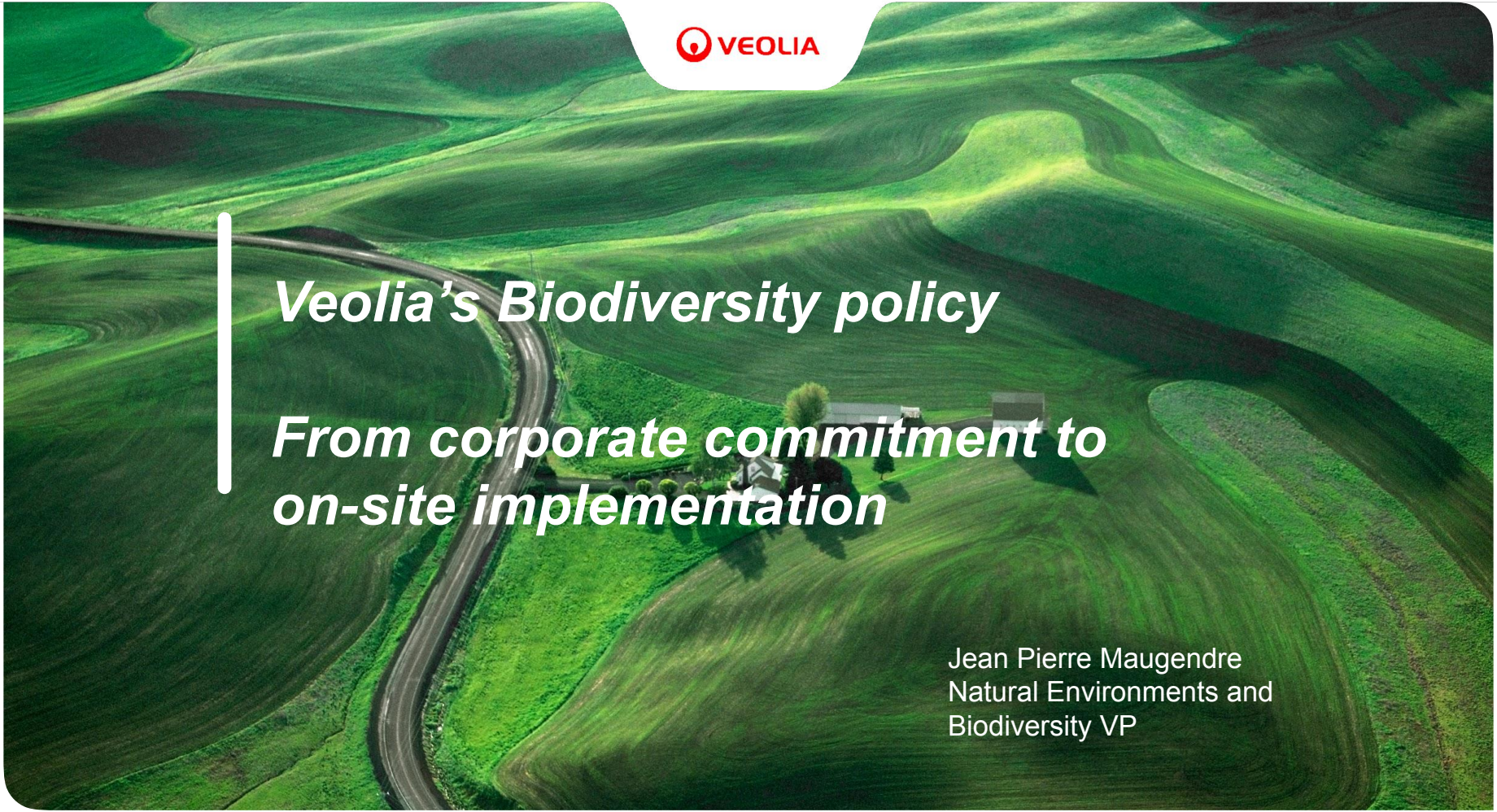


Veolia's Biodiversity policy

From corporate commitment to on-site implementation

Jean Pierre Maugendre
Natural Environments and
Biodiversity VP

Biodiversity policy : from Group’s Purpose to sites’ management

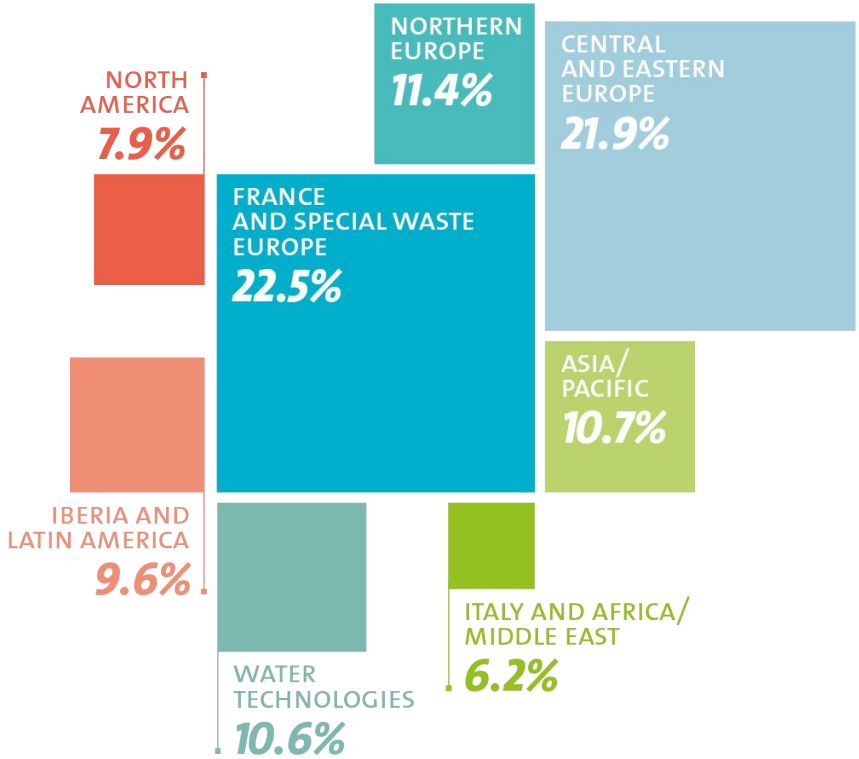
VEOLIA GROUP
GLOBAL
OVERVIEW

Historically French, naturally European and operationally international, Veolia