

Adapting to climate change in the 'Marais d'Yves' National Nature Reserve

VULNERABILITY ASSESSMENT AND ADAPTATION PLAN SUMMARY

VULNERABILITY ASSESSMENT NARRATION

« Marais d'Yves, tell us your story! »

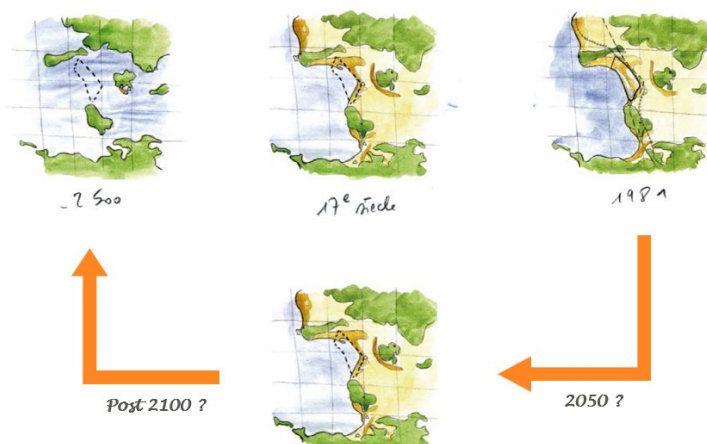
Historically, I was formed by the filling in of an old sea golf course. This explains why I am no higher than 5 metres at my highest point. I was therefore originally a maritime area composed exclusively of mud and colonised in places by salt meadow vegetation, before becoming a marsh. For a time, I functioned as an estuary with the presence of a small river, the Gères, which flowed into the sea in the bay, until in the Middle Ages, its mouth was filled in with sand and pebbles. I then formed a vast marshy depression and became a marsh. At the same time, I am sometimes flooded by the sea through marine submersions. I am therefore, by nature, a space subject to the influences of the sea and the land.

From the 19th century onwards, on the sea side, I accumulated sand on my shoreline thanks to the sea currents and the swell. I then gradually built up a new dune belt, which gradually allowed me to create a lagoon, which today covers 40 hectares. At the same time, on the land side, I had to deal with the diversion of the fresh water that fed me. The "culprits"? Man and the construction of the Charras canal, which definitively diverted the waters of the Gères towards the river Charente. I then became a dry marsh. During this century, Man continued to increase his hold with the development of transport infrastructures: a road (D137) and a railway, isolating me this time from my fellow villagers of the back coast. I then began to gradually lose my naturalness.

This was followed by a period during which man never stopped developing and exploiting me. The extraction of materials (sand, pebbles) modifies my natural relief and favours the presence of new water bodies. The creation of a network of ditches completes my drying out. The construction of earthen dykes isolates my lagoon from any contact with the sea. My vocation then became agricultural. Eventually, it was limited to extensive cattle breeding. More recently, the establishment of an oyster

farm on 25 hectares destabilised the dynamics of my shoreline.

In 1981, my registration as a nature reserve enabled me, at the same time, to avoid being developed as a water leisure park. The fact that I was placed under protective status marked a new page in my history, which has since been turned towards the protection of a rich natural heritage. Despite my anthropic facies, I am recognised as a coastal wetland with a preserved shoreline, the only non-urbanised coastal site between the cities of La Rochelle and Rochefort. Like my past, I have experienced two new marine submersions in recent decades (1999, 2010). The last one was tragic for the people (death, flooded houses). So, to protect themselves, they decided to build a new dike, which encloses me a little more from the back of the coast. From a "primary" natural space to an anthropogenic natural space, it is now the turn of climate change to be the cause of my future evolution. Rapid rise in sea level, drought, repeated marine submersions..., all direct consequences of climate change which, in the space of a century, could see me return to the sea. Should we see this as a sign of a return to my original state? Yes, it is possible! This is, moreover, the hypothesis retained by my "guardians" and the reserve manager. To find out how they intend to accompany me in this story, go and discover the stories they have written for me.



ADAPTATION PLAN NARRATION

By its very nature, the Yves marsh is a natural area vulnerable to the risk of marine submersion, due to its geomorphological and topographical context. Climate change, and more particularly the rise in sea level, will accentuate this existing vulnerability. However, this does not mean that climate disruption, so renamed because of man's responsibility for this phenomenon, will not cause major transformations on the site. On the contrary, it is with certainty that the reserve manager foresees the maritimisation of the Yves marshes in the future, a real footnote to the history of the site, which was originally a maritime area. Could this scenario become a reality in the medium to long term with the rise in sea level in the Charente's channels, or in the shorter term, with marine submersion? It is therefore the "when" of this maritimisation that remains an uncertainty for the manager.

Although this announced return of the sea favours the expansion of certain intertidal benthic marine habitats such as salt meadows, this scenario translates, on the scale of the protected area, into a loss of biological diversity, due to the homogenisation of natural environments. For the reserve team, this also means accepting the loss of its capacity to intervene in terrestrial habitats (hydraulic management, control of vegetation development) and changing the way it manages and intervenes on the site. Will the forthcoming presence of a dyke crossing the protected area, built as part of the territory's strategy for coastal protection, have a slowing effect on the process of "marinisation" of the reserve's terrestrial sectors? The question remains open. On the other hand, what is undeniable is that this new structure accentuates the isolation of the site, which is wedged between a rise in sea level and a succession of infrastructures: dyke, railway, departmental road, all of which are barriers that are difficult to cross for the natural environments and their species.

In this context, the equation to be solved for the manager becomes more complex when considering the retreat of the coastal ecosystem upstream inland.

Locally, it is therefore the state of conservation of coastal habitats that risks deteriorating.

So what position should the LPO adopt and defend, in view of the mission delegated to it by the State and which it has been striving to pursue for 40 years: the sustainable preservation of the remarkable environments and species of the national nature reserve of the Yves marsh? The manager advocates a return to a more natural state where land-sea exchanges are free to evolve and where his intervention is limited to accompanying the transformation of the coastal ecosystem under the effect of climate change. In other words, it is a question of encouraging the natural expression of coastal geomorphology and the mobility of the coastline. This does not mean "watching" and "doing nothing". It means helping nature, the natural heritage of the reserve, to adapt to changing climate and environmental conditions. In other words, the manager does not fight against the inevitable "marinisation" of the reserve's coastal land areas. On the other hand, it is working to guarantee a place for biodiversity issues, which will disappear from the perimeter of the protected area due to maritimisation, in the spatial reorganisation of the territory.

It also allows itself the right to use ecological engineering to intervene more or less proactively to facilitate, for example, the migration of species towards the retrolittoral marshes due to the retreat of the coastline (ecological corridors - climatic, translocation, etc.), with the help of numerous partners. The LPO's position on adapting the management of the Yves Marsh Nature Reserve to climate change is in line with the very identity of this area: the natural character of its shoreline.

**ENTIRE DOCUMENTS AVAILABLE
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[Vulnerability assessment and
adaptation plan \[FR\]](#)

