SERVICES IN MEXICO
SUPPORTING A SUSTAINABLE SOCIETY
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RAMBOLL IN MEXICO

Ramboll has been serving multinational clients in Mexico since the 1990s, completing projects in 30 of the 32 Mexican states.

With diverse expertise and a broad client base, Ramboll consultants provide integrated engineering solutions and consulting services to address the complex needs, demands and evolving challenges of our clients, including their ever-growing need for sustainable and socially responsible operations and products.

Our experts provide technical and strategic assistance over a range of services to a primarily private-sector client base located in Mexico, Latin America and the Caribbean.

Of particular interest to clients in the region are:

• Climate change and energy management
• Compliance assistance
• Environmental due diligence
• Environmental, health and safety (EHS) management systems
• Environmental impact assessment and permitting
• International finance
• Site selection services
• Site investigation and remediation
• Water resources

ABOUT RAMBOLL

Ramboll is a leading engineering, design and consultancy company employing 13,000 experts. Our presence is global with especially strong representation in the Nordics, UK, North America, Continental Europe, Middle East and Asia Pacific.

We constantly strive to achieve inspiring and exacting solutions that make a genuine difference to our clients, end-users and society at large.

WWW.RAMBOLL.COM/ENVIRONMENT-AND-HEALTH
We help clients understand, respond to and influence GHG management drivers, and analyse the cost implications of carbon regulations. We apply our unique blend of technical and policy expertise to help optimise engagement in the carbon markets, and integrate carbon management into everyday business operations.

Select project experience

- Conducted energy opportunity assessments for a multinational company with facilities worldwide, including several industrial and manufacturing facilities in Mexico. Work focused on identifying operational and infrastructure improvements for energy efficiency projects with a rate of return on investment (ROI) of less than three years.

- Calculated the carbon footprint and prepared the Carbon Disclosure Project (CDP) for a printing company to increase transparency to company clients and stakeholders. Identified specific risks and opportunities associated with climate change and energy opportunities.

- Performed field tests and designed and provided assistance during the construction and operation of a gas-to-energy system landfill in the municipality of Naucalpan, Mexico. The primary objective was to reduce methane emissions at the landfill, and generate renewable energy under the United Nations Framework Convention in Climate Change (UNFCCC) to obtain certified emission reductions (CERs).

- Conducted an energy assessment for the identification of energy reduction opportunities at one of the largest Tequila manufacturing facilities on behalf of a large spirits manufacturing corporation.

Our professionals have expertise in the complex disciplines critical to developing a broad-based, sustainable climate change and energy management programme. From strategy to technology, we assist clients in meeting greenhouse gas (GHG) business objectives by managing carbon risks and taking advantage of business opportunities around the world. We combine long-standing expertise in developing carbon strategies with sector-specific knowledge and a global team of professionals offering a broad range of services. Our staff are at the cutting edge of the latest developments in evaluating vulnerabilities to climate change and designing adaptation responses.
COMPLIANCE ASSISTANCE

Ramboll offers comprehensive services designed to help companies evaluate and implement regulatory compliance requirements. We guide our clients through the permitting process, ongoing facility operations and project closure, addressing enforcement actions and other issues that may require regulatory response.

We can also assist in preparing and implementing third-party environmental management systems, as well as various compliance plans and reports. Select services include:

- Developing action plans consistent with clients’ risk strategies
- Identifying and prioritizing risks and consequences
- Providing reviews of draft documents prepared by clients

Ramboll has particular expertise in assessing compliance regarding air emissions; water quality; wastewater and stormwater; solid, hazardous and radioactive waste; hazardous materials; occupational safety; and human health regulatory requirements.

Select project experience
Conducted EHS compliance audits for a global lubricant manufacturer. The audits included Mexico manufacturing operations and additional sites around the world.

