exploitation and restrict milling rights and other traditional activities to the "small forest", known as Le Pinail (1,000 ha), which became communal land (grazing, hunting, wood and heather cutting, firewood clearing, etc.)

1850-1870

Cessation of millstone activity

1950-1970

Re-appropriation of the site by the State and forestry redevelopment with levelling, drainage, and softwood planting

1980

Creation of a national nature reserve (142 ha) to protect the most representative collection of ponds and moorland

Early 1990s

Conservation management through grazing, mowing and prescribed burning, and the 1st heathland desilting works

Late 1990s

European classification of the Le Pinail moorlands (923 ha) and the Moulière forest (8,000 ha) as Natura 2000 sites

2021

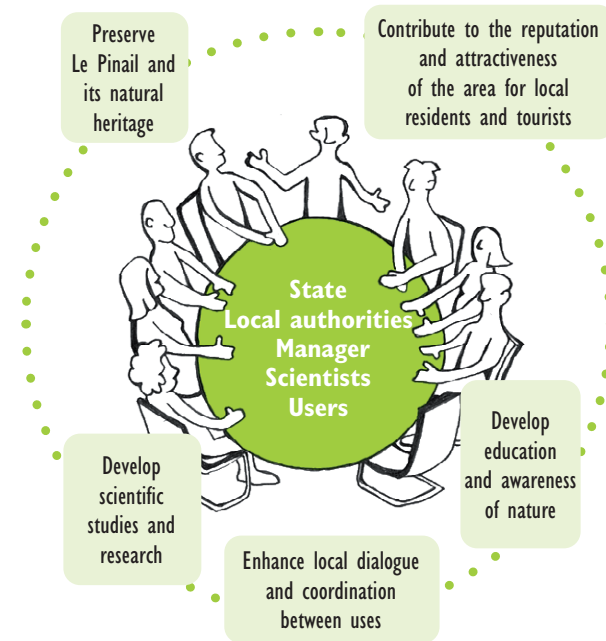
Worldwide recognition of Le Pinail as a Ramsar wetland (923 ha)

2022

1st ponds desilting works

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RAMSAR WETLAND PROJECT AT LE PINAIL



HEADING TOWARDS 2050: LE PINAIL AND CLIMATE CHANGE



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Mitigation and adaptation - what's the difference?

Le Pinail is extremely sensitive to droughts and heatwaves linked to climate change. Tomorrow's landscapes depend on today's activities: reducing greenhouse gas emissions and/or increasing their natural sequestration means mitigating climate change, while modifying land use and/or our behaviour to limit its consequences and promote our resilience means adapting.

Ramsar

Le Pinail



Departmental road



Défens pond



P P Reception area

Discovery trail

National nature reserve

Rivau d'Aillé

- Ponds and water bodies
- * Peat bogs and seeps
- Moorlands and wet meadows
- Dry to mesophilic moorland
- Thicket and ferns
- Hardwoods
- Softwoods
- Pathways
- ... Communal boundaries

0 250 500 m

Geographic details

Surface area: **923 ha**

Ownership:

95% State and **5% private**

Number of communes: **4**

Coordinator: **GEREPI**

A network of ponds and exceptional biodiversity

Le Pinail's ecological challenges are underpinned by its damp and poor soils. Characterised by a network of several thousand pools, peat bogs and vast expanses of moorland and wet grassland, the site is one of the most unique relict landscapes of the "brandes du Poitou." Shaped by humans, habitats are said to be semi-natural, while their diversity and interweaving allow for the expression of exceptional biodiversity, with more than 2,700 species currently listed: 400 plants, 750 fungi and 1,550 animals.

Odonata and amphibians are the emblematic groups of the site: 51 species of dragonflies and damselflies, and 12 species or hybrids of amphibians. Birds such as the pitchou warbler and harriers, reptiles such as the European cistude, and countless invertebrates (butterflies, spiders, orthopterans, etc.) are also found in Le Pinail, which is also home to carnivorous plants and orchids.

The site is home to populations of rare species threatened with extinction on a regional or international scale, such as the white-clawed crayfish, the raft dolomite, the leucorrhines, the amphibian vole and the wetland azure.



