WATER MANAGEMENT
CREATING OPPORTUNITIES
WWW.RAMBOLL.COM/WATER
Ramboll is a leading engineering, design and consultancy company employing 13,000 experts. Our presence is global with a strong representation in the Nordics, UK, North America, Middle East and Asia-Pacific. We constantly strive to achieve inspiring and exacting solutions that make a genuine difference to our customers, end-users and society as a whole.

www.ramboll.com

13,000 EXPERTS
300 OFFICES
35 COUNTRIES

PLANNING & URBAN DESIGN
Ramboll’s holistic approach to urban development encompasses strategy, planning, and world-class technical design services and is based on an integrated multidisciplinary skills base. We have an extensive track record working with a number of the world’s largest cities to create liveable, sustainable, and implementable urban development solutions that are fully adapted to the local context. Read more at: www.ramboll.com/planning-and-urban-design

OIL & GAS
To make it in today’s fast paced and competitive oil and gas market, companies depend on advanced technical solutions that combine economic efficiency with stringent health, safety and environmental (HSE) safeguards during the production and distribution processes. These elements form an integral part of Ramboll’s independent and multidisciplinary consultancy service, which covers the entire project cycle. We excel in offshore consultancy and have designed offshore structures for industry giants such as Maersk Oil, DONG Energy and Statoil since the 1970s.

Read more at: www.ramboll.com/oil-gas

TRANSPORT
Mobility fuels economic and social development and with 50% of the world’s population now living in urban areas, efficient and reliable transport systems are essential.

To meet this need, Ramboll has been working on some of the world’s largest projects and is the leading consultancy in the Nordic market. We create value for transport authorities, contractors and local authorities by providing multidisciplinary technical excellence and minimising resource usage.

Read more at: www.ramboll.com/transport

ENVIRONMENT & HEALTH
As a globally recognised environmental and health consultancy, we have earned a reputation for technical and scientific excellence, innovation and client service.

Advances in science and technology, and evolving regulatory, legal and social pressures create increasingly complex challenges for our clients. We evolve to keep pace with these changes - by adding new services, contributing to scientific advances or expanding geographically.

Read more at: www.ramboll.com/environment

WATER
Water is essential to life and one of our most precious resources. Working with municipalities, utilities, and industrial clients Ramboll draws on proven multidisciplinary expertise to manage the most challenging water resources, wastewater, and storm water issues. We integrate treatment processes, engineering, operational services, and regulatory management and planning to deliver innovative solutions that benefit both industries and society.

Read more at: www.ramboll.com/water

BUILDINGS
Buildings form a fundamental part of our lives by shaping our communities and daily activities.

For these reasons, Ramboll’s design philosophy is to always make room for the human experience. As one of Europe’s top 3 buildings designers with decades of experience in the global market, we create visionary, sustainable, and award-winning buildings that improve life for users and enhance the surrounding landscape.

Read more at: www.ramboll.com/buildings

ENERGY
Security of supplies, climate change, energy efficiency and resource scarcity are top priorities on the global agenda. The key challenge is to plan and implement a sustainable and affordable energy system that is capable of meeting the growing demand for energy.

As a consultancy, Ramboll is at the forefront of addressing these issues with world-leading competencies in offshore wind, waste-to-energy, thermal power and district energy.

Read more at: www.ramboll.com/energy

MANAGEMENT CONSULTING
National, regional and local authorities are responsible for issues that affect us all, from health care, education and day care to strategic planning of infrastructure and climate initiatives. Drawing on 500 management experts, Ramboll acts as a trusted partner to public administrations, creating the insights needed to make informed strategic decisions that promote stronger societies.

With unprecedented levels of competition in the global economy, Ramboll focuses on empowering private sector customers with expertise and powerful management tools.

Read more at: www.ramboll.com/management-consulting
WATER

ABOUT US

LET’S MANAGE YOUR MOST CHALLENGING WATER ISSUES

Whether your water issues relate to flood risks, water resources, water & wastewater treatment or water infrastructure, Ramboll is the high level water consultancy that can manage water challenges so as to create opportunities for our clients and society.

We are a global team of skilled water consultants - mainly engineers, hydraulic specialists and scientists - working from over 40 offices around the world with more than 50 years of experience solving local and international water management issues, in both the private and the public sectors.