is in the forefront of ecological transformation. We are committed to the territories, where we contribute to their economic dynamism and attractiveness.

Close to
220,000
employees worldwide

58
countries(1)

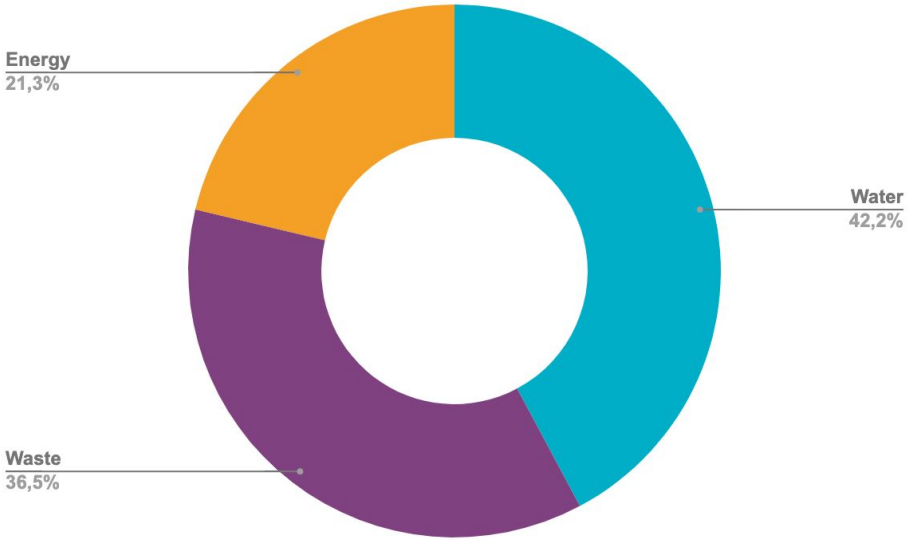
€42.9 bn
revenue



(1) Countries in which Veolia has permanent operations with personnel and employed capital of more than €5 million.

