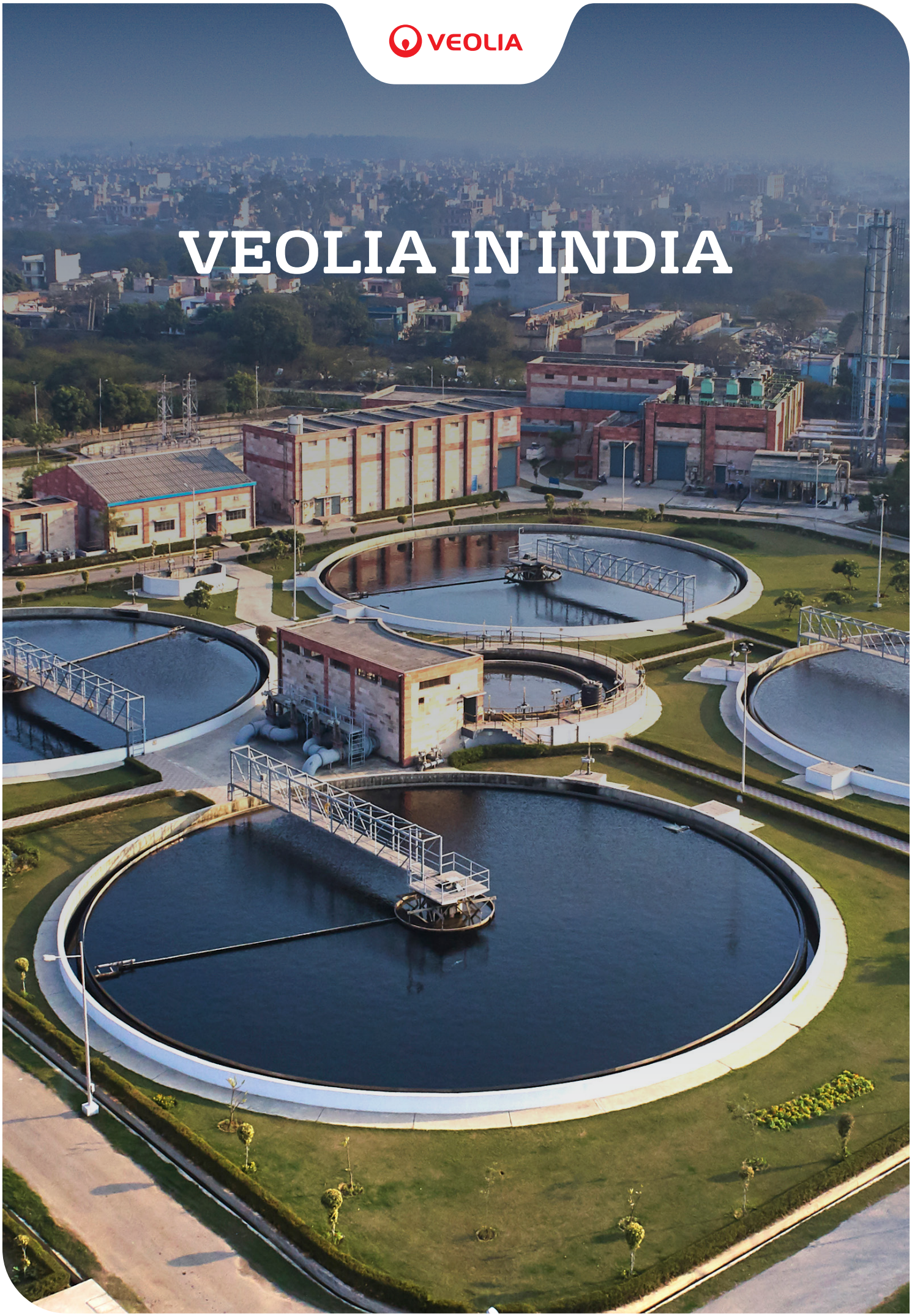
VEOLIA

# VEOLIA IN INDIA



# Ecological TRANSFORMATION Is Our PURPOSE

### IT IS URGENT

Never have ecological imperatives been so immediately perceptible and their consequences on our societies so apparent for communities. Climate change, depletion of resources, collapse of biodiversity, multiple forms of pollution: The ecological emergency requires us to go well beyond the “transition” alone.

### WE MUST ACT NOW

We can no longer procrastinate and gradually adapt our ways of doing things. The time has come for ecological transformation, for clear-cut and structuring decisions. As the reference company for the ecological transformation, we are committed to accelerating and massively deploying existing solutions, while investing in research and innovation to anticipate tomorrow’s needs on a global scale.

### WITH SOLUTIONS THAT TURN THE TIDE

Only in-depth transformations will enable us to adapt production and consumption patterns in a concrete and massive way. We design and implement concrete solutions to accelerate the ecological transformation and deliver a useful circular economy that protects the planet and the future of humanity.

### FOR AND WITH OUR STAKEHOLDERS

We work hand-in-hand with our stakeholders – industry and agriculture, local and national authorities, NGOs, individuals and citizens – in the belief that economic, environmental, social and community needs must be considered as a whole, in the same chain of responsibility.

# Our AMBITION is Huge, But so is our DETERMINATION

VEOLIA IN 2022

# AN EXPANDED INTERNATIONAL FOOTPRINT

With a broader international footprint, Veolia is changing scale to become the global champion of ecological transformation to help regions and companies.

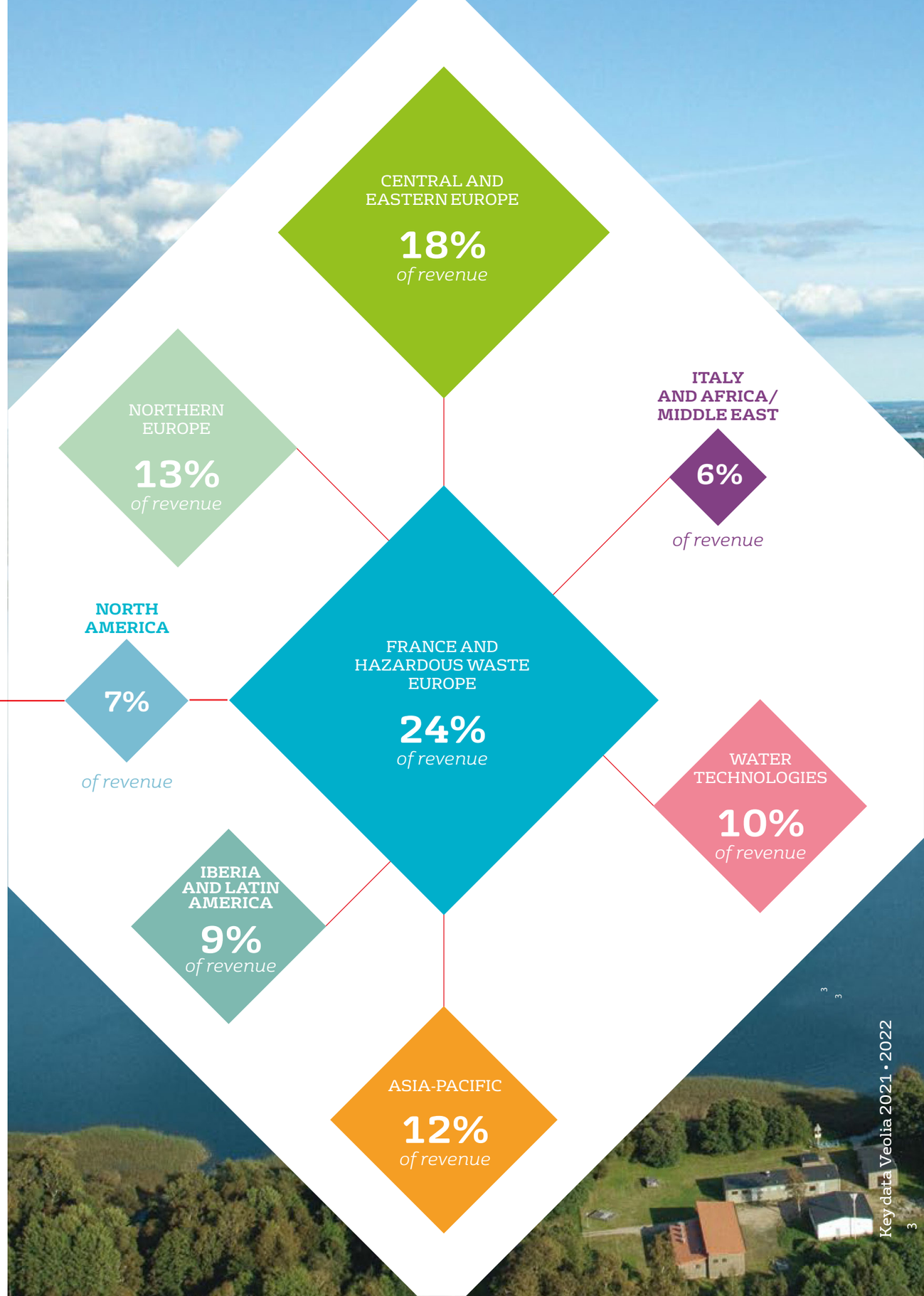
**3 BUSINESSES**

- **WATER**
- **WASTE**
- **ENERGY**

**5 CONTINENTS**

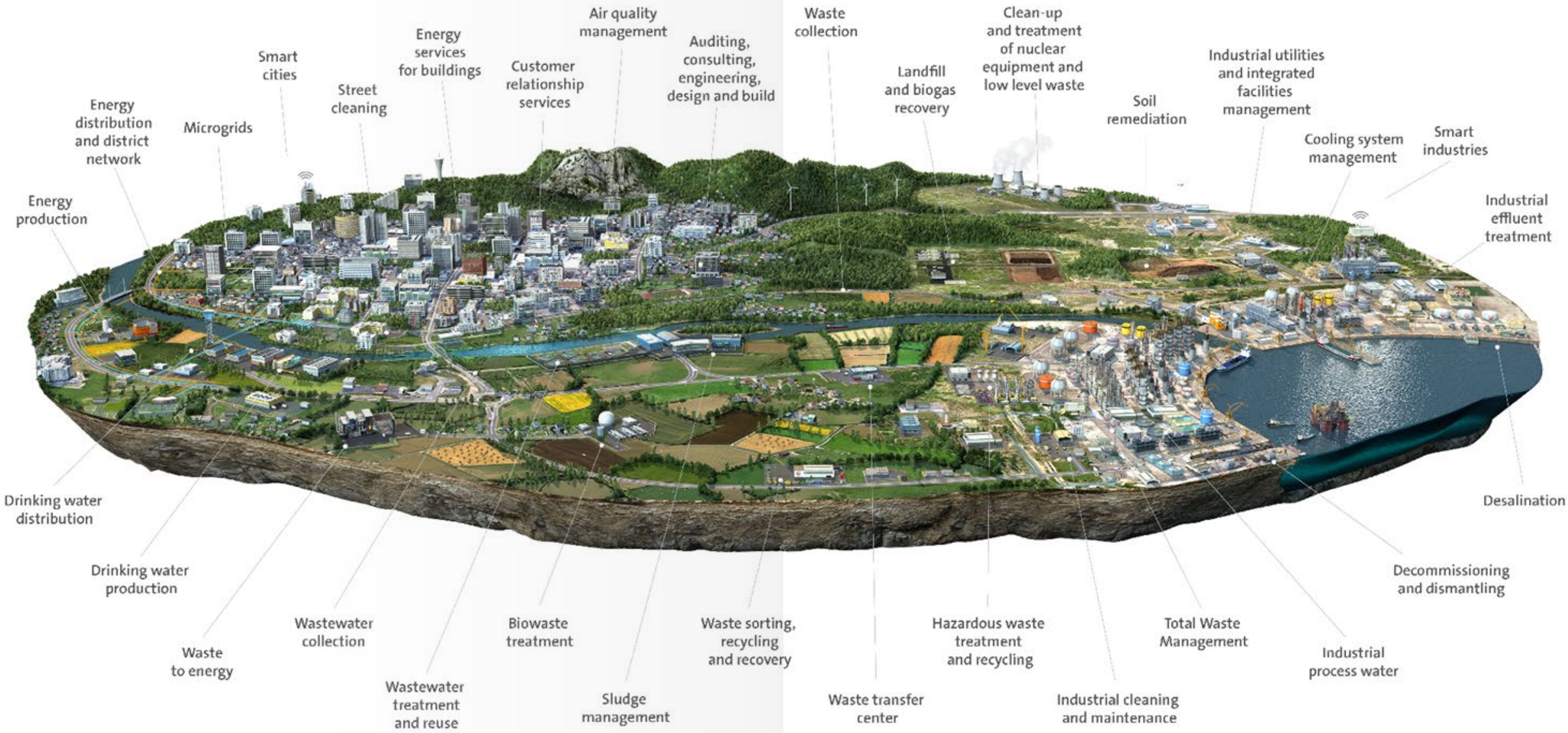
**220,000**
EMPLOYEES
IN THE NEW ENTITY
IN 2022

**€38.4 BILLION**
CUMULATIVE REVENUE FOR
THE NEW ENTITY FOR THE PAST
FINANCIAL YEAR(1)




(1) Condensed consolidated statement of income for the financial year ended December 31, 2021.