We build on the strong Nordic tradition for environmental and water supply sustainability combined with experience managing water in North America, the home of some of the most complex and advanced regulatory requirements. These experiences are now protecting the water environment globally by achieving efficiency in the design and operations of wastewater handling and maintaining high standards of drinking water quality and reliability of supply for cities, agriculture and industry.

With this background, we can utilise local insight with professional experience from all over the world and provide you with customised assistance from specialists working in the forefront of their fields globally.
OUR APPROACH

VIEWING THINGS AS A WHOLE – WITH A TRAINED EYE FOR DETAIL

You gain as a client from cooperating with our dedicated water unit which is part of the Ramboll multidisciplinary and global consultancy, with 13,000 experts worldwide. You can always rely on us to provide the exact niche competences you need, and at the same time, you get a partner who is used to seeing things as a whole.

We work with both purely water-related projects as well as projects integrated with other fields such as transport, buildings, energy, environment & health and management consulting - and our extensive experience cooperating closely with experts from other fields makes us well-qualified for multidisciplinary projects.

We cover the entire water cycle and handle all project phases; from initial strategic analyses to design of master plans and implementation of final solutions.

OUR KEY SERVICES ARE
- Climate adaptation and flood-risk management
- Industrial water & wastewater
- Water & wastewater infrastructure
- Water & wastewater process and treatment
- Water resource management
- Water supply and leakage
- Water use management

Our client base includes utilities, governments, local and regional authorities and municipalities, as well as private and industrial companies and political/financial institutions.
Resilience to flooding is a top priority for many leaders of both cities and industries. Ramboll provides integrated services in all aspects of flood risk management and design. Our highly experienced engineers and scientists create innovative, robust solutions to the challenges posed by river and surface water management, and we successfully steer projects through planning and regulatory requirements.

We offer high quality integrated services for all stages of a project — from initial studies and option appraisals to cost-effective design solutions, regulatory approvals and ongoing assessment after completion. We evaluate flood risks from all sources, including coastal waters, rivers, surface water, groundwater, and manmade structures such as reservoirs, overland flow, site drainage and public sewers.

In many projects we cooperate closely with our landscape architects and traffic planners to develop and execute solutions that not only minimise flood risks, but also create new blue-green infrastructure with added value in terms of social and recreational benefits.
MAPPING AND MANAGING WATER RESOURCES

Access to safe drinking water is a key component of an efficient policy for health protection. Ramboll has extensive experience in water resource management and an impressive portfolio of projects for national and international organisations, governmental institutions, municipalities and utilities. Our engineers, hydrologists, geologists, geophysicists, chemists, sociologists and agronomists provide our customers with up-to-date knowledge and hands-on experience in the implementation of water resource management. All to ensure sustainable water supply now and for the future.

Ramboll’s integrated approach ensures that the management, development and utilisation of water resources satisfy socioeconomic, environmental, sustainability and multi-sectorial water demands. Advanced technical solutions are applied and stakeholders are encouraged to participate.

Water resource management encompasses a wide range of disciplines and expertise, including integrated water resource management, assessment of the demand for water for drinking and irrigation purposes, groundwater mapping and surface water monitoring, simulation and modelling of the hydrologic cycle, legislation, river basin management, institutional and capacity building as well as protection of water resources.

IMPLEMENTING AQUIFER STORAGE AND RECOVERY IN DUBAI
Ramboll is assisting with the development of an Aquifer Storage and Recovery (ASR) project within a 700 km² (70,000 ha) wide area in the Emirate of Dubai. The implementation of drinking water ASR facilities requires suitable hydrogeological conditions that allow for a significant underground storage of desalinated water as well as a high recovery efficiency of the stored water. Hence, a feasibility study where Ramboll has provided input is the first part of the project.

MAPPING AND ANALYSING GROUNDWATER RESOURCES IN DENMARK
In Denmark, the government has decided that drinking water should be based on pure groundwater, which only needs simple treatment. But during the 20th century, Denmark experienced increasing groundwater pollution. To meet this challenge, the ‘Danish National Groundwater Mapping Program’ was launched in 1999. Ramboll has contributed extensively to this program through a range of multidisciplinary hydrogeological projects. Among other things, Ramboll has provided collection and analyses of existing data for specific survey areas and conducted large scale geophysical surveys.