OUR 3 MAIN BUSINESSES

GLOBAL OVERVIEW BY ACTIVITY*



*breakdown of revenue by business line

1

WATER

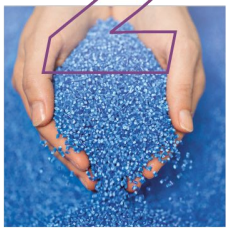
111
million people supplied with drinking water

97
million people connected to wastewater systems

4,130
drinking water production plants managed

3,506
wastewater treatment plants managed

2



WASTE

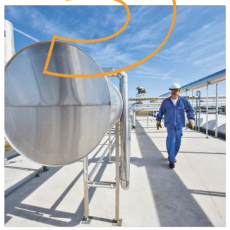
46
million people provided with collection services on behalf of municipalities

61
million metric tons of treated waste

533,759
business clients

823
waste processing facilities operated

3



ENERGY

44
million MWh produced

46,922
thermal installations managed

680
heating and cooling networks managed

2,716
industrial sites managed

Context

Activities and sites are strongly linked to nature

Management of large areas of land

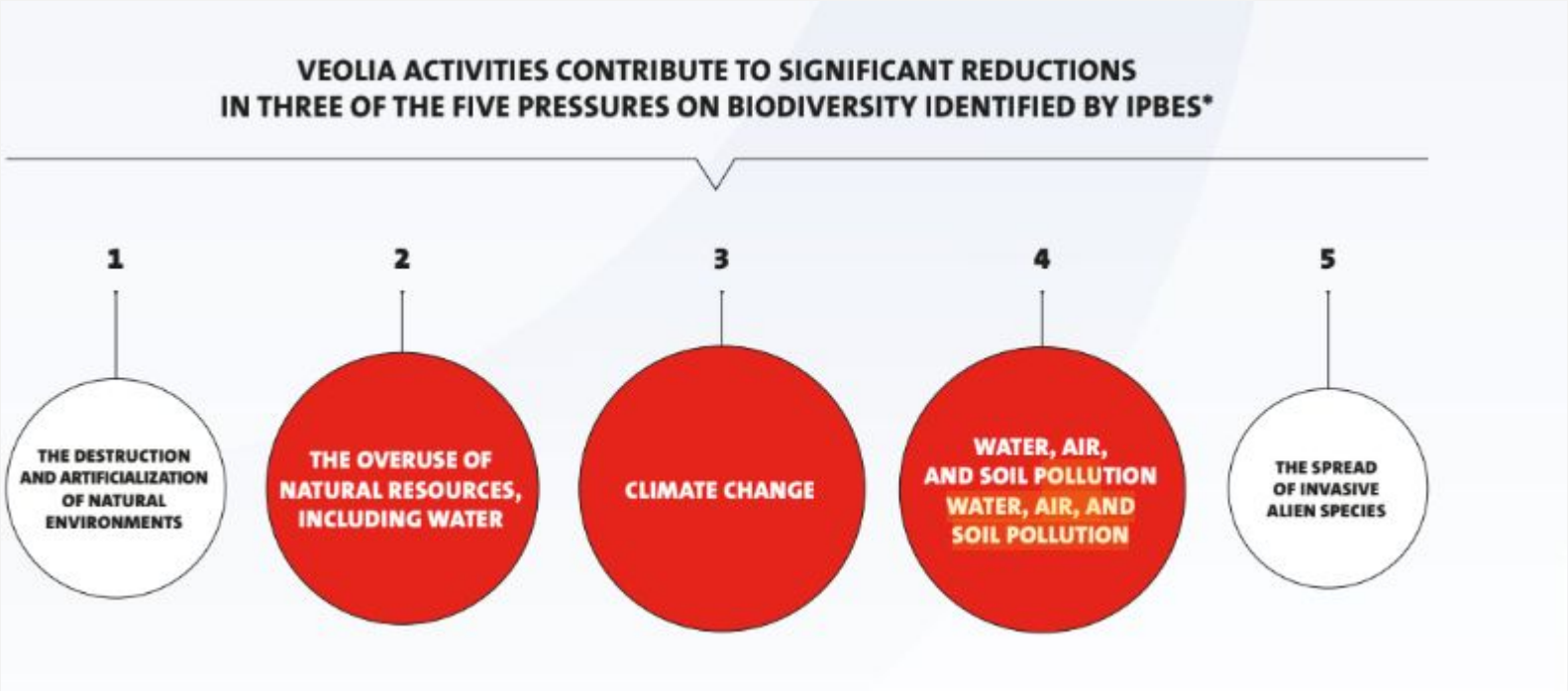
Local impact of our activities (processes and land use)

Presence of protected areas or species

Environment restoration

A strong connection with natural environments

Contribution of Veolia’s solution to biodiversity protection



OUR COMMITMENT MULTIFACETED:
PERFORMANCE

Veolia's Purpose is the compass that guides its strategic choices and activities, reflected in a commitment to multifaceted performance that creates value for all stakeholders.

Veolia is committed to placing the same level of attention and demands on its economic, financial, commercial, human resources, social and environmental performance.

