# VEOLIA INCHINA 2023



#### **VEOLIA GROUP**

Veolia is devoted to become the leading company of ecological transformation. With nearly 220,000 employees on five continents, Veolia designs and provides solutions that are both useful and practical for water, waste, and energy management, and that are helping to turn the tide radically. Through its three complementary business activities, Veolia helps to develop access to resources, and preserve and replenish them.

In 2022, the Veolia Group supplied 111 million people with drinking water and 97 million people with wastewater services, produced nearly 44 terawatt-hours of energy, and treated 61 million metric tons of waste.



58 COUNTRIES<sup>(1)</sup>

111

MILLION PEOPLE ARE SUPPLIED

97

MILLION PEOPLE ARE CONNECTED

TO WASTEWATER SYSTEMS

4,130

DRINKING WATER PRODUCTION PLANTS ARE MANAGED

3,506

WASTEWATER TREATMENT PLANTS

ARE MANAGED

WITH SAFE DRINKING WATER

EMPLOYEES WORLDWIDE

44 MILLION MWH PRODUCED

46.922 THERMAL INSTALLATIONS ARE MANAGED

2.716 INDUSTRIAL SITES ARE MANAGED

> 680 HEATING AND COOLING

NETWORKS ARE MANAGED

46 MILLION PEOPLE ARE PROVIDED WITH COLLECTION SERVICES ON BEHALF OF MUNICIPALITIES

61 MILLION METRIC TONS OF WASTE TREATED

533,759 BUSINESS CLIENTS

823 WASTE PROCESSING FACILITIES ARE OPERATED

## **VEOLIA'S ESG**



BY OUR 37 PLANTS AROUND THE WORLD

## 89%

ENGAGEMENT RATE IPSOS ENGAGEMENT STUDY (+ 2 POINTS VS 2021)

100% **EMPLOYEES PROTECTED** WITH A

STANDARD SET OF BENEFITS (CARE)

**1** million LOCAL JOBS

(INDIRECT OR DIRECT)

## **Multifaceted** performance

WITH OBJECTIVE EXTERNAL COMMITMENTS FOR 19 KPIS (INCLUDING 14 NON-FINANCIAL)

16,000

EMPLOYEES WITH A BONUS POLICY ALIGNED WITH MULTIFACETED PERFORMANCE

No. 1 shareholder = EMPLOYEES WITH 6.5% OF THE CAPITAL

<sup>(1)</sup> Countries where Veolia has permanent operations with personnel and employed capital of more than €5 million.

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#### **ECOLOGICAL TRANSFORMATION IS OUR PURPOSE**

Ecological transformation means acting to reconcile human progress and environmental protection. We develop and implement local solutions to depollute our vital resources and preserve them from depletion, solutions to decarbonize our ways of living and producing, and adapt them to the consequences of climate change.

At Veolia, we tackle economic, social, and environmental issues as an inseparable whole to benefit the largest number of people.

Veolia is engaged, to a greater or lesser extent, in the implementation of all 17 SDGs. Through its water, waste and energy businesses, Veolia provides solutions to ensure access for all to essential services, reducing the company's and its clients' ecological footprint, and contributing to the world's transitions. Daily, Veolia contributes to the SDGs, with particular emphasis on the 13 that relate more specifically to its purpose:

#### WE SUPPORT THE COMPANIES AND LOCAL AUTHORITIES **ON THE FRONTLINE OF ECOLOGICAL TRANSFORMATION**



#### WE TACKLE 3 MAJOR CHALLENGES THROUGH OUR 7 DOMAINS OF EXPERTISE









ACCESS WATER & SANITATION

SOLID WASTE TREATMENT LIQUID & HAZARDOUS WASTE RECYCLING RECOVERY TREATMENT & RECOVERY

LOCAL LOOPS OF ENERGY



BUILDINGS

ENERGY SERVICES

ON SITE SERVICES TO INDUSTRIAL CLIENTS





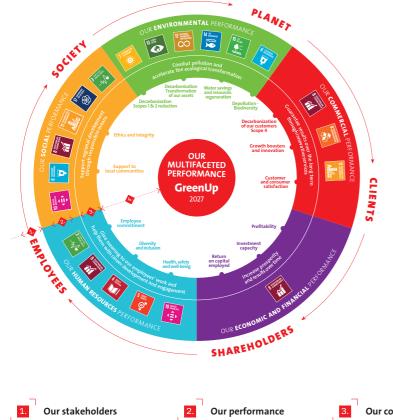
Local energy Energy autonomy



Recycling of plastics and critical materials Water neutrality Reuse of wastewater



