Benefits of Nature based Solutions: Wetland Rehabilitation in Yanshan Sinopec River flows dynamic management in Bievre Valley SIAVB
Established in 1970, Yanshan Petrochemical site is one of largest Sinopec petrochemical subsidiaries.

Main production capacity figures:
- 10.5 M Tons of crude oil processed
- 0.8 M Tons of ethylene

Manufactures in total 120 kinds and 494 grades of petrochemical products, including synthetic resin, synthetic rubber, phenol, acetone etc.
In 2017 a rehabilitation project has been completed in the wetland with treated waste waters

Serve as a buffer intermediary discharge area between the industry waste water outlet and the Niukouyu Reservoir, the final discharge area.

Beijing Yansan Veolia was fully involved in the design and construction of the wetland.

A natural solution to preserve resource and aquatic ecosystems against water scarcity
Benefits of Wetland rehabilitation

Improve water quality

Rehabilitation of 8 ha wetland with 23 terraces restored:

- 14,000 m³ of sludge removed
- Avoidance of algae growing
- Repair and renewal of hydraulic connection systems
- 1,600 m³/h inlet water supply from treated effluents
- 2.7 ha planted for phytoremediation

Water treatment polishing: the water quality is further guaranteed by phytoremediation process provided by the wetland
Benefits of Wetland rehabilitation

Create well-being for local communities

345 m walking bridge & observation pagoda across the wetlands with presentation panels

View platform

1 ha of recreational area with plants, trees, benches, a pagoda as well as a kids playground
More than 500,000 visitors are received per year.

Education approach is carried out through partnership with local schools.

1 environmental exhibition hall with content on wetlands benefits and biodiversity.

Digitalization: An APP allows visitors to hear voiced presentation, check the map of wetland, Q&A...
Benefits of Wetland rehabilitation

Different habitats and landscapes to enrich wildlife: water ponds, banks, forest......

5 main habitats
144 types of birds
57 types of plants
28 types of dragonflies
10 types of butterflies
8 types of fishes *

IUCN red list near threatened birds have been identified:
- Reed parrotbill (passereau)
- (Paradoxornis heudei)
- Northern lapwing (vanneau)
- (Vanellus vanellus)

*: All the data based on the <2019 Wetland Ecosystem Monitoring Technical Support Report>
Contract since 1991 for dynamic water flows management with an automate remote system
- 200 000 inhabitants and 17 local communities under floods vulnerability
- Floods in 1973 et 1982 with more than 1 billion of damages, 110 mm in 3h of rainwaters
The Bievre Valley
remove permanent water bodies

Increase the buffer storage waters capacity

With the support of the water agency, the function of water natural basins is changed to perform regulation water flows

Direct Benefits:
- 30% of additive storage water capacity
- improve wetlands and biodiversity
- provide buffer tank to protect for floods
- remove the cyanobacteria blooms
The Bievre Valley
dynamic process remote system of water flows

Improve flow regulation
Reduce the risk of floods
The Bievre Valley
dynamic process remote system of water flows

Reduce overflowdings
Steering storage/emptying
THANK YOU

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