SECURING HIGH QUALITY DRINKING WATER IN SKELLEFTEÅ, SWEDEN
Currently, the inhabitants in Skellefteå (a municipality in the north-westerly part of Sweden) get their drinking water directly from the local river. Unfortunately, the river has repeatedly suffered from problems with the drinking water quality. The local authority now addresses the challenge with a change of water supply and new treatment facilities. Ramboll is lead consultant on the project which is the largest of its kind in Sweden.
PURIFYING WATER FOR OVER 1 MILLION INHABITANTS IN STOCKHOLM, SWEDEN

During the coming years, the sanitary sewers in the Swedish capital of Stockholm will undergo their biggest transformation ever. As part of this project, Ramboll has been assigned the task to manage the process and project design of the site extension of one of the city’s primary wastewater treatment plants. Ramboll is also responsible for the detailed project design of the tunnel between the borough of Bromma and the plant in the neighbouring borough of Sickla.

DESIGNING A NEW AND MODERNISED TREATMENT PLANT IN TAMPERE, FINLAND

Until the early 1970’s, the Kaupinoja water treatment plant served as the main water source for the city of Tampere. However, due to water pollution in the local Lake Näsijärvi, the plant was since decommissioned and used only as a backup water treatment facility. Now, the water quality of the lake has improved significantly, and with assistance from Ramboll, the plant is now undergoing a comprehensive renovation and extension process. The renovated plant will be fully modernised and automated and once again become the main water source for the inhabitants of Tampere.

TREATING WATER AND WASTEWATER

Ensuring a high quality of water resources requires constant focus on wastewater discharge and efficient wastewater treatment plants. Ramboll covers all disciplines of water & wastewater treatment, including process design, layout and detailed design within biological, chemical and physical wastewater treatment. We also assist our clients with new facilities and plant modernisation in areas such as tertiary treatment, sludge treatment, anaerobic digestion and sustainable sludge disposal. We are often used as a lead consultant responsible for process design and mechanical engineering and can assist with other technical disciplines such as civil, structures, HVAC, electrical engineering and automation.

Moreover, we are among the global frontrunners in sludge and organic waste treatment. By combining our expertise within wastewater, energy, polluted soil and groundwater services, we provide integrated, innovative and sustainable solutions for our clients.

GLOBAL CHEMICALS COMPANY

Ramboll Environ provided comprehensive engineering services to upgrade a wastewater treatment plant for expanded production while reducing reliance on groundwater needs for production water by treating and recycling contaminated groundwater from an adjacent remediation site. Ramboll Environ provides ongoing operations services for both the wastewater and groundwater treatment plants.
DEVELOPING THE FUTURE WATER AND WASTEWATER INFRASTRUCTURE IN ILFOV, ROMANIA

The European Bank for Reconstruction and Development (EBRD) and the European Union (EU) Cohesion Fund are supporting the modernisation and upgrade of water and wastewater infrastructure in Romania. The support includes a loan to SC APA Canal Ilfov SA, a regional company supplying water and wastewater services in Ilfov County, which surrounds the capital, Bucharest. Ramboll has assisted the utility with a wide range of services in order to obtain the co-financing from the European Union.

UPGRADING THE WATER SUPPLY IN LULEÅ

The small city of Luleå in Sweden has a vision of increasing its population by 10,000 before 2050. Ramboll provides consultancy in order to upgrade the city’s water supply and sewer infrastructure which is necessary in order to achieve the growth ambitions.

IMPROVING WATER INFRASTRUCTURE

Maintenance and upgrade of urban water infrastructure often account for up to 80% of total capital investments for utility companies. So, proper planning and cost-efficient execution are important measures for achieving high efficiency in utilities. Ramboll has extensive technical expertise related to water and wastewater infrastructure – from rehabilitation of existing sewage pipelines and establishing new ones to establishing of storm water drains, rainwater storage tanks and open rainwater basins as well as water distribution networks.

Our services within water infrastructure include urban water landscapes, CCTV sewer inspection reviews and renewal planning, 1D and 2D network modelling, e.g. Mike Urban, Mike II, Mike 21, EPANET and Aquis, conceptual design and construction supervision – just to name a few.

CREATING TOMORROW’S SEWER IN GREATER COPENHAGEN

Ramboll has designed the Damhus line sewer project for Hvidovre municipality in Greater Copenhagen, Denmark. The new 4.3 km (around 2.6 miles) sewer provides relief for the Damhusåen sewage treatment plant, reducing sewer overflows. Our services include geotechnical, hydraulic and tunnel engineering as well as an environmental assessment and ongoing supervision and construction management.

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