# VEOLIA'S SOLUTIONS FOR THE CITY AND INDUSTRIES



# OUR 9 CSR Commitments

Veolia's approach to social, environmental and societal responsibility is an integral part of its strategy, business model and durability.

Veolia's success is founded on its usefulness to all its stakeholders: clients, shareholders, employees, suppliers and the current and future generations living in the different locations where we operate.

Our ongoing dialogue and nteractions with all these takeholders build a solid foundation of mutual knowledge and understanding, ensuring that we can best serve the various needs of these different groups.

## Resourcing The Planet

1. Sustainably manage natural resources by encouraging the circular economy
2. Contribute to combating climate change
3. Conserve and restore biodiversity

## Resourcing The Regions

4. Build new models for relations and value creation with our stakeholders
5. Contribute to local development and attractiveness
6. Supply and maintain services crucial to health and human development

## Resourcing The People

7. Guarantee a safe and healthy work environment
8. Encourage each employee's professional development and commitment
9. Guarantee that diversity and fundamental human and social rights are respected within the company

# OUR KEY DIFFERENTIATOR

## Acting and committing to ecological transformation

Our commitment to respect and preserve natural resources to the highest level drives the way we develop our business and supports the long term sustainable development of our company and our projects. “Resourcing the world” means not only developing highly efficient technologies and systems but also constantly innovating to find solutions for a sustainable future. We believe in a circular economy, where nothing, ultimately, will be wasted, and where “waste” is a resource.

## Operational Excellence

The foundations for Veolia’s operational performance are our people and our shared objectives plus state-of-the art standards, benchmarking and best practices.We optimize the operation process to improve the lifecycle of the projects and and ensure continuous improvement of our customer’s operational performance.

1. Global technical centre of Excellence to continuously improve operational performance
2. More than 350 proprietary technologies to support customized solutions for our clients
3. Strong international dynamic network to deliver integrated solutions
4. Full range of services from design & installation to exceptional customer service
5. Deliver O&M solutions for longer equipment life and optimised cost
6. Reducing Total Cost of Ownership and OPEX costs
7. Maximize productive up time
8. Optimizing cash flow
9. Highest integrity and commitment to compliance



# INNOVATION & CUSTOMER FOCUS DRIVE VEOLIA’S PERFORMANCE.

## Ecological Innovation

Driving ecological innovation with and for all our stakeholders is the pathway to address current and future challenges and allowing everyone to meet their biological, human and social needs with the aim of improving living standards and sustainability on our planet.

1. Innovate to transform our social and business models, and guarantee their "net zero impact" in the long term, including eco-design, bioconversion, and CO2 capture and storage.
2. Providing solutions tailored to specific challenges: wastewater treatment and recovery; the development of high-performance treatment systems for industrial process water; monitoring and treatment solutions for atmospheric emissions from sites;
3. Delivering greater efficiencies and cost savings to our customers, as well as creating incremental value by extending the longevity of resources through recycling, recovery and reuse.
4. Deploying initiatives and solutions aimed at protecting and preserving biodiversity.

## People first

Environmental services is a people’s business. For Veolia, this means a “people first” approach where we prioritise our employees. We are committed to creating a safe and healthful work environment that favours the well being and development of all our employees.

1. Safety is and will always be at the front and center of the organization. Veolia has made **"zero accidents"**: a choice, a concrete goal and a true lever for performance.
2. For **career development** of our employees, we tailor training programmes to enhance their efficiency, knowledge and skills.
3. **Diversity in our workforce** is an integral part of the organization. We strongly promote gender diversity as we believe it is a major asset in our ability to be successful.
4. **Compliance with the law and internal rules** is an absolute obligation and non-negotiable, it being the basis of the relationship of trust that Veolia maintains with its employees, shareholders, partners and customers and more broadly with all its stakeholders.

# OUR HISTORY IN INDIA

Veolia India Private Limited has been in India for more than 20 years, offering an entire range of water and waste solutions tailored to meet the specific needs of municipalities and industries across India, including engineering and construction services, operations and maintenance services, performance contracts, and significant maintenance and refurbishment.

Veolia India has partnered with various local authorities in New Delhi, Maharashtra and Karnataka, Greater Mohali, to provide a 24/7 water supply through a water distribution system that is continuously full and under pressure. We are also leading the way in hazardous waste management for industries in Gujarat and work hand-in-hand with them to develop innovative solutions and meet their specific waste, water, and energy needs.

## 1999

**DELHI**

***1999:*** Veolia in Delhi

**CHENNAI**

***2000:*** Chennai Twinning & Chennai Waste collection

## 2005

**NAGPUR**

***2005***: First demo zone Projects

***2007:*** Pench I demo zone

***2008:*** Kanhan WTP

**MAHARASHTRA**

***2009:*** Lavasa STP

## 2010

**NAGPUR**

**NEW DELHI**

**KARNATAKA**

**SRI LANKA**

***2010:*** **MIHAN**

***2011:*** Orange City Water - Nagpur Full City

***2011:*** Pench IV

***2010:*** Okhla WTP

***2012:*** Nangloi Water Services & Nilothi Sewage Treatment Plant

***2012:*** Bijapur, Ilkal & Indian Institute of Science (IISC)

***2011:*** Passikudah Bay

## 2015

**CHENNAI**

***2015:*** Neyveli Lignite

**KARNATAKA**

***2017:*** Shimoga, Harihar & Ranebennur

**GUJARAT**

***2018:*** Detox India Private Limited

**MOHALI**

***2019:*** Mohali WTP

## 2020

**NAGPUR**

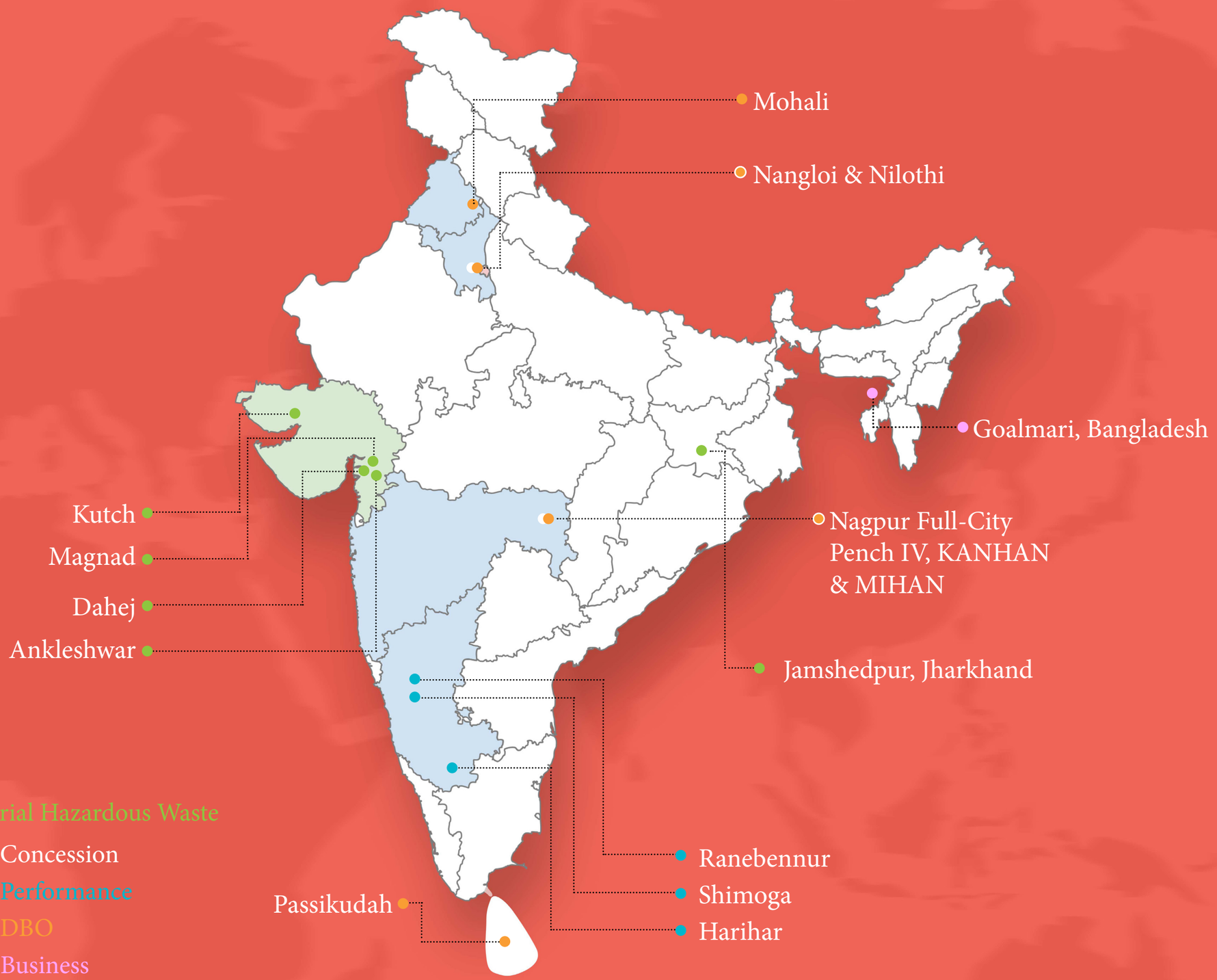
***2020:*** Orange City Water operated by Veolia

**JAMSHEDPUR**

***2022:*** Veolia Carbon Clean ($CO_2$ Capture @ Tata Steel)

| |
|---|
| ***WASTE PROJECT*** |
| ***WATER PROJECT*** |
| ***CARBON CAPTURE*** |

# OUR PRESENCE in India



# OUR AREA of Business

## WATER

**5** Million
**People supplied with drinking water**

**1000** MLD
**Water treated and produced**

**90** MLD
**Sewage treated**

Today in India, Veolia partners with local authorities to provide 24X7 drinking water for citizens through a water distribution system that is continuously full and under pressure. The solutions mainly include engineering and construction services, operations and maintenance services, performance contracts and major maintenance and refurbishment. We are the pioneers in demonstrating the feasibility of 24X7 water supply in India (like cities of Karnataka, Maharashtra, Greater Mohali and areas in Delhi).

Our mission involves producing the highest quality drinking water and collecting and treating wastewater for safe discharge or recycling. Veolia's experience covers the whole water cycle, from collection to discharge, together with network and customer management, to meet the needs of cities.



## WASTE

**1800** KLD
**Concerntrated wastewater treated**

**36000** MT
**Hazardous waste incinerated per annum**

**18** MMT
**Total landfill capacity**

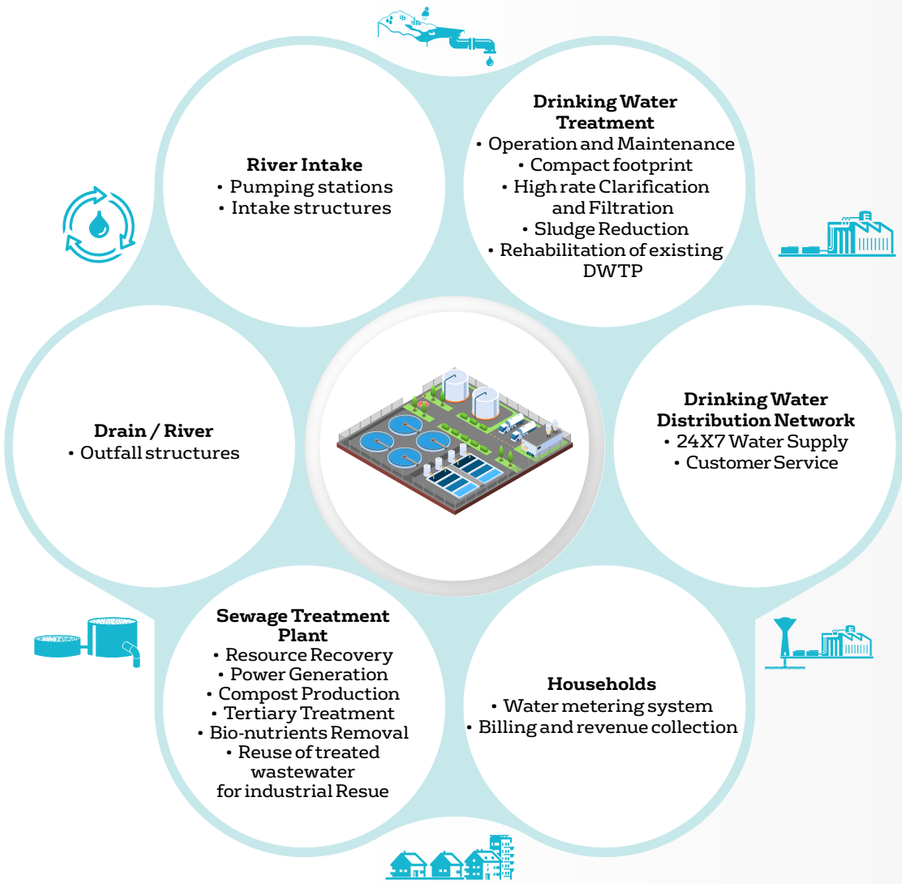
Veolia India has strengthened its position in the services to the industries by entering into the hazardous waste market in the industrial state of Gujarat. We develop cost effective technological solutions for clients from diverse markets to reduce, reuse and recycle their waste and help them improve profitability and preserve the environment.