Crayfish

10,000
PONDS



Pond



Pitch warbler



Raft Dolomite



Crested newt



Azure of the wetlands

2,700
SPECIES



Large thorax leucorrhine

60
HABITATS



Wet moorland



Peat bog



Drosera

Tools and actors at the service of nature

The sustainable management of Le Pinail's wetlands is based on a number of natural heritage conservation measures: a national nature reserve, a Natura 2000 site, and a state-owned forest.

Complementary action by local managers and actors means that forestry management can be combined with conservation management of the moorland and pond ecocomplex. These areas are regularly cut, grazed, or burnt, while other parts of the site are left to evolve freely. The heather is put to good use in local industries producing fences, roofs, and natural filters, while the trees provide timber and firewood.

The "Ramsar" initiative aims to develop collaborative projects focused on adapting to climate change (water functioning, soil cover), restoring ponds and moorlands (deforestation), and receiving and raising public awareness (educational facilities).

The Natura 2000 site on Le Pinail moorlands is a special conservation area (European habitat-fauna-flora directive) managed by the LPO. The site's perimeter, steering committee and management document are based on the Ramsar wetland, although they take a broader view of biodiversity, including moorland and dry grassland habitats and species. Natura 2000 contracts can be signed with voluntary owners and managers to support their practices, which respect the ecological challenges of the site.



Cut and export



Ornithological monitoring

Restoration of ponds under pine forest in Moulière national forest



The Moulière state forest is managed by ONF, whose mission is to produce wood, preserve biodiversity, and welcome visitors. At Le Pinail, management includes a forest production series (60%) and an ecological series (40%) where moorland maintenance, restoration of ponds and the creation of a controlled biological reserve are implemented. A sylvo-cynnegetic balance is sought for the benefit of the forest and surrounding crops.

Prescribed burning



Réserve Naturelle Nationale
PINAIL

The Le Pinail nature reserve is managed by GEREPI, which provides protection, conservation management and awareness-raising services in line with the principles of the French nature reserve network. The reserve covers 142 hectares and contains over 6,000 ponds. Scientific monitoring is being developed as part of an observatory of biodiversity and the impact of climate change, while low-carbon management is being sought.

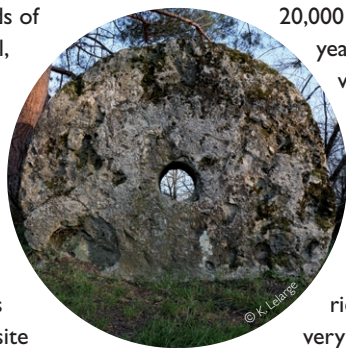


Extensive grazing



A rich heritage and activities for all ages

At the crossroads of natural, historical, and cultural heritage, Le Pinail is an ideal place to discover the region and the interaction between humans and nature. The site can be explored through a range of leisure activities (hiking, mountain biking, photography, etc.) and a programme of visits and events organised by local actors (CPIE Seuil du Poitou, GEREPI, etc.).



20,000 visitors every year. The 2km trail winds its way between moorlands and ponds, providing access to observatories and discovery areas, as well as information panels and half a dozen video reports. As a protected area, access is regulated but free and specially adapted for people with certain disabilities.

Throughout the year, nature activities are offered to local residents, tourists, and schoolchildren. Guided tours, themed outings, educational

events, and workshops help visitors to discover Le Pinail's rich heritage: millstones, wetlands, birds, forestry sites, small pond creatures, etc. For the more experienced, there are also training courses on biodiversity, climate change, etc.



National and international events at Le Pinail

- World Wetlands Day
- Operation 'Fréquence Grenouille'
- International Forest Day
- Nature Festival
- Bat Night
- Pond Festival

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VIRTUAL TOURS, a free, open-access experience

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The adventure begins at

www.sentier.reserve-pinail.org

VIDEO
Libre et gratuit

La Gazette du PINAIL



Subscribe to the quarterly newsletter
of the site's actors

Mares Landes

Tourbières Brandes du Poitou

Forêt de Moulière

Pierre meulière

Prairies humides



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Ramsar sites in metropolitan
France

