What is the REMPAR network?

Network of monitoring and expertise on micropollutants, macro-pollutants and micro-organisms in the waters of the Arcachon bay and its tributaries

The REMPAR network, supported by the SIBA, carries out in-depth and collaborative investigations on fresh and marine waters, in addition to the numerous monitoring of coastal water quality conducted by Ifremer, the water agencies and the regional health agencies.

This action was born from the will of the elected representatives of the Arcachon bay's coastal communities, united within the SIBA, and that of local scientific organizations (Ifremer, Bordeaux University, etc.), supported by the administrations in charge of water policies, in particular the Adour-Garonne Water Agency.

As time goes by, the network is constantly being enriched with partners and interlocutors to improve expertise and amplify actions:

- To know the uses on the territory and its catchment areas;
- To quantify the presence of pesticides, PAHs, metals, UV filters, microorganisms and nutrients in water;
- Understand the effects on the aquatic ecosystem;
- Share information;
- Encourage and support changes.

Why?

The Arcachon bay, the only tidal lagoon on the sandy coasts of the south-west, is an extremely sensitive natural environment, where the multiplicity of uses requires high water quality. Numerous activities depend on this quality: shellfish farming, fishing, swimming, leisure activities. In addition, there are natural environments rich in biodiversity such as the eelgrass beds, the Banc d'Arguin, the Île aux Oiseaux, the Leyre Delta, the Arès and Lège salt meadows reserve, etc., which deserve equal attention.

These environments receive fresh water from a large catchment area of more than 5,000 m², occupied in particular by forests and crops, right up to the coastal areas, from lightly to heavily urbanized.

All these waters are marked by our imprint, which must be known and understood so that everyone can act at the source.

Historical review of the creation of REMPAR and its development

The SIBA (Intercommunal Syndicate of the Arcachon Bay) was created in the 70's and now groups together 12 communes to manage and preserve the quality of the waters of the Arcachon bay. When it was created, the SIBA's main competence was wastewater treatment to avoid discharges into the Basin, then its competences were extended, in particular to stormwater management and monitoring the quality of bathing water in connection with the preservation of the Bay's waters.

Water quality monitoring was set up in the 1970s: **bacteriological** for bathing water and since the 1990s, at the level of tributaries for **nutrients** (nitrogen + phosphorus) and bacteriological quality, providing the territory with rich time series.

Then in 2010, the issue of **micropollutants** emerged in the concerns of society and began to be investigated under the impetus of the SIBA, in connection with all local expertise, giving rise to the REMPAR Network: First **pesticides**, then micropollutants in the broad sense with a consequent inventory established between 2014 and 2018, both on wastewater and natural water, in the framework of the call for projects "Innovations and changes in practices: fight against micropollutants in urban waters" of more than 1 million €, going as far as the realization of pilot treatments and ecotoxicological studies.

Today, the REMPAR network includes all historical (nitrogen and phosphorus, microbiology) and more recent (pesticides, **metals**, **UV filters**, etc.) monitoring, whether one-off, such as **drug residue** or **surfactant** fingerprinting, carried out within the framework of the call for projects, or continuous, such as pesticides monitored every two months.

In recent years, the SIBA, via its REMPAR network, has also set up projects on micropollutants considered to be locally at stake. This is the case, for example, of the inventory of knowledge on **PAHs** (polycyclic aromatic hydrocarbons), which is being pursued by spot measurements of inputs to the water body.

In 2020, the SIBA launched the **BRIQUE** project (Residential buildings and their influence on water quality), which aims to measure and understand the fate of **biocidal** molecules used in construction. The aim is to observe how biocide molecules end up in the natural environment. These are new explorations, never before studied on our types of soil, which call on the skills of research laboratories.

The SIBA is also often called upon for research programs developed in whole or in part on its territory of competence, such as the "Arplastic" project, which studies the contamination of water bodies by **microplastics**, the "Emergent'sea" project for the search for **substances of emerging interest**, or the "Microbial Source Tracking" project, which makes it possible to identify sources of **faecal contamination origin** thanks to bacterial genomes.

The actions of the REMPAR Network are also progressing in synergy with those of the research center on wastewater set up between SIBA and ELOA, but also with those of all the SIBA's centers, all of which are involved in the preservation of water (wastewater treatment, stormwater treatment, GEMAPI, hygiene service, tourism promotion, maritime works)

Knowing, sharing, acting

In addition to its own actions in the above-mentioned fields of competence, the SIBA supports the actors of the territory who wish to become involved in the preservation of water quality.

The various reports produced by the REMPAR network are accessible via a virtual library and a software program called ENKI centralizes the thousands of data acquired, facilitates their visualization and allows them to be exported if necessary.

However, the appropriation of knowledge or the development of new actions inevitably requires permanent exchanges with local stakeholders, regular feedback and presentations of the various works.

With this objective in mind, the SIBA has an educational space, the Eau'ditorium, which enables the main principles of wastewater treatment to be understood with the help of multimedia supports. Its objective is also to raise awareness of the path of water and its return to the natural environment, with particular attention to the management of stormwater, which is very important in our territory.

In autumn 2019, SIBA launched an awareness campaign on the preservation of the quality of the Arcachon bay waters, entitled "Here begins the sea, throw nothing away! "which aims to install buttons at the stormwater drains in the communes along the Arcachon bay. Educational activities are also carried out in the schools of the communes to encourage children to be ambassadors of water quality on their territory and to know the difference between treated wastewater and untreated stormwater, which must be quickly returned to the natural environment, marked at least by our footprint.

Since 2017, the SIBA has been organizing awareness campaigns around the issue of drug residues. The collaboration with the Cyclamed organization makes it possible to raise awareness among the population of the impacts of discharges of medical residues into the collective sewerage system and the need to use the appropriate disposal channel

As prevention is always better than cure, reductions at the source, when possible, are the best action to take to preserve our aquatic ecosystems. In this respect, the actors of the territory have demonstrated their involvement, as have the communes, all of which are committed to the "Zero Pesticide" objective. The aim is to rethink the management of communal areas in order to move towards a more ecological and economic management that integrates the preservation of the environment and the quality of life of the inhabitants. Like the agricultural partners, who are heavily involved in adjusting practices via a partnership with the GRCETA (Research Group on Agricultural techniques and Crops), along with chemical monitoring of the resulting experiments on the soil and water quality.

In 2021, together with the players in the catchment areas, SIBA is launching the ReZHilience project, which, by restoring wetlands upstream of urbanized areas, will further contribute to improving the hydraulic regulation of surface water and groundwater, promoting biodiversity and preserving the quality of water flowing into the Arcachon bay.

The SIBA wishes to continue to listen to and support the professionals and actors of the Arcachon bay in their initiatives to preserve the quality of our waters through the REMPAR network.