Our mission currently involves in providing operation and maintenance services for industries to assist them with environment management programmes and help them achieve their sustainability goals.

Through our Detox India Pvt. Ltd, venture in Gujarat, we work hand-in-hand with them to develop innovative solutions to meet their waste, water and energy needs.

# OUR SOLUTIONS and Expertise

## Water Cycle Management




**Construction and O&M Water Treatment Plants**

**Construction and O&M Sewage Treatment Plants**

**Managing bills, collection and customer management**

**Network and distribution management**

**Construction and O&M Desalination Plants**



## Waste Management Model

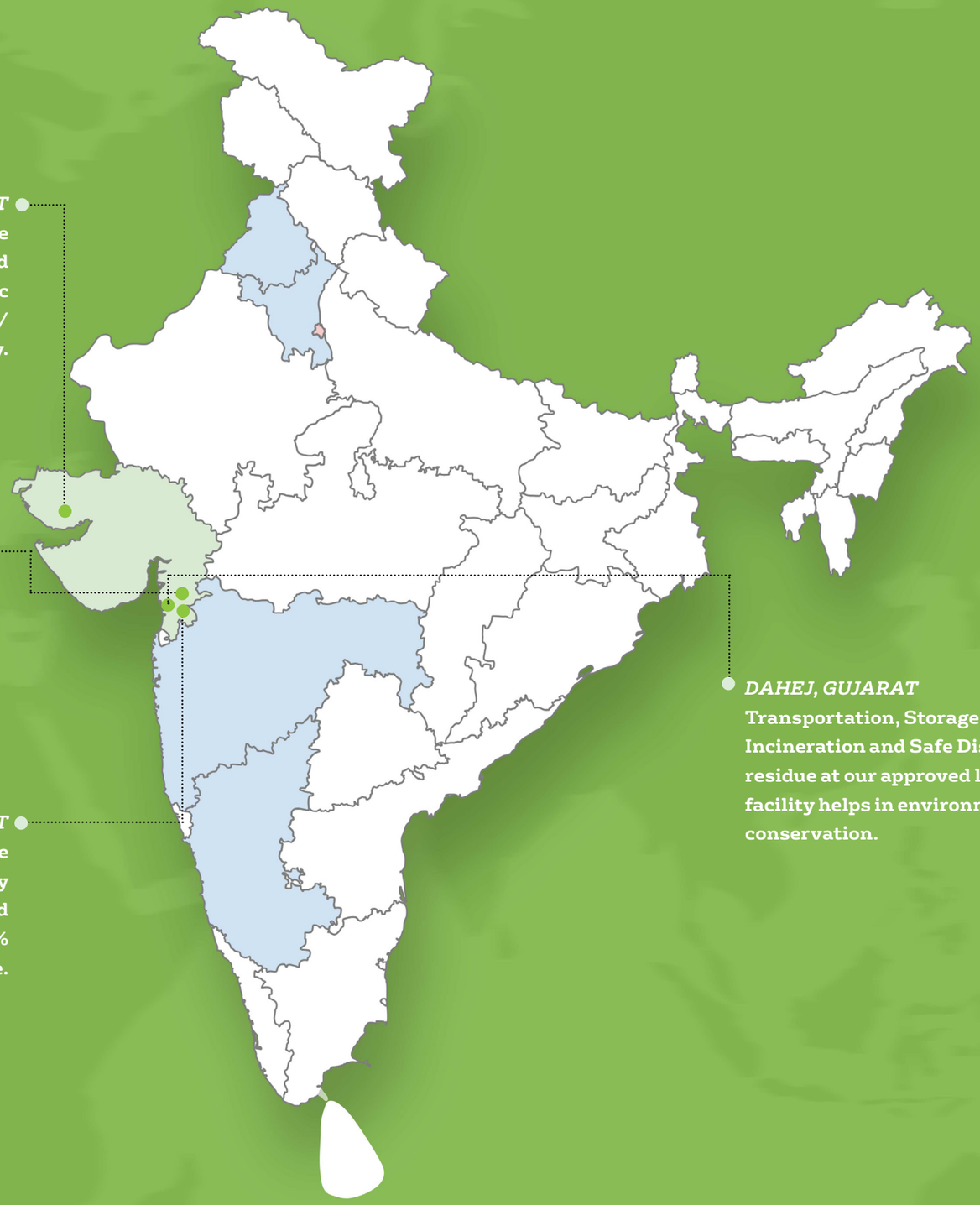

**Biomethanation Plant**

**Industrial Wastewater Treatment Zero Liquid Discharge**

**Hazardous Waste Land filling and Pre-processing**

**Hazardous Waste Incineration**

# Our industrial projects
# HAZARDOUS WASTE



*KUTCH, GUJARAT*
**Integrated common hazardous waste management facility with a secured landfill of approx 2.5 million metric tons capacity with an ETP of 20KL/ day and STP of 50KL/ day.**

*MAGNAD, GUJARAT*
**One of the largest greenfields landfill site in India with a total 15 MMT Capacity, currently managing 3500 metric tons of waste per day.**

*ANKLESHWAR, GUJARAT*
**2 MLD Zero Liquid Discharge Common ETP, is Gujarat's first facility for treatment of concentrated wastewater which recovers nearly 45% of the treated water for reuse.**

*DAHEJ, GUJARAT*
**Transportation, Storage, Incineration and Safe Disposal of residue at our approved landfill facility helps in environmental conservation.**

# MAGNAD Hazardous Waste Landfill

India's largest hazardous waste landfill facility

## 15 MMT HAZARDOUS WASTE LANDFILL

**Project start on**
*2021*

**Type of contract**
*Merchant Plant-Build Operate Own (BOO)*

The Magnad hazardous waste landfill is the largest green field landfill site in India with a total 15 MMT Capacity. Using the most up-to-date landfill design and processing technologies, Veolia ensures that the waste is pre- treated in a separate solidification and stabilisation Pit and safely released to the landfill. The plant specialises in all forms of landfill suitable hazardous waste type.

Currently managing 3500 metric tons of waste per day, this landfill caters to the requirements of industries in Jambusar, Vadodara, Bharuch and Dahej. It has a total client base of around 900 industries ranging from pesticides, pharmaceuticals, paints, dyes, chemicals.

## OUR SOLUTIONS

**The plant offers** direct landfilling, landfilling after treatment & salts drying (leachates + external wastes) services to all its clients

**State-of-the-art in-house laboratory** For comprehensive and quick check analysis; monitoring waste characterization parameters

**An intermediate storage facility-** has been built for waste collection during the monsoon

End-to-end monitoring of safe and **compliant disposal of waste**

**LICENSE TO OPERATE**
Guarantee Compliance.
Waste Traceability And Reporting.
Health And Safety.

**COST EFFICIENCY**
Reduced Operating Costs.
Guarantee Performance.
Integrated Services.

**SUSTAINABLE PERFORMANCE**
Environmental Footprint (Compliant Landfill Management From Construction to Closure).
Social Footprint (Community Engagement).
Employee Absorption and Development.

# ANKLESHWAR
# Zero Liquid Discharge Common Effluent Treatment Plant

## Complete Solutions For Concentrated Wastewater Treatment

**1.2 MILLION LITRE INDUSTRIAL WASTEWATER TREATED PER DAY**

**Project start on**
*March 2016*

**Type of contract**
*Merchant Plant-Build Operate Own (BOO)*

Ankleshwar nests one of the most extensive industrial belts of Gujarat, with over 1500 chemical plants engaged in the production of pesticides, pharmaceuticals, chemicals, and paints.

This unique ZLD CETP at Ankleshwar is Gujarat's first facility to treat concentrated wastewater generated from highly polluting industries and recover nearly 100% of the treated water for reuse.

The final waste is transported to a designated landfill in full compliance with the environmental and safety standards. In addition, Veolia creates dedicated waste recycling solutions for each customer's specific needs.

## OUR SOLUTIONS

**Cost-effective treatment solutions** for critical wastewater streams having high concentrations of COD, TDS, Amm. Nitrogen, etc. generated from various industries.

**Treatment of broad spectrum of industrial liquid waste** viz. Pharma, Pesticides, Bulk Drugs, Dyes & Intermediates, H-Acid & Chemical sector.

**Integrated best technologies -** Best treatment technologies are adapted to suit the specific requirement of the plant. It is well-equipped with technologies like forced evaporation systems, multi-effect evaporators, mechanical vapor recompression, membrane biological treatment, and reverse osmosis.

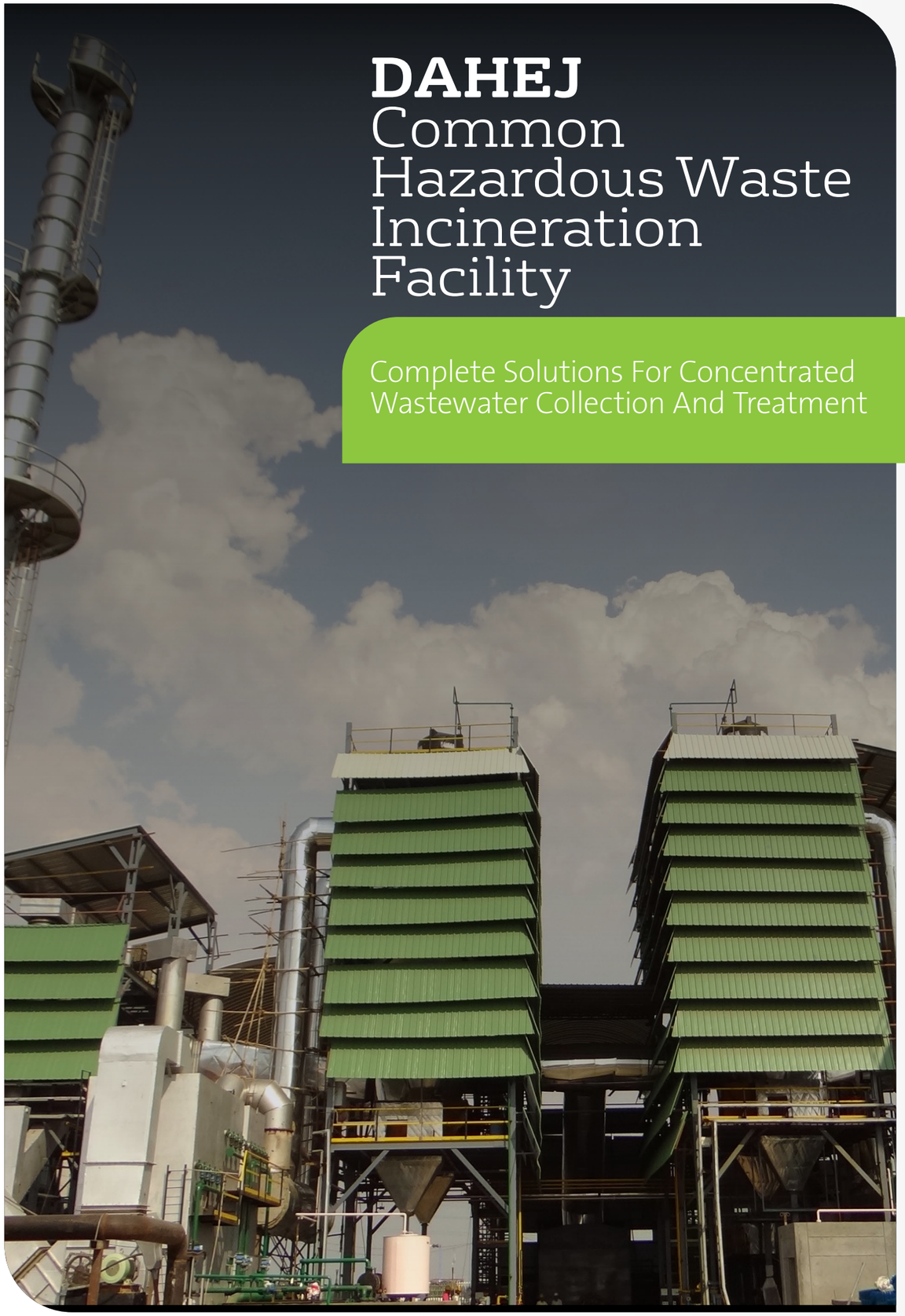
**Recovery & Recycling -** Veolia ensures the disposal and recovery from the waste under full compliance and regulation.