Assessed the compliance of computer refurbishing, dismantling and recycling operations in the US and Mexico with hazardous waste disposal and recycling regulations.
COMPLIANCE PROJECTS

Select project experience

• Currently conducting ongoing annual audits for the legal corporate environmental compliance program, and annual external third-party audits for an environmental management system, on behalf of one of the top worldwide 10 Tier I automotive manufacturers. Identified actions to gain compliance or conformance with certain regulations or standards conducted under at least seven different state regulations. Work involves the collation and communication of legislation information in a concise and user-friendly format, at a level suitable for use by both regional environmental staff and site managers. Produced an environmental compliance management manual containing procedures covering plant and equipment maintenance, property management, hazardous materials and waste management, and checklists for monthly and annual facility environmental inspections.

• Conducted environmental compliance audits for eight facilities that produce beverage containers.

• Conducted environmental compliance audits for four facilities manufacturing industrial refrigeration equipment. The assessments included the use of commercially available environmental compliance software.

• Conducted a process safety management audit for a facility dedicated to the production of laboratory-grade chemicals. The facility is considered the epicenter of chemical risk for one of the largest industrial complexes in Mexico.

• Conducted EHS compliance audits in Mexico and abroad for a global fragrances and flavors company. Assessed compliance with applicable laws and regulations and benchmarked against best practices.

• Conducted an occupational health and process safety audit of a toller chemical operations in Monterrey. Interviewed personnel, reviewed documentation and conducted tours of the plant to determine compliance with Mexican and US regulations.

• Prepared summaries of asbestos regulations for 11 countries for an automotive parts manufacturer.

• Produced environmental legal registers for 46 countries around the world on behalf of a major communications and IT client.

• Conducted regulatory research associated with the export, import, registration and local transport requirements for hazardous chemicals. Assessments have been conducted on behalf of chemical manufacturing and industrial supply companies.
ENVIRONMENTAL DUE DILIGENCE

Ramboll has completed more than 500 environmental site assessments (ESAs) in Mexico, among other due diligence assessments and reviews.

Select project experience
• Conducted a Phase I ESA with limited compliance for a coal washing operations facility in the Mexican coal region as part of the leasing agreement between a leading Mexican mining company and leading coal manufacturing company.
• Conducted an environmental review North American operations for a tire manufacturer. Work included a Phase I ESA and limited compliance reviews of two sites in Mexico and the US.
• Conducted an environmental review of four facilities of a manufacturer of encapsulated pharmaceutical and nutritional products with facilities in Mexico City, Canada, the US and the Netherlands.
• Conducted an environmental review of the land-based operations of sustainable seafood farms in Baja, California, and Mexico, as well as near the Dalmatian Island in Croatia. Subsequently, conducted a sustainability evaluation of the farmed species.
• Conducted a Phase I ESA and limited compliance assessment for a commercial carbon fiber manufacturing facility in Mexico on behalf of a private equity firm as part of an acquisition process.
• Conducted a Phase II ESA and water sampling on behalf of the largest maquiladora facility in Sonora, Mexico. Supervised the remediation project and provided legal support for remediation activities.
• On behalf of an anti-vibration company, conducted EHS due diligence assessments with a limited compliance review for a planned joint venture at 22 sites in Mexico, Brazil, China, Germany, France, India, Romania, Russia, South Korea, Spain, Turkey and the US. Conducted a compliance review at one German site, and Phase II soil and groundwater investigations at sites in Spain and the US. Conducted asbestos surveys at 9 sites.
• Conducted Phase I assessments at 14 chemical manufacturing and distribution facilities in Mexico, Colombia, Costa Rica, Ecuador, el Salvador, Guatemala, Honduras, Nicaragua, Panama and Peru. Assessments were conducted on behalf of a major venture capitalist firm and included cost estimates for soil and groundwater contamination, and support for selecting comparison criteria for contaminants.
ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT

Ramboll professionals have extensive experience and expertise in the development, review and audit of management systems throughout the region. Our experience includes ISO 14001, ISO 9000, BS7750, AS/NZS 4801, OHSAS 18001, risk management systems and integrated management systems.

