Protection works against the erosion of the La Baule beach and seawater filtration filtered by the patented ECOPLAGE® system

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Year of commitment : 2018
Address 1 - street : AVENUE DE LA MER, LA BAULE, France
Diameter : 29000
Green energies : Geothermal
Water cycle : Capture

1 500 000 €

Builder
Ecoplage

GENERAL INFORMATION

The beach of Baule Bay is endemic erosion which results in a leak of sandy elements. The municipality of laBaule-Escoublac has therefore decided to implement the Ecoplage® process on 950 ml of the beach.

The system consists of laying drains under the beach, parallel to the coastline and connected to a pumping station. The drainage dries the foreshore and curbs the erosion of the beach. Filtered seawater from the drainage system is used to recover energy: it is the principle of thalassothermy (use of the heating power of the sea) to produce heat or cold and thus feed the infrastructures located on the coast.

At La Baule, the system will supply the seawater ponds and heat pumps of the AQUABAULE aquatic complex located near the beach. It will

also be able to supply the various thalassotherapy establishments located in the agglomeration, thus enabling them to achieve significant energy savings.

Progress Status

In progress

Data Reliability

Self-declared

Website Enterprise / Infrastructure

http://www.ecoplage.fr/en/

Sustainable Development

Preservation / Environmental Improvement :

The Ecoplage drainage system offers the following advantages:

- Decrease in sediment discharges caused by groundwater run-off
- Decrease in the ebb force of the waves
- Increase in sediment transported by waves by promoting infiltration
- Faster recovery after storms
- Increased wind effects favoring the reloading of dune feet and dike feet
- Establishment of a sand reserve that can serve as a "buffer stock" for the following storms

Resilience :

- **Fight against erosion of the beach**

The system makes it possible to fight erosion of the beach without any negative impact on the fauna, flora and neighboring shores. it is invisible and silent and does not disfigure the landscape. Installed for 19 years on the beach des Sables d'Olonne, it allows an effective fight against the erosion and facilitates the resilience of the beach.

- **Thalassothermie**

The system provides filtered seawater with powerful heat pump devices that produce heat and cool with significant energy savings. It contributes to the reduction of greenhouse gas emissions in the atmosphere.

Responsible use of resources :

Filtered seawater production

The drainage of the beach allows the production of a considerable amount of slowly and naturally filtered water which can be valorized for many uses such as:

- Recreational sea water basin supply (case of La Baule project)
- Aquaculture / shellfish farming / Aquarium (Nausicaa Aquarium case in Boulogne sur mer (62, 2017)
- Desalination to produce drinking water (the high level of filtration makes it possible to get rid of the pretreatment stages) (prototype case of Saint Gilles Croix de Vie (85)

Governance

La Baule - Escoublac City

Holder Type : Regional Authority

Ecoplage

Builder Type : Other

Sustainable Solutions

Ecoplage

Description :

Beach drainage system consisting of laying drains under the beach, parallel to the coastline and connected to a pumping station. The drainage dries the foreshore and curbs the erosion of the beach.

The drainage system was discovered in Denmark in 1981 by GEO. Mandated to produce large quantities of perfectly filtered seawater, GEO engineers had the idea of draining the beach, thus using the filtering capabilities of the sand. This drained beach has seen its surface increase significantly. A second experiment was therefore conducted on another beach that confirmed the beneficial effect of drainage in the fight against erosion and natural re-fattening.

- Resources :
- Biodiversity :

Company (es) Website :

Contest

Reasons for participating in the competition(s)

Lutte contre l'érosion de la plage

Le système permet de lutter ddurablement contre l'erosion de la plage sans aucun impact négatif sur la faune, la flore et les rivages voisins. il est invisible et silencieux et ne défigure pas le paysage.

Installé depuis 19 ans sur la plage des sables d'olonne, il permet une lutte efficace contre l'érosion et facilite la résilience de la plage.

Production d'eau de mer filtree

Le drainage de la plage permet la production de quantité considérable d'eau lentement et naturellement filtrée qui peut être valorisée pour de nombreux usages tels que :

· Alimentation de bassins d'eau mer récréatifs (cas du projet de la Baule)

· Aquaculture / conchyliculture / Aquarium (cas Aquarium Nausicaa à Boulogne sur mer (62, 2017)

· Dessalement pour produire de l'eau potable (le haut niveau de filtration permet de s'affranchir des étapes de prétraitement) (cas de prototype de Saint Gilles Croix de Vie (85)

Thalassothermie

Le système permet d'alimenter en eau de mer filtrée des dispositifs puissants de pompes à chaleur permettant de produire de la chaleur et du froid en réalisant d'importantes économies d'énergie.

Il participe en cela à la réduction des émissions de gaz à effet de serre dans l'atmosphère.

Building candidate in the category

Coup de Cœur des Internautes

Grand Prix Infrastructure Durable

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