**State of the art in-house laboratory** monitors waste characterization parameters at every stage of the treatment; ensures consistency in the quality of treated water for reuse.

**LICENSE TO OPERATE**
Guarantee Compliance.
Waste Traceability And Reporting.
Health And Safety.

**COST EFFICIENCY**
Reduced Operating Costs.
Guarantee Performance.
Integrated Services.

**SUSTAINABLE PERFORMANCE**
Environmental Footprint (Reduced fresh-water consumption, Effluent and sewage treatment). Social Footprint (Community Engagement).
Employee Absorption and Development.



# DAHEJ
# Common Hazardous Waste Incineration Facility

## Complete Solutions For Concentrated Wastewater Collection And Treatment

**36,000 METRIC TONS HAZARDOUS WASTE INCINERATED PER ANNUM**

**Project start on**
*April 2014*

**Type of contract**
*Merchant Plant-Build Operate Own (BOO)*

**Design capacity**
*36000MT per Annum*

Dahej is located on the South-West coast of Gujarat in Bharuch district. It is a special economic zone for petrochemicals. The Dahej Common Hazardous Waste Incineration Facility has a treatment capacity of 36,000 metric tons per annum (10 million Kcal/hr) and has a robust industrial customer base in the industrial estates of Dahej, Ankleshwar, Sarigam, and Vapi in Gujarat.

Hazardous waste and toxic pollutants pose significant health and environmental risk. Veolia ensures comprehensive hazardous waste management in the collection, transport, recovery, physicochemical treatment, incineration, or landfill disposal. Its services aim to provide clients with the safest treatment of hazardous waste while fulfilling all compliance requirements.

## OUR SOLUTIONS

**Hazardous waste management -** Transportation, Storage, Incineration, and safe disposal of residue at our approved landfill facility. Our solutions reduce the environmental impact of industrial activities, avoid disruption of pollution in the environment and promote a circular economy.

**Operational efficiency** through process automation and advanced control PLC & SCADA systems. Efficient flue gas treatment for air pollution control with continuous online monitoring system.

**State of the art in-house laboratory** for comprehensive and quick check analysis; monitoring waste characterization parameters.

**Effective treatment solutions** for hazardous waste streams from a wide spectrum of industrial waste viz. Pharma, Pesticides, Bulk Drugs, Dyes, Chemical sector.

**LICENSE TO OPERATE**
Guarantee Compliance.
Waste Traceability And Reporting.
Health And Safety.

**COST EFFICIENCY**
Reduced Operating Costs.
Guarantee Performance.
Integrated Services.

**SUSTAINABLE PERFORMANCE**
Environmental Footprint (Sewage treatment).
Social Footprint (Community Engagement).
Employee Absorption and Development.

# KUTCH
# Integrated Common Hazardous Waste Management Facility

## Hazardous Waste Treatment Storage Disposal Facility

## 2.5 MILLION TONS LANDFILL FACILITY

**Project start on**
*April 2008*

**Type of contract**
*Merchant Plant- Build Operate Own (BOO)*

**Plant capacity**
*2.5 Million Tonnes*

Kutch facility is a pre-processing and treated waste landfill facility that supports the Gujarat industrial belts. As industrial hazardous waste is corrosive, toxic, or reactive, proper treatment is essential to ensure environmental safety and healthy living.

At the Kutch facility, waste is identified and analyzed at a dedicated laboratory, and the best treatment process is adapted as per the specific requirement. The final waste is stabilized and landfilled in full compliance with the environmental and safety standards.

This facility has a secured landfill of approximately 2.755 million metric tons capacity with an Paddle Dryer with capacity 30 KL/day and a sewage treatment plant of 50KL/ day. This facility has a forced evaporation capacity of 100KL/day. The landfilling capacity is projected to increase to 5 million tonnes in the future.

## OUR SOLUTIONS

**Integrated solutions -** Forced evaporation capacity of 350KL/ day; integrated leachate treatment and solidification and stabilization capacity of 200MT/ day.

**Operational Efficiency through process automation** and advanced control PLC & SCADA systems. Using the most up-to-date processing technologies, Veolia ensures that the waste is treated and safely released to the landfill.

**State of the art in-house laboratory** for comprehensive and quick check analysis; monitoring waste characterization parameters.

**Transparency through live tracking of activities,** online stack monitoring, and weather monitoring station.

**Monitoring:** GPS-enabled vehicles for reliable transportation of hazardous waste.

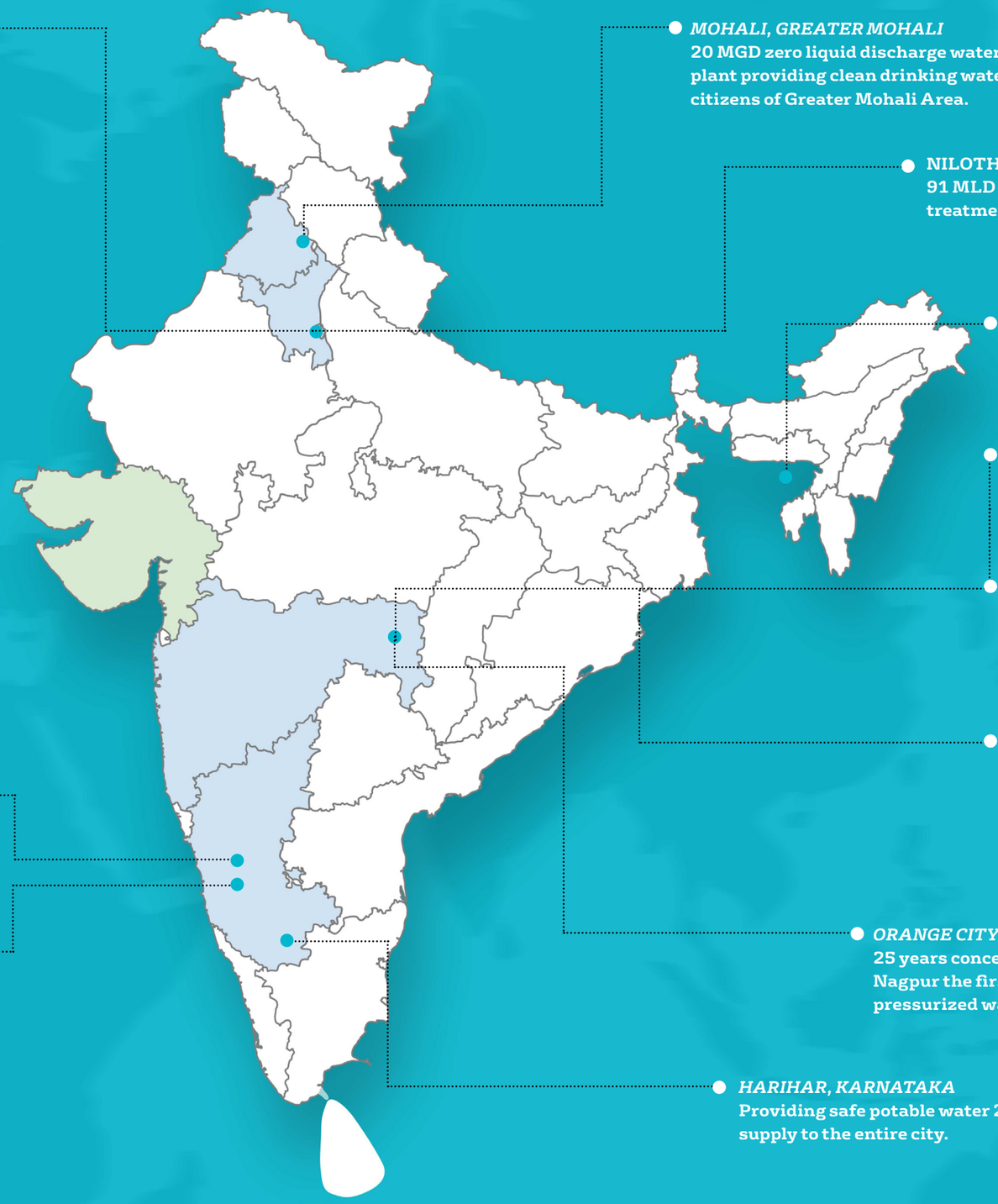
**Storage Facility -** Hazardous waste and toxic pollutants pose significant health and environmental risk. An intermediate storage facility has been built for waste collection during the monsoon.

**LICENSE TO OPERATE**
Guarantee Compliance.
Waste Traceability And Reporting.
Health And Safety.

**COST EFFICIENCY**
Cost effective model.
Guarantee Performance.
Integrated Services.

**SUSTAINABLE PERFORMANCE**
Environmental Footprint (Compliant Landfill management from construction to closure) .
Social Footprint (Community Engagement).
Employee Absorption and Development.

# Our Municipal Projects
# WATER & WASTE WATER



***NANGLOI, DELHI***
**PPP project for supplying 24X7 water supply to more than 1 Million citizens of Nangloi area.**

***MOHALI, GREATER MOHALI***
**20 MGD zero liquid discharge water treatment plant providing clean drinking water to the citizens of Greater Mohali Area.**

**NILOTHI, DELHI**
**91 MLD innovative green wastewater treatment plant.**

***GRAMEEN VEOLIA, BANGLADESH***
**A Social Business Solution to provide arsenic free water to rural areas in Bangladesh.**

***PENCH IV, NAGPUR***
**Design, built and operate state-of-the-art 115MLD ZLD.**

***KANHAN, NAGPUR***
***Compact technologically advanced 240 MLD WTP designed and built by Veolia to meet the water demands of the city of Nagpur.***

***MIHAN, NAGPUR***
**Multi-modal International Hub and Airport at Nagpur (MIHAN) targets to serve 14 million passengers and nearly a million tons of cargo, comprising an airport terminal and a SEZ.**

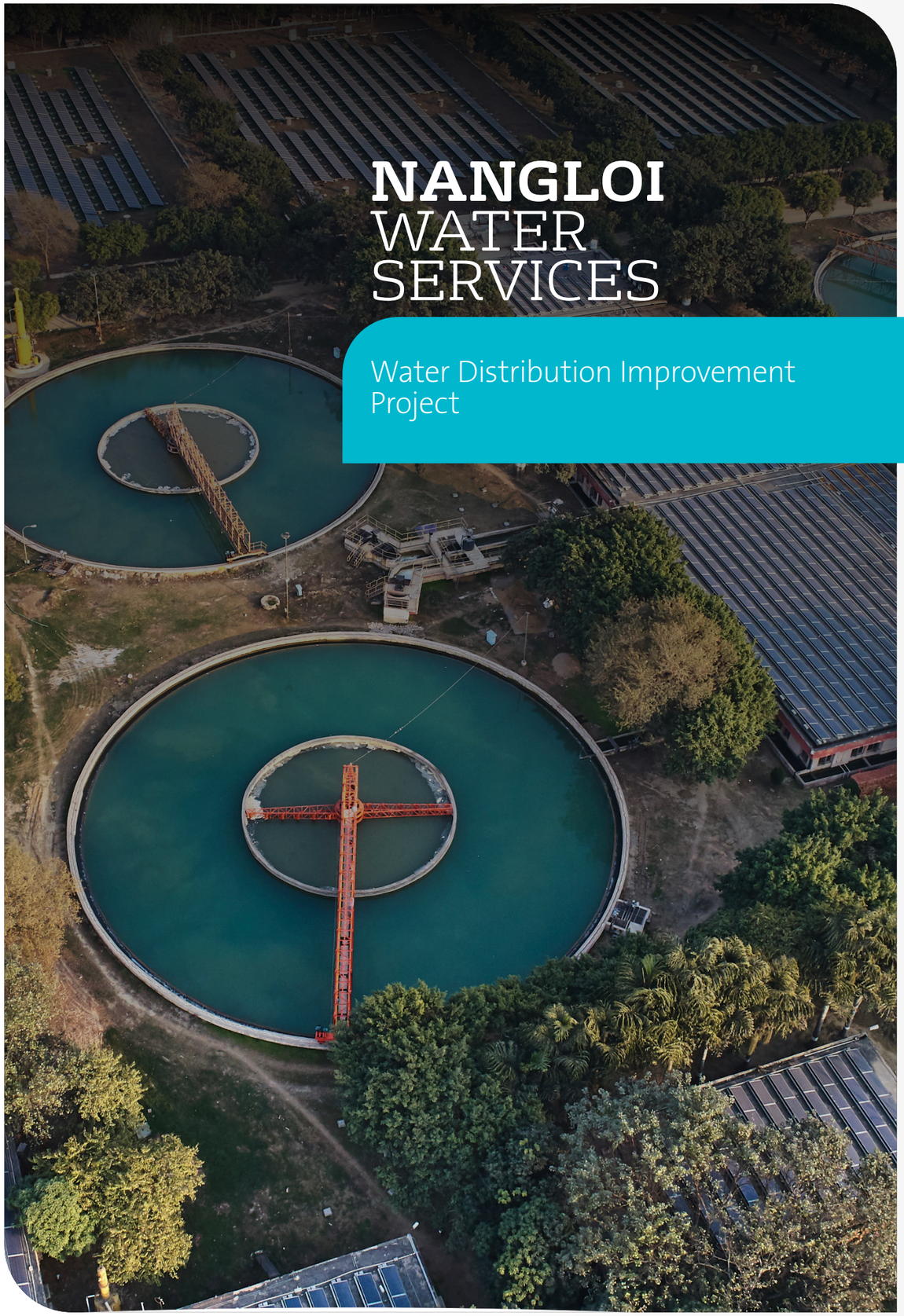
***RANEBENNUR, KARNATAKA***
**Design and construction of 33 MLD water treatment plant with Veolia's patent technologies and distribution network to provide clean drinking water to the citizens.**