We offer an unparalleled combination of technical, regulatory, management and training skills to assist clients in addressing EHS issues. The fundamental risk assessment and management perspective that we apply to problem solving provides us with a distinct advantage when evaluating the potential significance of EHS issues, and shaping appropriate responses. Select services include:

• Analysis of emerging EHS issues and impact on business decision making
• Gap analysis
• System design, development, integration, optimization and review
• Training

Select project experience
• Conducted detailed reviews of EHS regulatory compliance for facilities in Mexico, and assessed the adherence of those facilities to corporate EHS management policies.
• Assisted legal counsel of a major aerospace and defence company with an EHS compliance assessment of a facility located in Mexicali.
ENVIRONMENTAL HEALTH & SAFETY EXPERIENCE

Select project experience

• Provided assistance to a major US-based auto manufacturer in establishing company-specific soil and groundwater clean-up levels that surpass and supersede local regulatory requirements.

• Conducted a lifecycle evaluation of chrysotile asbestos for clients in the Mexico and India building and housing industries. Conducted an evaluation of reputation risk associated with the sale of chrysotile asbestos in Mexico.

• Assisted a major aerospace and defence company with a presentation informing facility management about the process for developing and implementing an EHS management system conforming with ISO 14001 and OHSAS 18001.

• Conducted an EHS audit for an industrial valve manufacturer with a facility in Tlalnepantla de Baz.

• Conducted site audits to assess the readiness of a pharmaceutical packaging company for ISO 14000 certification.

• Performed EHS regulatory compliance assessments of a major wine and spirits manufacturer with a distillery located near Mexico City. Scope of work included site visits, interviews with site personnel, document review, evaluation of compliance against relevant regulations and report preparation.

• Performed an environmental review of facilities owned by a communications equipment manufacturer. Locations included Guadalajara, Reynosa, and Eatontown, New Jersey.

• Conducted comprehensive EHS assessments, evaluated conformance to specific EHS corporate policies and measured risk using the Zurich risk management audit matrix for a large packaging products company with facilities in Mexico.

• Provided industrial hygiene services, including chemical and noise monitoring, and a general asbestos review, for a packaging facility in Toluca.

• Conducted health and safety overviews at facilities in Brampton, Ontario; Cypress, California; Lincoln Park, New Jersey; Shelbyville, Tennessee; Toluca, Mexico; and Sao Paulo, Brazil.
Environment Impact Assessment & Planning

Ramboll’s expertise spans a broad range of business sectors, from small-scale developments in urban areas to large mining and industrial projects. We are leaders in environmental impact assessment, study and reporting (EIA/EIS/EIR), as well as environmental planning.

Our services include consulting during initial project design stages; communicating with regulatory authorities, stakeholders and the community; assisting with environmental approvals and permits; and developing and implementing environmental management plans and management systems for construction, operation and decommissioning.

Our environmental, technical and socio-economic professionals manage and coordinate technical studies often required for the most complex EIA projects. We have an excellent understanding of local environmental and social issues and regulatory frameworks, and have developed a rapport with local decision-making authorities.

Select project experience
• Prepared an EIA for a land-use change and urban development in Ciudad Juarez, Chihuahua.
• Conducted several EIAs and prepared preliminary EIRs for diverse types of developments, including housing projects, hydraulic projects (eg water channel development) and industrial facilities (chemical processing and maquiladora manufacturing) at both state and federal levels.
• Prepared a federal EIA and land-use change technical assessment on behalf of a Canadian mining company for the employee camp of a silver/gold mine operation in the mountains of Chihuahua.
• Conducted and prepared a municipal EIA on behalf of a developer for a housing development in Chihuahua.
• Conducted two projects involving 100,000 and 50,000 hectares to assess the environmental impacts of potential urban development outside the approved urban plan of Ciudad Juarez. Work was performed on behalf of an urban development architectural design firm employed by a major housing developer in Mexico. Reports were submitted to the municipal council for approval.
INTERNATIONAL FINANCE

Ramboll routinely provides expert environmental and social support to international projects seeking financing to ensure compliance with applicable standards, including:

- The Equator Principles
- International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability (PSs, 2012) and EHS Guidelines
- European Bank for Reconstruction and Development (EBRD) Performance Requirements (PRs)
- Inter-American Development Bank (IADB) Environment and Safeguards Compliance Policy and Implementation Guidelines
- Organisation for Economic Cooperation and Development (OECD) Recommendations for Common Approaches to the Environment

Our expert international finance team combines extensive knowledge of lender standards with practical approaches to resolving identified issues, thereby facilitating project compliance in a cost-effective manner. Additionally, we maintain a roster of external consultants around the globe for project support. Whether working on behalf of financial institutions to manage project, credit and/or reputational risk, or project developers to manage project risks and impacts, Ramboll helps clients successfully meet environmental and social challenges.