Treatment of hazardous waste Treatment of micropollutants Soil remediation IAO



9 goals related to its businesses



3 goals linked to its organizational priorities as a responsible company



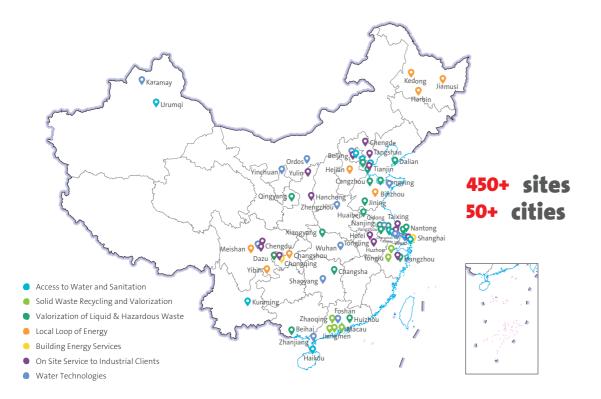
1 key goal as a driver to achieve the SDGs





4. Our objectives

#### **OUR BUSINESS FOOTPRINT IN CHINA**



## **VEOLIA IN CHINA**

Since entering the Chinese market in the early 1990s, Veolia has firmly established its leadership in the environmental services sector through its three core businesses: water, waste, and energy. We provide customized environmental solutions to cities and industries, with profound respect for local variances.

In China, guided by a globally shared purpose, Veolia collaborates with all our stakeholders to tackle the three major challenges: decarbonization, resource economy and regeneration, and depollution. We bring our expertise to bear in seven business segments, thereby actively driving ecological transformation.

Today, Veolia provides services at more than 450 sites in approximately 50 cities across China. We offer our clients customized and comprehensive solutions, including access to water and sanitation, solid waste recycling and reuse, hazardous waste treatment, local energy loops, building energy services, and on-site services for various industries.



of GHG emission (CO<sub>2</sub> equiv.)



#### **PROVIDE SERVICES FOR CITIES AND INDUSTRIES**

ACCESS TO WATER AND SANITATION Solutions to address water-related issues that now affect every part of China.

#### ECOLOGICAL TRANSFORMATION FOR MUNICIPALITIES

In 2002, Veolia was awarded a 50-year municipal water concession contract by Shanghai Government to provide full water management services to Pudong District. As the first PPP partnership in China's water industry, Veolia runs and manages the water plants with a capacity of 2,000,000 M<sup>3</sup>/day and provides water treatment, network management, distribution and customer services to over 4 million populations across 5.61 million KM<sup>2</sup>. Thanks to the cutting-edge digital solutions, Veolia steps forward to achieve the smart water plant.

A similar case happens in Veolia Tianjin Jinbin Water Plant, and it is also another step towards decarbonization! Veolia's drinking water treatment facility in Tianjin has connected its solar power project to the grid, making it the first "low-carbon water plant" in the city. Using a "self-sufficient power supply" model, the facility has a total installed capacity of 1.6 MW, with approximately 3,000 solar panels installed. It is expected to generate over 1.5 million KWh of electricity annually, equivalent to about 1/10 of the water plant's original power consumption. More importantly, this renewable energy solution will reduce carbon dioxide emissions by approximately 1,500 tons per year.

Provide **15 million** people with drinking water

Introduced **1.63 billion m<sup>3</sup>** of drinking water to network

Collect **288 million m<sup>3</sup>** of wastewater **3.22 million** people connected to our wastewater networks



**26.1 million m**<sup>3</sup> of cooling water produced

**43 million m<sup>3</sup>** of process water produced for clients

**42 million m<sup>3</sup>** of effluent treated



ON-SITE SERVICES TO INDUSTRIAL CLIENTS Solutions to preserve resources and accelerate the ecological transformation of industrial production sites.