***SHIMOGA, KARNATAKA***
**Continuous and pressurised water supply distribution network to deliver safe drinking water to the entire city.**

***ORANGE CITY WATER, NAGPUR***
**25 years concession contract to make Nagpur the first city in India with 24X7 clean pressurized water supply for all its citizens.**

***HARIHAR, KARNATAKA***
**Providing safe potable water 24X7 water supply to the entire city.**

# CONCESSION CONTRACTS



# NANGLOI WATER SERVICES

## Water Distribution Improvement Project

**24X7 Water Supply to more than 1 Million Citizens**

**Client**
*Delhi Jal Board*

**Type of contract**
*Long term performance contract*

**Year of Award**
*2013*

**Scope of Work**
*4 years of Rehabilitation & 15 years of O&M*

In 2013, the Delhi Jal Board (DJB) chose Veolia to run its water supply service for the next 15 years for the Nangloi command area. Through its joint venture company, Nangloi Water Services (NWS) - Veolia will provide a 24X7 water supply to more than one million citizens.

The project consists of improvement and revamping of the existing water supply, transmission and distribution network under the command area of Nangloi water treatment plant, on a Public-Private Partnership (PPP) basis.

By working hand-in-hand with the Delhi Jal Board and various stakeholders, Veolia will aim to provide a continuous potable water supply to all within the Nangloi project area (approx. 129 sq-km). All assets under this contract will remain the property of Delhi Jal Board, along with setting the water tariff for the customers.

## OUR SOLUTIONS

**Modernization of the Nangloi Water Treatment Plant** and three existing underground service reservoirs (UGRs) and their associated pumping stations along with the construction of 2 new UGRs and pumping stations.

**Raw water is transferred from Bawana pumping station to Nangloi WTP** through a dedicated pipeline of about 18 km maintained by NWS. NWS then treats the raw water to the highest quality standard fit for drinking purposes, storing the treated water and finally distributing it to all households through the piped network of about 2000 km.

**Rehabilitation of the existing distribution networks** and replacement of all customer meters. Connection/ metering of all illegal and not connected properties and network extensions in no network/ no connection areas.

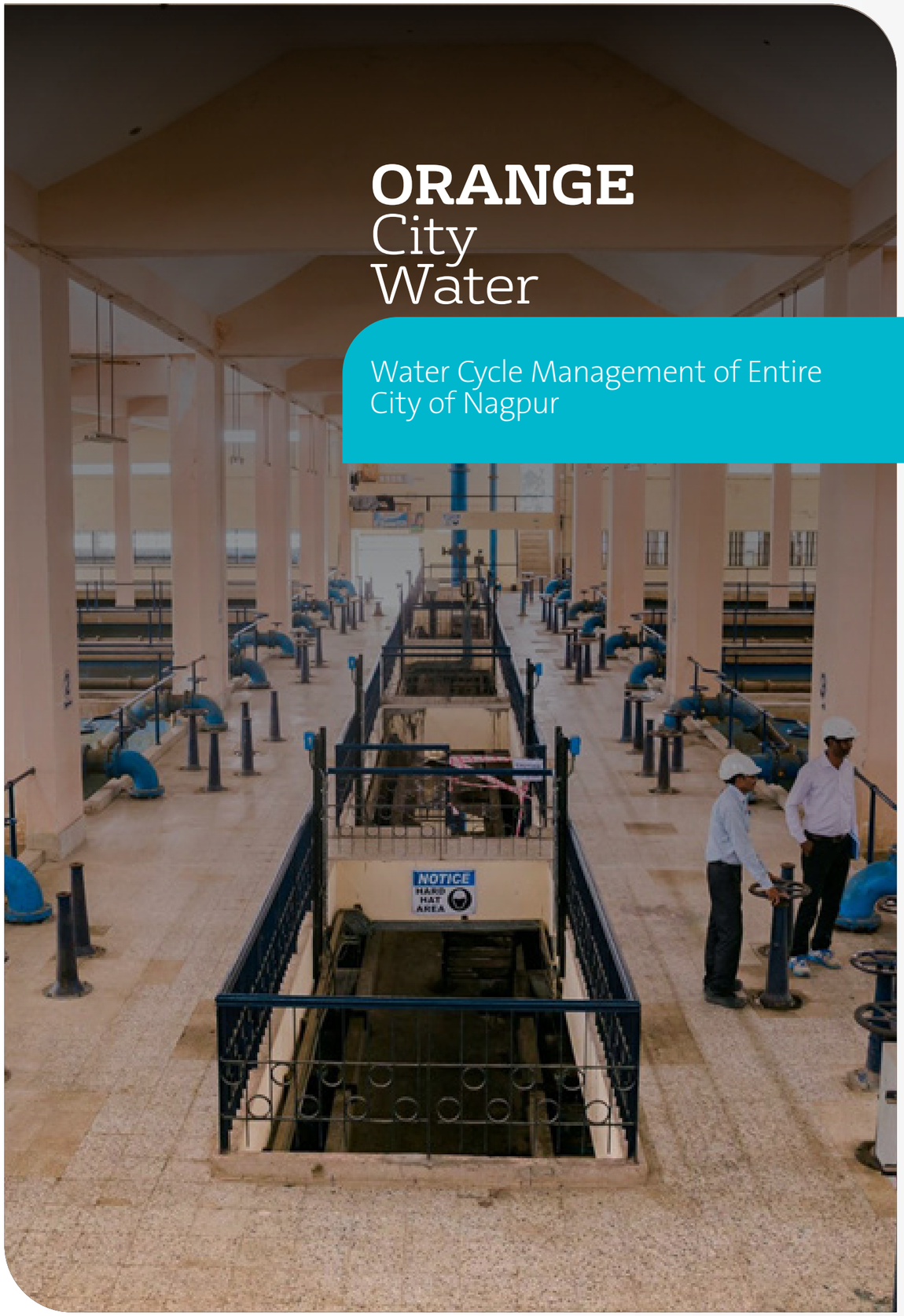
**Water solutions are tailored to local conditions,** and all meet public health standards. Distribution systems are compliant with regulations, in line with customer expectations, and designed with minimal environmental impact.

**Modern customer care center** There are three modern customer care centers.

**LIVABLE**
Public Health & Salubrity.
Improve Citizen Well-being.

**RESILIENT**
Resource Prevention (Quality).
Resource Scarcity Management (Quality).
Social Engineering and Relation with Citizens.

**INCLUSIVE**
Access to essential services.
Customer Satisfaction.




# ORANGE City Water

## Water Cycle Management of Entire City of Nagpur

**24X7 WATER SUPPLY FOR ALL CITIZENS OF NAGPUR**

**Client**
*Nagpur Municipal Corporation*

**Type of contract**
*Concession contract*

**Year of Award**
*2012*

**Scope of Work**
*25 years of O&M*

**Population served**
*~3 Million*


With the rapid urbanization of Nagpur, the water supply challenges also increased. To overcome these challenges, in 2012, Nagpur Municipal Corporation chose Veolia, making Nagpur the first city in India with a fully pressurized 24X7 drinking water supply system. This concession contract was implemented under the Jawaharlal Nehru National Urban Renewal Mission (JnNURM).

This 25 years concession contract includes rehabilitating water production and distribution infrastructure and other integrated services to provide safe drinking water to the inhabitants of Nagpur city.

### PROJECT SHEET

**Operational efficiency** with Veolia's world-class engineering expertise and solutions. Refurbishment and replacement of existing assets with advanced technologies.

**Operating five water treatment plants** with a combined capacity of ~750 MLD and managing a water distribution network of ~3000 km.

**It moves towards a 24X7 water supply** by executing a command area-wise rehabilitation plan and then improving the water supply hours from intermittent to 24X7.

**Social acceptability is crucial for this project,** as it will bring behavioural and social changes to the lifestyle of the Nagpurians. A Social Welfare Team with members from different backgrounds was formed to strengthen community relations and improve dialogue with the citizens.

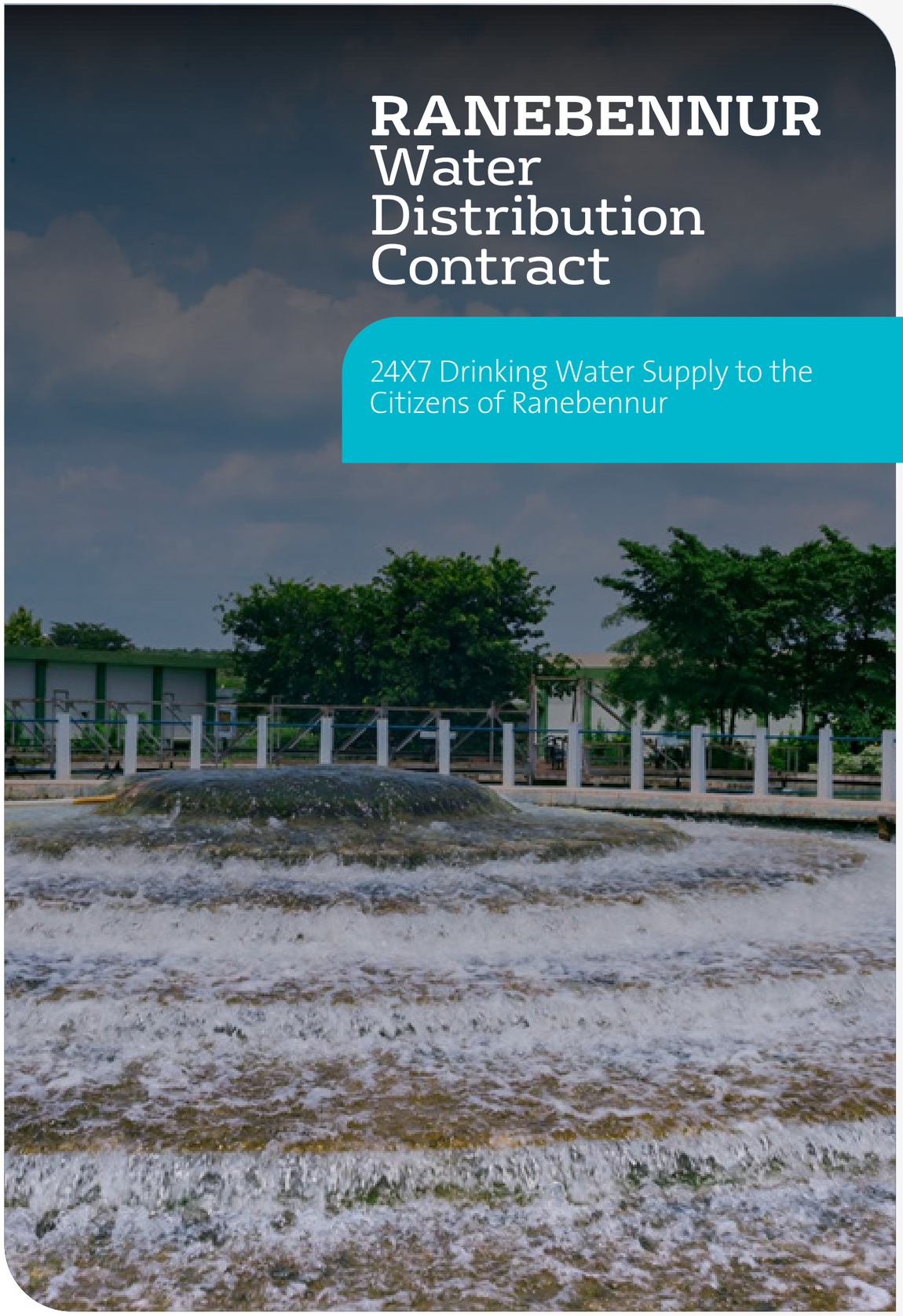
**Efficient customer service centers** to provide effective and quick service.