This commitment guides us in how we support our customers, seeking the most effective solutions in technical and economic terms, but that also have a positive impact for people and the regions.

www.veolia.com

Focus on environmental Performance

Veolia' Purpose (link)

4 priorities

- Decarbonization : scope 1 and scope 2
- Decarbonization : transformation of our assets
- Sustainable management of water resources and resource preservation
- **Depollution / Biodiversity**

Group's main KPI :

85 % progress on action plans aiming to improve the ecological footprint of "sensitive sites" by end 2027 (163 sites)

Environment and biodiversity protection
2024-2027 commitments

Commitment to the

act4nature international

initiative including the following quantified targets.

Weblink :
https://www.act4nature.com/en/

... to contribute to ecological transformation

	2024-2027 Plan
Main biodiversity indicator	**85% progress on action plans** to improve the ecological footprint of “sensitive sites."
Additional biodiversity indicators	No phytosanitary products at **95 % of sites**
	Implement ecological management at **95% of sites** with a surface area of more than 1 ha

Integrating nature-related risks into the existing risk analysis process

A work performed on the main activities of Group's Value chain, with the help of concerned BSP segments and Risks Dept

Assessment of the negative **impacts** of Veolia on nature + Assessment of Veolia's **dependencies** on nature → Risk analysis

What are the significant negative impacts and where are they located in the value chain?

What are the significant dependencies and where are they located in the value chain?

What are the risks for Veolia on the main issues and how are they managed?

X **NB : by construction, analysis of opportunities and positive impacts are not part of the exercise**

Analysis prism

IPBES identifies impacts on the **5 main drivers of erosion on biodiversity** : Land and sea use change, Direct resource exploitation, Climate change, Pollution, Invasive alien species

Dependencies ares assessed according 18 categories of ecosystem services defined by the IPBES and grouped into 3 macro categories: provisioning, regulating and non-material services.

Use of the risk classification adopted by the **TNFD: physical risks** (direct result of dependencies) and **transition risks** (mismatch between stakeholder expectations and business operations)

-> Output : main activities targeted by impacts and dependances on nature

- Biomass supply (*cf. CDP Forest*)
- Energy supply
- Fossil fuel supply

Next step : determine what should be included in the framework of the corporate Risk process assessment

Implementation of biodiversity action plans on sensitive sites

Environment and biodiversity protection

Targets:

	2024-2027 Plan
Main biodiversity indicator	**85% progress on action plans** to improve the ecological footprint of “sensitive sites."
Additional biodiversity indicators	No phytosanitary products at **75% of sites**
	Implement ecological management at 75% of sites with a surface area of more than 1 ha
	Internal or external awareness of biodiversity protection issues at 50% of sites

163 sites

Sensitive site identification criteria

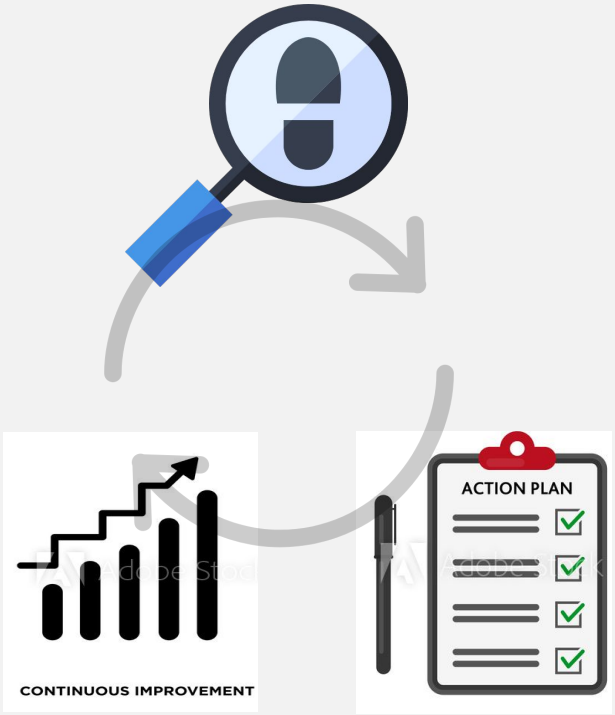
1) **Ecological potential and sensitivity:**
   - Surface area of permeable areas
   - Green space management practices
   - Type of environment
   - Presence of protected species
   - Presence of protected natural areas
   - Presence of endangered species
1) **Process:**
   - occurrence of environmental accidents or discharge thresholds being exceeded
   - discharge into water and air (BOD, COD, SOx, NOx, etc.)
   - exposure to water stress

Sensitive sites in all businesses (Waste, Water and Energy)**, worldwide**

Genesis of the biodiversity footprint tool
Our aim

A tool:

- Adapted to local issues at sites while analyzing the value chain
- Specific to water / waste / energy businesses
- To:
  - ✓ Measure qualitatively & quantitatively the pressures exerted by the site on ecosystems, but also its potential for conserving/restoring biodiversity
  - ✓ Implement a targeted action plan
  - ✓ Manage performance over time with monitoring indicators.