#### **ON-SITE DECARBONIZATION FOR INDUSTRIES**

Veolia initially built up a partnership with Beijing Yanshan Petrochemical in 2006, providing industrial wastewater treatment services with high stability and availability. Based on 10-year solid cooperation, an expansion contract was signed and brought the on-site services to the operations, maintenance and upgrade of the full water loop of BYPC. Leveraging innovative and cutting-edge expertise, Veolia serves with the high-quality process water supply to meet varied standard demands of this industrial complex, real-time compliance wastewater treatment and even achieving the world's most stringent discharge standards. We achieved a watershed moment by surpassing the water outlet standards of even pristine water sources. Enhanced by the profound technology and solution, the 80,000-square-meter oxidation pond has evolved into a Wetland Park and is open to the public. The eco-friendly water resources attract and nourish the whole wetland ecosystem.

Veolia provides 15-year on-site services to Shaanxi Longmen Coal Chemical for operating and managing the zero-liquid discharge ("ZLD" for short) facility and helps our customer in the coal industry reduce their carbon footprint. The "ZLD" solution aims to ensure the quality of the reclaimed water and minimize waste generation as much as possible. Through this engineering approach, the dissolved and suspended substances (salt and organic compounds) of the industrial wastewater are extracted as solid. Depending on the specific process configurations, these solids can be sold as recovered resources, reused as chemicals, or managed as waste.

#### TREAT AND VALORIZE SOLID AND HAZARDOUS WASTES WITH EXPERTISE

#### **OPTIMIZE ENERGY EFFICIENCY FOR INDUSTRIAL AND COMMERCIAL CUSTOMERS**

LIQUID AND HAZARDOUS WASTE TREATMENT & RECYCLING Expertise in the whole treatment cycle to limit the environmental impact of industrial activities, prevent the dispersion of pollution.

**570,000 tons** of hazardous waste treated

#### SECURE THE PROCESS OF HAZARDOUS AND CONTAMINATED WASTE TREATMENT

Tianjin Hazardous Waste Integrated Treatment Center is the first treatment and disposal facility in China that integrates incineration, sterilization, PCT, secure landfill and resource recycling. Based on the most advanced technology to collect, transport, store and treat hazardous waste and medical waste, the center is qualified to treat 45 out of the 46 categories of waste that are listed in the Directory of National Hazardous Wastes, except HW15 explosive wastes. The designed capacity reaches 72,500 tons/year (Phase I) and 134,000 tons/year (Phase II).

## **672,000 people** covered by municipal waste collection

**55,200 tons** of plastic recycled from Veolia transformation plant



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SOLID WASTERECYCLING AND RECOVERY

Veolia provides solutions to regenerate new materials from non-hazardous waste, and deploys the value chain in the field of resources recovery.

#### EMPOWER CIRCULAR ECONOMY BY REGENERATION OF RESOURCES

Veolia is devoted to ecological transformation and to achieving China's dual carbon goals by actively engaging in circular economy practices through the Huafei plastic recycling facility. Huafei, as the only company worldwide that processes certifications for rPET, rPP, rHDPE and FDA approval concurrently, purchases waste plastic to recycle and produce recycled PET bottle chips, high-ended recycled slice, recycled fiber, modified engineering plastic and so on, which are widely used in textile, food and beverages packaging, automobile, household appliances and digital products fields.Huafei achieved to avoid 1,882 tons of CO<sub>2</sub> emissions in 2022.

In early 2023, Veolia officially launched its brand PlastiLoop in Shanghai, focusing on circular recycled plastic solutions in China We joined hands with multiple partners to promote the local circular economy together.

#### LOCAL LOOPS OF ENERGY

Local energy loops are a solution for providing environmentally friendly energy autonomy.

5.745 million MWh of energy produced 937,000 people connected to district heating networks

#### RENEWABLE SOLUTIONS FOR CITY AND INDUSTRY

In Veolia's green energy industrial plant in Yibin, 220,000 tons of CO<sub>2</sub> emissions are avoided annually by utilizing biomass fuel instead of fossil energy. The facility consumes 450,000 tons of biomass fuel and generates a maximum of 800,000 tons of steam and 220 million KWh of electricity each year, thus providing 100% green energy with high availability to multiple industrial clients located in Jiang'an Economic Development Zone.