**LIVABLE**
Public Health & Salubrity
Citizen Well-being
Replenish Resources

**INCLUSIVE**
Access to essential services
Customer Care
Social And Flexible Tariffs

**RESILIENT**
Resource Scarcity Management (Quality)
Social Engineering and Relation with Citizens

# PERFORMANCE CONTRACTS



# RANEBENNUR Water Distribution Contract

24X7 Drinking Water Supply to the Citizens of Ranebennur

## SUPPLY DRINKING WATER TO 150,000 CITIZENS

**Client**
*KUIDFC and Ranebennur City Municipal Council*

**Type of contract**
*Performance contract*

**Year of Award**
*2017*

**Contract period**
*2.6 years of Construction & 8 years of O&M*

The Ranebennur City Municipal Council (RCMC) along with Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC) selected Veolia India to build an efficient water supply infrastructure for the city.

Veolia India has constructed a 33 MLD water treatment plant along with a distribution network of 290 KM of pipeline to connect 150,000 citizens with continuous safe drinking water. This 10.6 years contract (2.6 years of construction and 8 years of O&M) was awarded to Veolia India in September 2017.

## OUR SOLUTIONS

**State-of-the-art water treatment plant** providing 24X7 clean drinking water with Veolia's patent technologies: Multiflo$^{R}$ and Filtraflo$^{TM}$ TGV.

**Multiflo$^{R}$ is a compact clarifier** that combines coagulation, flocculation, and lamella setting, all in a single unit. Reduction in footprint and 27,000 connections installed

**Filtraflo$^{TM}$ TGV, a compact gravity filtration system** that allows the suspended solids to penetrate deeper into the filter bed, thus allowing a "volume filtration" rather than a "surface filtration".

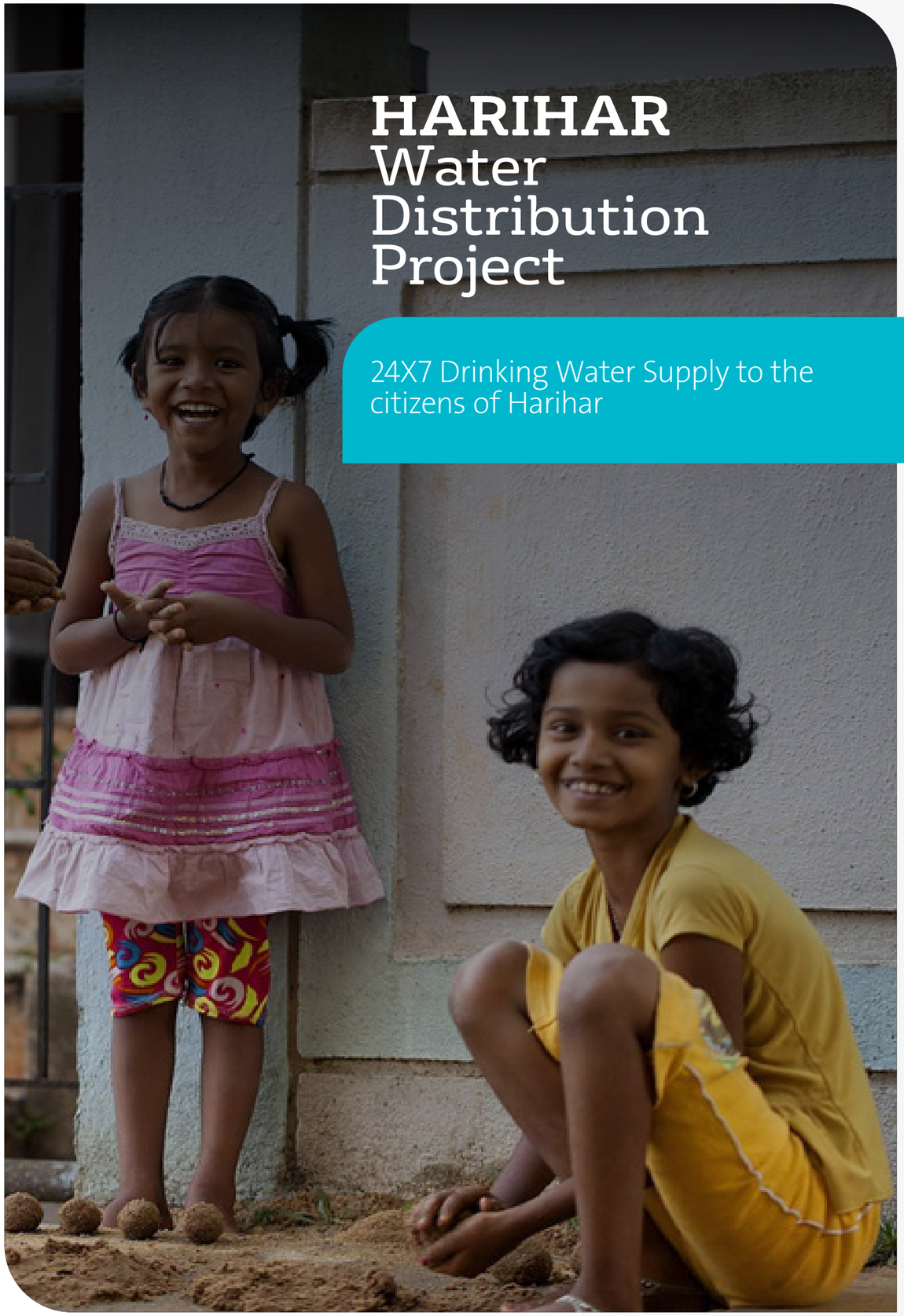
**Operation and management of the distribution system** from service reservoirs to the end-user, including billing to customers and round-the-clock customer care.

**With continuous pressured water** available at their convenience, citizens do not have to incur additional water withdrawal and storage expenditure.

**LIVABLE**
Public Health & Salubrity
Citizen Well-being

**INCLUSIVE**
Access to essential services
Customer Satisfaction

**RESILIENT**
Robust Infrastructure & Management
Resource Scarcity Management (Quality)



# HARIHAR Water Distribution Project

24X7 Drinking Water Supply to the citizens of Harihar

## SUPPLY DRINKING WATER TO 100,000 CITIZENS

**Client**
*KUIDFC and Harihara City Municipal Council*

**Type of contract**
*Performance contract*

**Year of Award**
*2017*

**Contract period**
*2 years of Construction & 8 years of O&M*

Harihar City Municipal Council (HCMC) along with Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC) selected Veolia India to construct a water distribution network and provide 24X7 water supply services in Harihara.

It is the first city in Karnataka to outsource the services of operator for complete water supply scheme i.e source to end-user.

Under this project, Veolia provides access to safe water (as per regulatory standards which help citizens to improve their health and hygiene). Continuous water supply reduces the risk of water-borne diseases, which is evidently high when water is supplied intermittently.

## OUR SOLUTIONS

**Constructing ~300km length** of distribution network constructed, 17500 connections installed.

**Operation and management of complete water supply** scheme from source to the end-user including water treatment, billing & collection and customer service.

**With continuous potable water available** at their convenience, citizens need not incur expenditure on account of coping costs such as overhead tanks to store water, suction pumps etc.

**World-class SCADA system** to monitor the performance of the entire water supply system from source to customers.

**Efficient customer service** centers to provide effective and quick service.

**LIVABLE**
Public Health & Salubrity
Citizen Well-being

**INCLUSIVE**
Access to essential services
Customer Satisfaction
Solidarity

**RESILIENT**
Robust Infrastructure & Management

# SHIMOGA Water Distribution Project

24X7 Drinking Water Supply to the citizens of Shimoga

## SUPPLY DRINKING WATER TO 350,000 CITIZENS

**Client**
*Karnataka Urban Water Supply and Drainage Board*

**Type of contract**
*Performance contract*

**Year of Award**
*2017*

**Contract period**
*3 years of Construction & 3 years of O&M*

Karnataka Urban Water Supply and Drainage Board (KUWS&DB), Bangalore, on behalf of Shimoga City Corporation selected Veolia India for providing 24X7 continuous and pressurized water supply distribution system to the entire city.

This six-year contract (3 years of construction and 3 years of O&M) will make Shimoga the first City Corporation that provides 24X7 water supply to the entire city, in the state of Karnataka.

## OUR SOLUTIONS

**Construction of about 700km length of water** distribution network, 56000 water connections installed.

**Operation and maintenance of the distribution system** from service reservoirs to the end-user including billing to customers and round-the-clock customer care management.

**With continuous pressured water available at their convenience,** citizens need not incur expenditure on account of coping costs such as overhead tanks to store water, suction pumps, etc.

**Proficient customer service centers** to provide effective and quick service.

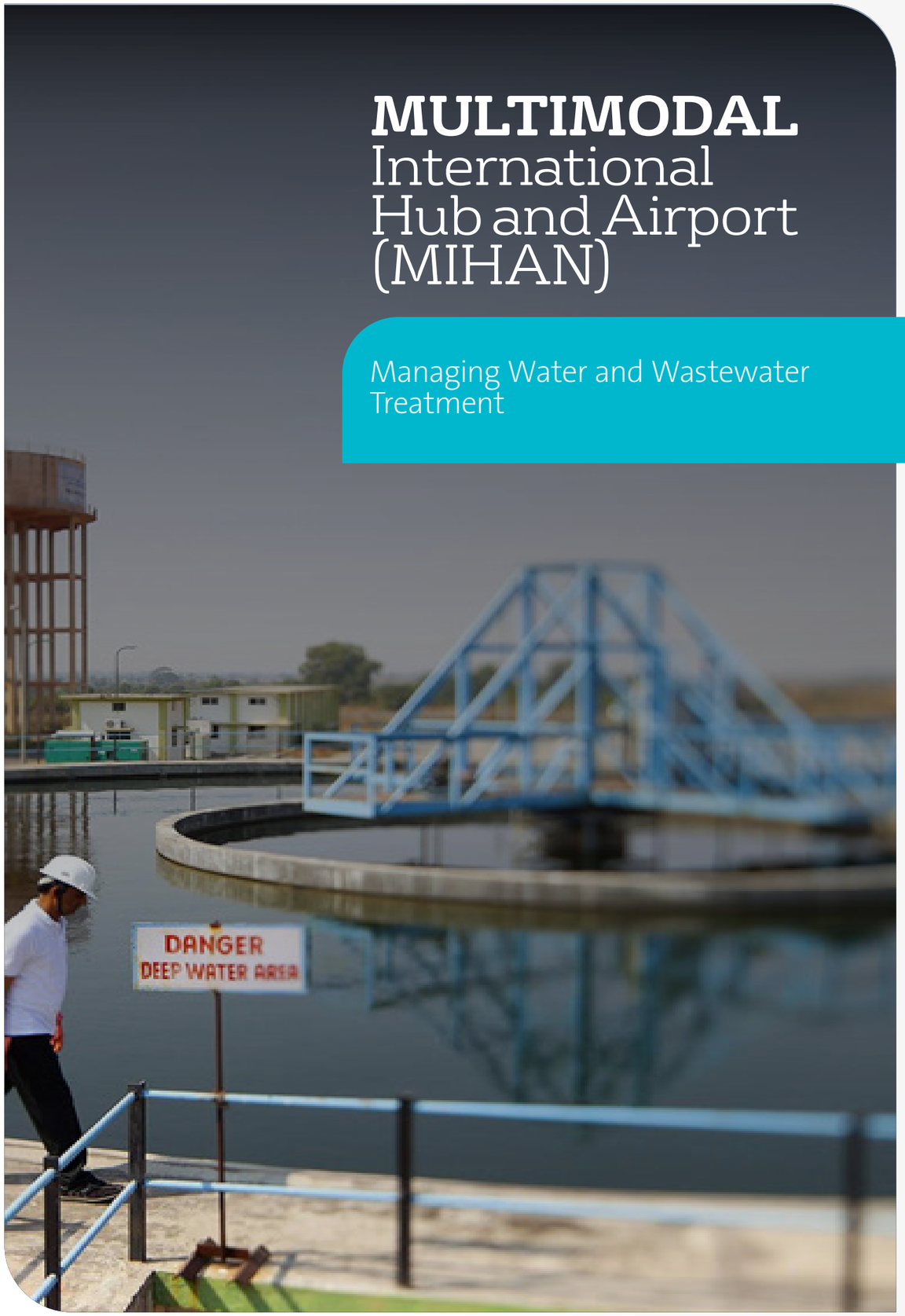
**LIVABLE**
Public Health & Salubrity
Citizen Well-being

**INCLUSIVE**
Access to essential services
Customer Satisfaction
Solidarity

**RESILIENT**
Robust Infrastructure & Management

# MULTIMODAL International Hub and Airport (MIHAN)

Managing Water and Wastewater Treatment




## ONE STOP SOLUTION FOR ALL WATER NEEDS TO INDUSTRY

**Client**
*Maharashtra Airport Development Company Limited*

**Type of contract**
*Operation and Maintenance*

**Year of Award**
*2010*

**Scope of Work**
*10 years of O&M*

The Multi-modal International Hub and Airport at Nagpur (MIHAN) is one of India's most significant economic development projects, with a target to serve 14 million passengers and nearly a million tons of cargo. It comprises an airport terminal and a Special Economic Zone (SEZ), with a residential area covering almost 40 square kilometers.