Genesis of the biodiversity footprint tool
Benchmarking tools

Analysis criteria for existing tools:

- **Scale / Level** (Cities, National / International, Company, Sites, Products)
- **Life Cycle Assessment (LCA) model(s)**
- **Local ecosystems** (Standard, Inventories, Fauna & Flora diagnosis, Ecologist visit, others)
- **Aspect** (Quantitative, Qualitative, Total Value chain)
- **Metric** (unit)
- **Recognition** (IPBES, IUCN, ADEME, others)
- **Business** (Action plan, assessment of current performance, assessment of future performance)
- Data specific to our water/waste/energy businesses (input, output)

Tools investigated	
GBS / GBSFI	InVEST
BIM	BFM
PBF	Local Biodiversity Intactness Index (LBII)
STAR	BIRS
ESS6	BNGC
BPT	BISI / BIEC
CBF	IQE and IPE
LEFT	CISL

⇒ **Conclusion**: no off-the-shelf tool that meets our needs

⇒ **Build a Veolia tool** starting in 2019, with:

- support from external experts
- Veolia's DDD and R&D departments

General principles of biodiversity footprint tool’s design

Biodiversity Footprint

Impacts & benefits assessed across the entire value chain of sites

In the course of its activities, each Veolia site...

Consumes

Energy

Reagents

Water & raw materials

... produced off-site

Draws on natural resources on site (water)

Emits pollutants into water/air/soil

Occupies, ***transforms*** and/or ***manages*** land

... on site

Generates

Waste

Energy recovery

Material recovery

... managed off-site

... which generate impacts on and benefits for biodiversity

Indirect footprint
⇒ Quantifies impacts generated off-site upstream

Direct footprint
⇒ Quantifies the impacts generated on the site

Indirect footprint
⇒ Quantifies impacts generated off-site downstream

Biodiversity Footprint

Design of hybrid tool combining "Ecology" & "LCA" approaches

5 types of "biodiversity" issues assessed using a panel of quantifying indicators:

ii) negative impacts: generated by the activities carried out by the sites
ii) benefits: generated by control measures and good ecological management & energy and material recovery

Biodiversity issues	Impact indicators	Direct footprint	Indirect footprint
Loss and change of habitats	Habitat artificialization	■	■
	Habitat fragmentation	■	■
	Damage to general biodiversity	■	
	Damage to rare or threatened species	■	
	Site's location in a protected area	■	
Invasive species	Spread of invasive species	■	
Overexploitation of resources	Impacts on biodiversity due to stress on water resources	■	■
Pollution	Light pollution	■	
	Soi l and water eutrophication	■	■
	Soil and water ecotoxicity	■	■
	Air acidification & soil impacts	■	■
Climate change	Impacts on biodiversity due to CO_2 eq. emissions	■	■

Direct footprint

1. Need for "ecology" methods for habitat, species and site management
2. Need for Life Cycle Analysis models to assess the impact of substance discharge & on-site extraction

Indirect footprint

1. Life cycle Analysis models are needed to assess the impacts of:

✓ the production and transport of energy, reagents and raw materials consumed on site
✓ management of waste, energy and recycled materials

Biodiversity Footprint

Complementarity and specific features of the "Ecology & LCA" approaches

“Ecology" expertise

Analyzes the actual impacts and benefits on habitats and species in the site's immediate environment as a result of:

- the site's location, size and position in relation to protected areas or the presence of species of interest
- its on-site practices, such as the management of lighting or mowing.

“LCA" expertise

Analyzes the potential impact in terms of loss of species, based on:

1- Quantitative data about "process" activities:

- quantities of materials and energy entering and leaving the site
- pollution emissions from the site in its discharged waste and products

2- Conversion into Life Cycle Inventories (=flows of pollutants & consumption of resources) then into **Impacts on biodiversity**, using **data bases** (EcoInvent) **and impact models** (Recipe)

Provides site impact estimates where consumables are produced/transferred, etc.