In the far Northeast of China, Veolia is operating and managing a 30-year biomass municipal heating concession project in Kedong, Qiqihar. Under the renewable solution, waste stalks from local corn and soybean plants are collected as biomass resources. The facility generates green energy for municipal heating, serving an area of 2.93 million  $m^2$ , and sells electricity to the grid. The facility avoided 60,881 tons of  $CO_2$  emissions in 2022.



More than **160** building energy servicescontracts signed



#### ENERGY SERVICES FOR BUILDINGS Solutions to reduce the energy consumption of buildings while increasing the use of low-carbon energy sources.

#### IAQ SOLUTION UPGRADES THE WELL-BEING OF PEOPLE

As part of Veolia's building energy management services, indoor air quality service is aimed at ensuring a consistently high-quality indoor environment and providing health assurance for the people who live and work inside the buildings. Veolia conducts comprehensive real-time air monitoring within buildings, optimizes HVAC systems, upgrades the fresh air system, formulates reasonable fresh air distribution strategies based on customer needs, and addresses identified indoor air pollutants, including fine particulate matter, microorganisms, and viruses, which may be detrimental to human health. Through the Hubgrade monitoring center, real-time data is collected, analyzed, assessed, and researched for the managed buildings. This data solution generates reports that serve as reliable bases for managerial decisions and solution adjustments. While maintaining excellent indoor air quality, Veolia also offers clients more energy-efficient and cost-effective solutions, assisting them in achieving WELL and RESET<sup>™</sup> Air v2.0 certifications. Currently, Veolia manages multiple indoor air quality systems in China, such as the Shanghai Museum, Shanghai Municipal Design Institute Office Building, Bank of Communications New Data Center, etc...

#### LEAD THE EVOLUTION OF THE WATER INDUSTRY WITH INNOVATIVE TECHNOLOGY

As the global WATER TECHNOLOGY experts of Veolia, we deliver on both performance and sustainability without compromise. We provide you with peace of mind knowing your business and communities are efficient and resilient. Together we protect, preserve, and reuse resources, tackling environmental challenges while creating the water treatment and process solutions of tomorrow.



#### ENHANCE A PURE LAND BENEATH THE CITY

Veolia is responsible for a fully underground wastewater treatment plant in Zhejiang Province. With the cuttingedge technologies provided by Veolia, its land utilization has been reduced by up to 70% with a compact design as compared with the conventional water treatment plant. Veolia, with its globally shared know-how, helps the facility's effluent to meet the China National Standards Class III, which is also the highest standard in the province.

#### Veolia Water Technologies provided multiple technologies including:

- MULTIFLO<sup>™</sup> settler for primary treatment;
- BIOSTYR<sup>™</sup> Duo pre-denitrification, nitrification, and post-denitrification for secondary biological treatment;
- ACTIFLO<sup>™</sup> Carb settler, HYDROTECH<sup>™</sup> DISCFILTER for tertiary treatment;
- o sodium hypochlorite for the final disinfection stage.

In addition to being underground, this WWTP doubles up as a public park, complete with car parking lots all combined in one. This showcase of sustainable economic development of a compact footprint is much welcomed in the city which is experiencing a land shortage.

#### Water treatment technology and process expertise

INTEGRATED SOLUTIONS TO PROVIDE ALL-ROUND MEMBRANE PRODUCTS, CHEMICALS AND SERVICES TO SUPPORT SUSTAINABLE GROWTH FOR INDUSTRIES AND THE ENVIRONMENT

Wanhua Chemical Group is among the global leading suppliers of chemical innovative products such as polyurethanes, petrochemicals, performance chemicals and emerging materials. The partnership between Veolia Water Technologies & Solutions and Wanhua has lasted for nearly 20 years, maintaining a forward momentum in mutual trust.

#### Over the years, Veolia Water Technologies & Solutions has provided Wanhua Chemical with a wide range of products and solutions:

- Water treatment service package in Yantai, Fujian and Sichuan Base
- Reliable chemical solutions and on-site service to Wanhua's ethylene systems
- UF process of Yantai Water Treatment Project
- Ozone system of Wanhua Citral Project

In 2023, we were awarded "Strategic Supplier for the Year of 2023-2025" for the customer's high recognition in exquisite professional skills, rich industry experience and responsible attitude.



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# Resourcing the world

Veolia

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