### PROJECT SHEET

**Veolia operates and maintains a water treatment plant** of 20.64 MLD and a sewage treatment plant of 39MLD.

**Advanced water treatment plant** providing 24X7 clean drinking water with Veolia's patent technologies: Multiflo$^{R}$ and Filtraflo$^{TM}$ TGV.

**Multiflo$^{R}$ is a compact clarifier** that combines coagulation, flocculation and lamella setting, all in a single unit thus saving a lot of infrastructural requirements of a conventional WTP.

**Filtraflo$^{TM}$ TGV, a compact gravity filtration system** that allows the suspended solids to penetrate deeper into the filter bed, thus allowing a "volume filtration" rather than a "surface filtration"

**Veolia also operates a 77 MLD wastewater treatment plant** to meet MIHAN's industrial needs for water.

**The treated wastewater from the sewage treatment plants** goes through tertiary treatment before releasing into the environment.

**This comprehensive treatment process with 183 kilometers** of network across the entire area helps meet MIHAN's industrial needs.

**RESILIENT**
Resource Scarcity Management (Quality)
Social Engineering and Relation with Citizens

**INCLUSIVE**
Access to essential services
Customer Satisfaction

**CIRCULAR**
Improve Resource Productivity
Improve Efficiency

# DESIGN BUILD & OPERATE PLANTS

# KANHAN Water Treatment Plant

State of the art
Water Treatment Plant

## 240 MILLION LITRES WATER TREATMENT PLANT

**Client**
*Nagpur Municipal Corporation*

**Type of contract**
*Design Build and Operate*

**Year of Award**
*2008*

**Scope of Work**
*2.5 years of Construction & 15 years of O&M*

In a bid to provide improved water supply to the north, east and southern parts of the city, Nagpur Municipal Corporation decided to upgrade the existing Kanhan WTP of 120 MLD.

Veolia constructed a compact technologically advanced WTP to meet the demands of Nagpur Municipal Corporation. Kanhan WTP is equipped with Veolia's patented technologies like MultiFlo(R) and Filtraflo™ TGV, that significantly reduces the footprint of water treatment plants and efficiently produces high quality of treated water., that enabled us to construct a plant of double capacity and by utilising only 30% of the space that was occupied by the earlier plant.

New plant is endowed with beautiful landscape and rich biodiversity.

## PROJECT SHEET

**A river water treatment plant** treating up to 9000NTU turbidity. It is the largest capacity treatment facility for Nagpur city.

**Multiflo$^{R}$ is a compact clarification unit** that combines coagulation, flocculation and counter-current lamella settling stages in a single unit. The lamella plates provide a very large projected settling area in a limited space. The footprint is 10 to 20 times less than that of a conventional settler system.

**Filtraflo™ TGV, a rapid gravitational filter** that uses granular media to separate impurities from water. The plant is also equipped with sludge treatment to reduce the water losses in the plant.

**Reuse and recirculation of filtered backwash water** thus minimizing the raw water demand and preventing any discharge into natural stream.

**100% SCADA operated** water treatment plant with leakage detection technology to reduce water losses.

**Compact and more efficient treatment process** occupying one-fourth of the space required for a conventional clarifier.

**SMART**
Operational Performance
Advance Technology

**RESILIENT**
Resource Scarcity Management (Quality)
Robust Infrastructure & Management

**LIVABLE**
Public Health & Salubrity
Citizen Well-being

# PENCH IV
# Water Treatment Plant

State-of-the-art Zero Liquid Discharge water treatment plant

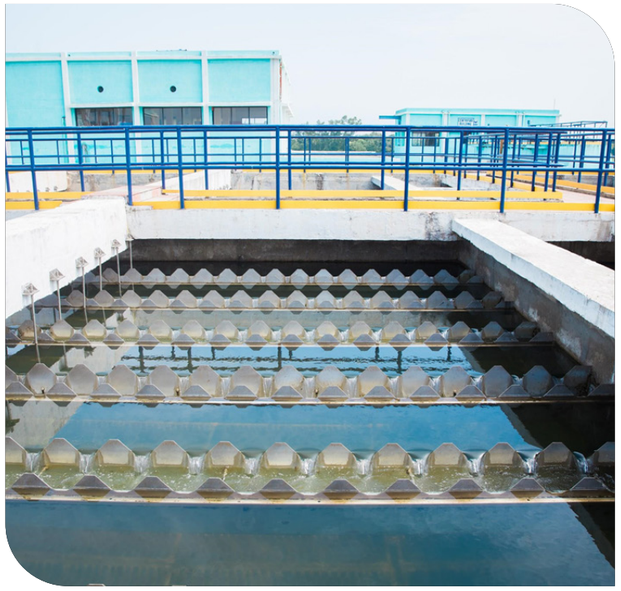
## 115 MILLION LITRES WATER TREATMENT PLANT

**Client**
*Nagpur Municipal Corporation*

**Type of contract**
*Design Build and Operate*

**Year of Award**
*2009*

**Scope of Work**
*2 years of Construction & 10 years of O&M*



To provide continuous and pressurized potable water to the citizens, the Nagpur Municipal Corporation awarded Veolia a contract for the construction of a brand new 115 MLD water treatment plant, Pench IV.

This state-of-the-art zero liquid discharge plant is one of the primary source supporting the Nagpur 24X7 water supply project. Combined with a full range of services from the installation of technologies to the operation of the plant, Veolia has designed and implemented customized solutions tailored to the city's local conditions.

## PROJECT SHEET

**State-of-the-art Zero Liquid Discharge water treatment plant** with Veolia's patent Multiflo$^{R}$ and Filtraflo$^{TM}$ TGV.

**Multiflo$^{R}$ is a compact clarification unit** that combines coagulation, flocculation and counter-current lamella settling stages in a single unit. The lamella plates provide a very large projected settling area in a limited space. The footprint is 10 to 20 times less than that of a conventional settler system.

**Filtraflo$^{TM}$ TGV, a compact gravity filtration system** that allows the suspended solids to penetrate deeper into the filter bed, thus allowing a "volume filtration" rather than a "surface filtration"

**Reuse and recirculation of filtered backwash water** thus minimizing the raw water demand and preventing any discharge into natural stream.

**100% SCADA operated water** treatment plant with leakage detection technology to reduce water losses.

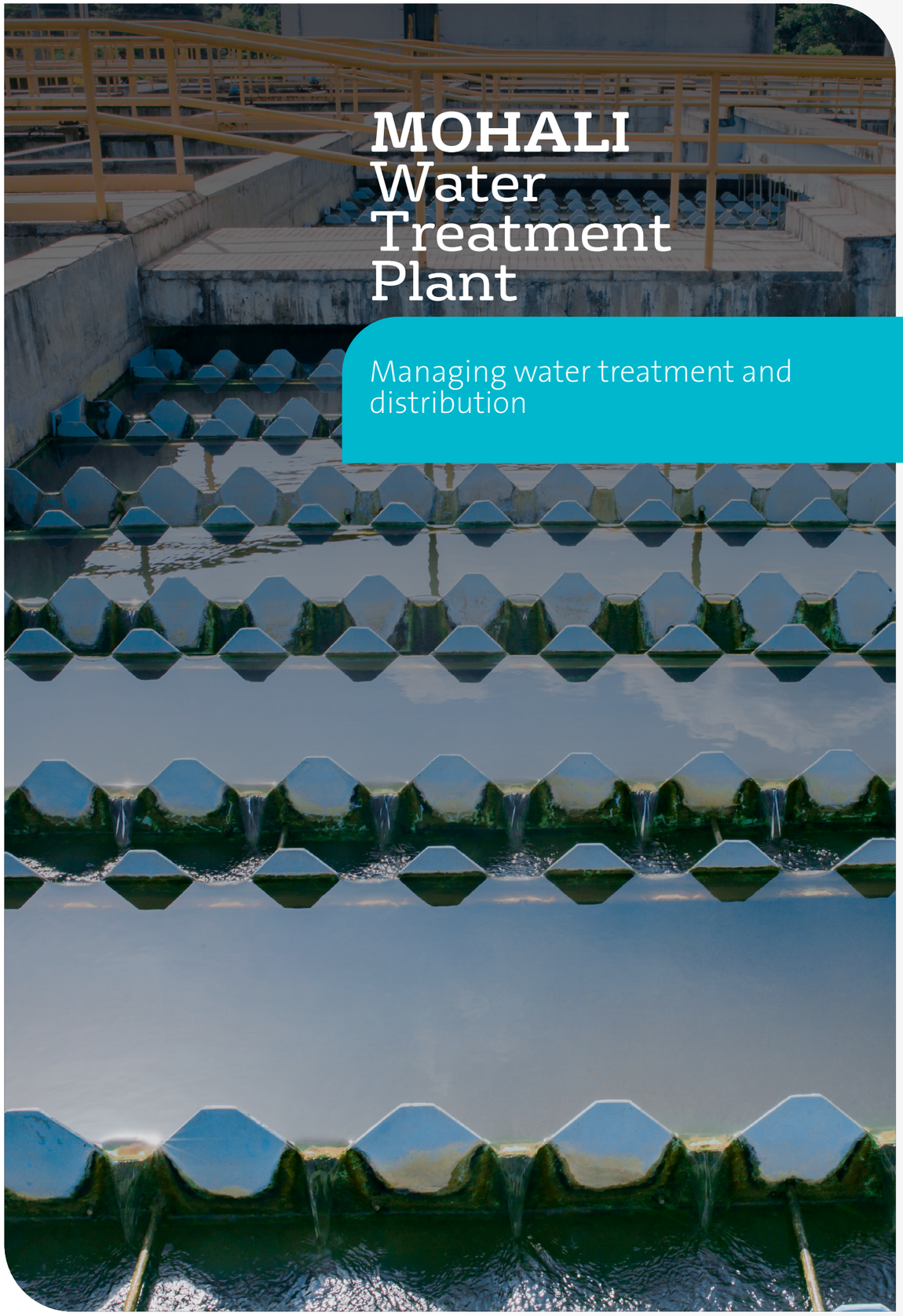
**Compact and more efficient treatment process** occupying one-fourth of the space required for a conventional clarifier.

**SMART**
Operational Performance
Advance Technology

**INCLUSIVE**
Access to essential services
Local Economic Dynamics
Customer Satisfaction

**RESILIENT**
Resource Scarcity Management (Quality)
Robust Infrastructure & Management

**LIVABLE**
Public Health & Salubrity
Citizen Well-being



# MOHALI Water Treatment Plant

Managing water treatment and distribution

## 20 MILLION GALLONS PER DAY WATER TREATMENT PLANT

**Client**
*Greater Mohali Area Development Authority*

**Type of contract**
*Design Build Operate Transfer*

**Year of Award**
*2019*

**Scope of Work**
*1.5 years of Construction & 10 years of O&M*

With urbanization and growing population in the cities of Mohali and Chandigarh, Greater Mohali Area Development Authority conceived the idea of developing a self-sustaining city to address the increasing water demand over the next 20 years.

Greater Mohali is an extension of Mohali city, which comes under Greater Mohali Area Development Authority. To meet the water supply requirements, a 20MGD capacity Water Treatment Plant (WTP) was proposed to be installed exclusively for New Chandigarh.

In 2019, the Greater Mohali Area Development Authority (GMADA) selected Veolia India for the construction of a 20 MGD (Million Gallons per day) capacity WTP to supply drinking water to about1500,000 citizens of the Greater Mohali Area.

## OUR SOLUTIONS

**State-of-the-art Zero Liquid Discharge water treatment plant** providing clean drinking water 24X7.

**Multiflo$^{R}$ is a compact clarification unit** that combines coagulation, flocculation and counter-current lamella settling stages in a single unit.