Business data	X	**Database of impact factors**	=	**Impact on biodiversity**
Operator data *a kWh/year or T/year*		LCA database *b species.yr/kWh or /T*		Result *c species.yr/year*

Veolia Biodiversity Footprint
Overview of available sector specific tools

WATER BUSINESS
- Drinking water production (DW)
- Wastewater treatment (WWP)

ENERGY BUSINESS
- Energy production (CHP and DEP)

WASTE BUSINESS
- Landfill of non-hazardous waste (LAN)
- Incineration of non-hazardous waste (INN)
- Landfill of hazardous waste (LAH)
- Incineration of hazardous waste (INH)
- Sorting and recycling (SRN)

GENERIC BUSINESS
- Mechanical biological treatment (MBT)
- Transfer (TRN)
- C&I collection (CIN)
- Dismantling (DEM)
- Industrial Maintenance (ICM)
- Physico-chemical or biological treatment (PCT)
- Solvent/oil regeneration (REH)

Group’s solutions for Biodiversity

Example of Nature Based Solutions

What are Nature-Based Solutions ?

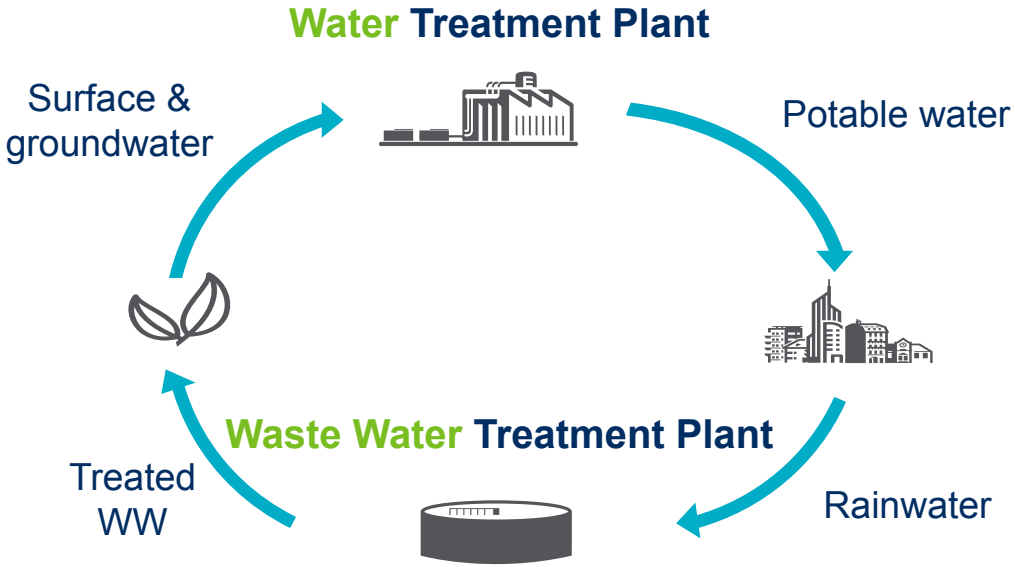
Using **plants and vegetal cover** of the soil as :

> Sponges to control/ preserve water supply = water storage in the soil & the plant

> Purifiers to clean water = pollutants filtration

Leverage nature for resilient water management

Veolia offer on NBS



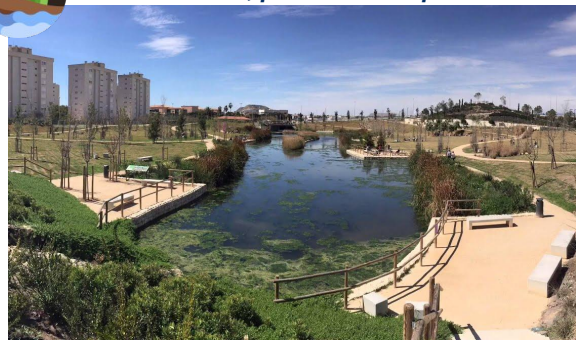
NBS complementary to our water assets
A differentiator to consolidate our water stronghold

Veolia references

Examples of Veolia's portfolio - different types of NbS

1 *Resources preservation through aquifer recharge & natural storage*

2 *Urban drainage & floods protection with wetlands, ponds & floodparks*



3 *Ecosystems protection with vegetated buffer at WWTP outlet*

2 *River & coastal renaturation*

3 *Watershed ecological management*

3 *Industrial waste water management*


VEOLIA
Q & A