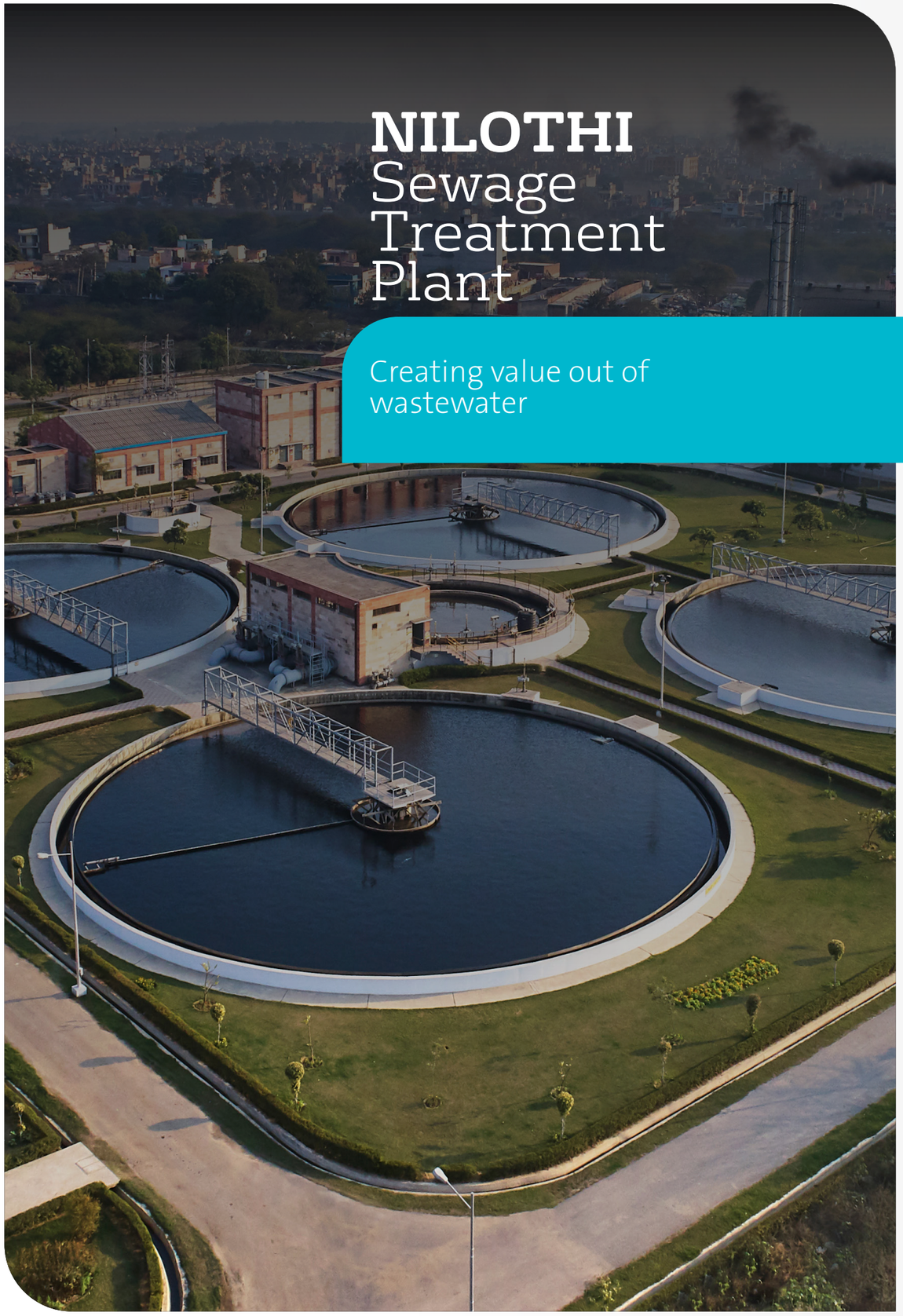
**Filtraflo$^{TM}$ TGV, a compact gravity filtration system** that allows the suspended solids to penetrate deeper into the filter bed, thus allowing a “volume filtration” rather than a “surface filtration”.

**Reuse and recirculation of filtered backwash water** thus minimizing the raw water demand and preventing any discharge into natural stream.

**SMART**
Operational Performance
Advance Technology

**INCLUSIVE**
Access to essential services
Local Economic Dynamics
Customer Satisfaction

**RESILIENT**
Resource Scarcity Management (Quality)
Robust Infrastructure & Management
Resource Prevention (Quality)



# NILOTHI Sewage Treatment Plant

Creating value out of wastewater

## 91 MILLION LITRES SEWAGE TREATED PER DAY

**Client**
*Delhi Jal Board*

**Type of contract**
*Design Build Operate (DBO)*

**Year of Award**
*2012*

**Scope of Work**
*2 years of Construction + 1 year of Defect Liability & 10 years of O&M*

India's capital city, Delhi, is the world's second-most populous urban agglomeration causing a astrain on the city's energy and water resources. In 2012, Delhi Jal Board, the authority in charge of water and sanitation, chose Veolia to design, build and operate an innovative green wastewater treatment plant with a capacity of 91 MLD (20 MGD), thus, setting precedence in managing valuable wastewater resources.

Veolia offers a full range of services, from the installation of technologies to management of this project. We leveraged our expertise and designed customized solutions.

## OUR SOLUTIONS

**Technical Performance Efficiency -** Providing the highest standard of wastewater treatment technologies through Veolia patented technologies of Azenit (for enhanced Bio-P & TN removal) with sequenced aeration and Disc Filters.

**Sustainable Interventions -** Nutrient recovery from sewage sludge and transforming sludge into biogas.

**Energy Recovery -** The sludge treatment system uses digesters equipped with gas mixing systems to optimize biogas production, a green energy source. Electricity is produced on-site and meets approximately 60% of the plant's energy demands.

**Resource Recovery -** Treated sewage sludge (Class A Biosolids) meets U.S. EPA guidelines for land applications. Standard quality compost is produced, which can be used for crops, green spaces, and gardens.

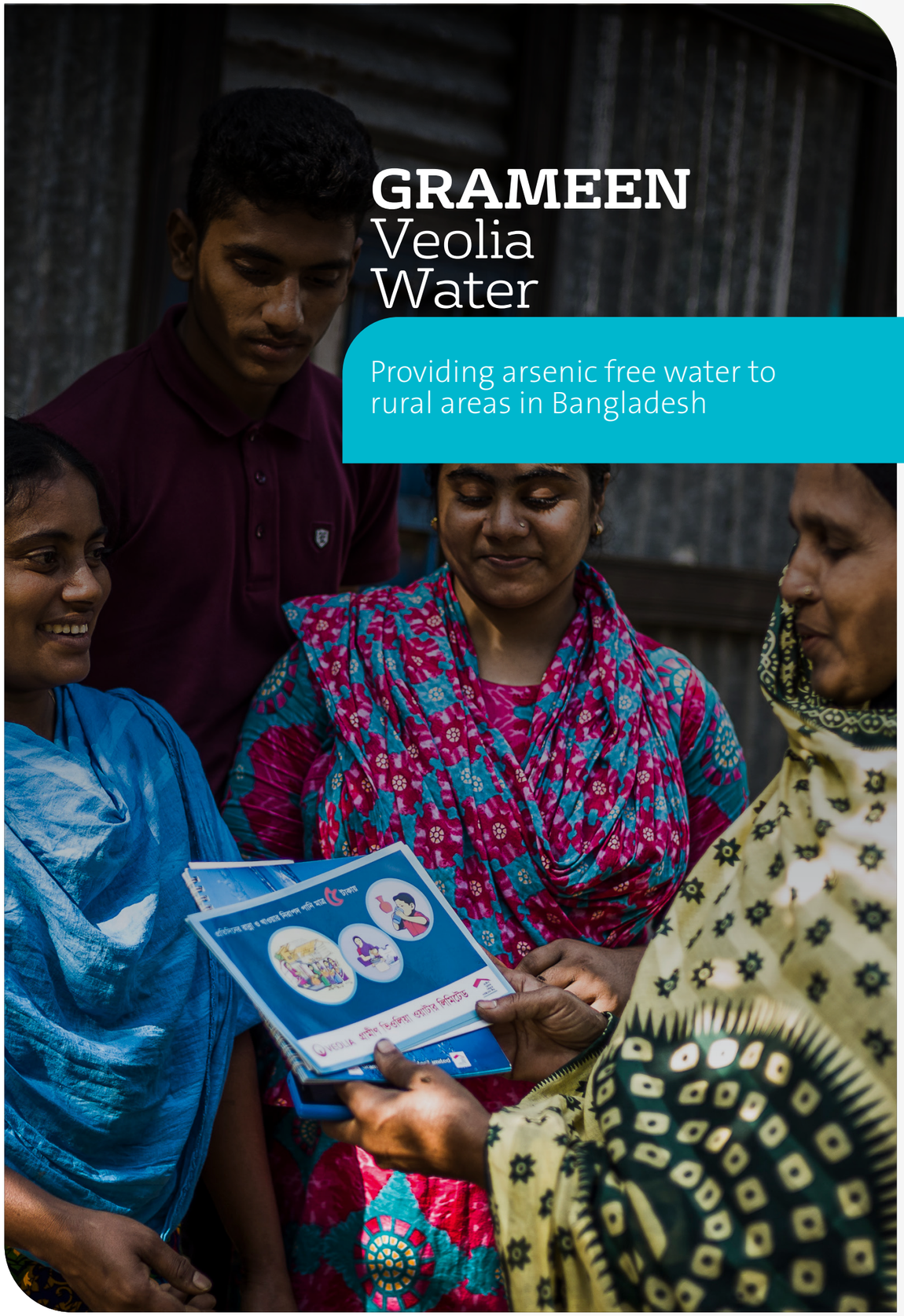
**Water Source Protection -** The treated wastewater helps to reduce the pollution load of the Yamuna River. To minimize the impact on water bodies/ environment into which effluents are discharged, the nutrients like nitrogen and phosphorus are removed during the treatment.

**LIVABLE**
Public Health & Salubrity.
Environmental footprint reduction.

**CIRCULAR**
Biogas Recovery - Electricity generation.
Sewage sludge recovery - Compost production.

**RESILIENT**
Sustainable urban water management .
Reducing Pollution and Resource Consumption.

# SOCIAL BUSINESS



# GRAMEEN Veolia Water

Providing arsenic free water to rural areas in Bangladesh

## A SOCIAL BUSINESS SOLUTION

**Type of contract**
*Social Business*

**Year of Award**
*2008*

**Scope of Work**
*Design Build and Operate a drinking water treatment plant*

In Bangladesh around 39 million people are exposed to arsenic concentrations in drinking water above the maximum permissible limit recommended by the World Health Organization thus posing significant health risks to the population.

In 2008, Grameen Veolia Water Ltd. was established as a joint venture between Veolia and Grameen Health Care Services Ltd. to provide safe drinking water in arsenic affected areas of Bangladesh. This project is based on a social business model that aims to direct all the profits for further expansion and improvement of the rural water distribution network.

## PROJECT SHEET

**River water treatment** to supply safe drinking water.

**Design-Build and Operate** a world-class water treatment plant that produces water in line with the Bangladesh Standard and Testing Institution (BSTI) and World Health Organization (WHO) standards.

**Water supply access** to all through metered connections in households, schools and community tap points.

**Dedicated Social Welfare Team** that conducts awareness campaigns and programs on safe water use and its impact on health.

**Continuous water quality testing and monitoring** to ensure safe water for all.

**LIVABLE**
Public Health & Salubrity
Citizen Well-being

**INCLUSIVE**
Access to essential services
Customer Care
Social And Flexible Tariffs

**RESILIENT**
Resource Scarcity Management (Quality)
Social Engineering and Relation with Citizens

# CARBON CAPTURE PROJECT

# CARBON Capture Project

Operation of India's first steel plant capturing $CO_2$ from Blast Furnace gas.

**Client**
*Tata Steel*

**Type of Contract**
*Operation and Maintenance*

**Year of Contract**
*2021*

**Scope of Work**
*3 years O&M of 5 TPD Carbon Capture Plant, Jamshedpur*

Veolia India won the O&M of a 5 TPD of Carbon Capture plant from Blast Furnace Gas of LD#1 in Tata Steel, Jamshedpur. The first contract was for a period of 1 year starting August 2021. The second contract period is for three years starting from December, 2022.

Steel is one of the most 'hard-to-abate' sectors and contributes to about 8% of the total Greenhouse Gas (GHG) emissions. Through this project, Veolia India is supporting Tata Steel in its long-term goal of decarbonization by reducing Scope 1 emissions from one of the largest industrial sources of GHG along with saving on Scope 3 emissions through the replaced liquid $CO_2$ purchased for in-house consumption.

The depleted $CO_2$ gas is sent back to the gas network with increased calorific value.

## FUTURE DEVELOPMENTS

In the future, Tata Steel aims to utilize it for various other in-house consumption in the production process and also to develop new products.

## PROJECT SHEET

- 24*7 operational plant through DCS
- 5TPD production of $CO_2$
- First operational $CO_2$ capture plant for Veolia Group
- First step into Industrial OSS in India.

**SEEDS**

**ON SITE SERVICES TO INDUSTRIAL CLIENTS**

**$CO_2$ (C APTURE)**

**Resourcing the world**

**Veolia India Private Limited**

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