We have worked extensively on behalf of major financial institutions, as well as project sponsors and developers seeking international financing. Our experts carried out over 1,000 assignments globally, including more than 500 in Latin America.
INTERNATIONAL FINANCE

Select project experience

• Currently engaged as an independent environmental and social consultant (IESC) to prospective lenders for a major petrochemical project in Veracruz. Reviewed four major environmental and social impact assessment (ESIA) documents against IFC’s Performance Standards, EHS Guidelines, Equator Principles, IADB’s Environment and Safeguards Compliance Policy and Implementation Guidelines. Prepared gap analyses and conducted a site visit. Prepared an environmental and social due diligence (ESDD) report.

• Currently engaged as the IESC for Conduit Capital’s Latin Power III fund. Scope of work includes undertaking pre-investment ESDD reviews and construction and operational monitoring of their projects against IFC’s Performance Standards and EHS Guidelines. Investors include the US Overseas Private Investment Corporation (OPIC) and DEG.

• Produced an environmental and social management plan (ESMP), an H&S action plan and a grievance mechanism for developers of a 40-megawatt hydroelectric facility in Veracruz in compliance with IFC’s Performance Standards and EHS Guidelines.

• Served as IESC to lenders for the development and construction of a 750 MW hydroelectric power plant with a 220 m-high rock-fill dam on the Santiago River in Mexico. Assessed compliance against Equator Principles, including reviewing project documentation; monitoring construction; and conducting site visits and meetings with developers, the EPC contractor, SEMARNAT, governmental authorities and local leaders.

• Served as IESC to the lender for the development, construction and operation of a 155 km rapid transit light railway system. Assessed project compliance against the Equator Principles, which involved the review of documentation, a site visit and meetings with developers, SEMARNAT and other governmental authorities. The project also involved land acquisition and resettlement along the project’s right-of-way.

• Retained by IFC to review all new Orient Express projects financed under a corporate credit facility. Visited multiple sites in Peru and Mexico, and reviewed for compliance with IFC requirements, including EHS guidelines for hotels and resorts.
Our services are underpinned by risk assessment and management principles, and include:

- Application of available and established risk-based corrective action (RBCA) schemes (e.g., ASTM and AOI EWG)
- Assisting clients in regulatory issues related to land contamination
- Design and implementation of comprehensive soil (vadose zone) and groundwater monitoring
- Landfill investigation and closure
- Remediation using proven and innovative engineered techniques, monitored natural attenuation and/or a combination of both
- Risk-based management of entire property portfolios
- Sediment and surface water quality assessment
- Soil and groundwater contamination assessment of former and operating industrial sites
- Utilization of site-specific screening levels, chemical fate and transport, and mathematical models

Select project experience

- Conducted cleanup and remediation activities of a diesel-contaminated area at an industrial facility in Mexico. Supervised removal of contaminated soil and conducted verification sampling and analysis.
- Conducted a Phase II environmental site assessment on behalf of a company manufacturing combustion burners to identify the continued presence of chlorinated solvent contamination in soil and groundwater. Prepared a preliminary environmental risk assessment that was submitted by the client’s legal counsel to federal environmental and water authorities.

SITE INVESTIGATION & REMEDIATION

Ramboll provides a full range of site characterisation, remedial investigation and design, and remedy implementation services. We focus on the threshold issues of whether and why a site should be remediated before addressing the question of how to remediate. The process involves strategic planning, integrating regulatory and statutory requirements with business considerations, identifying specific risk-based project objectives, designing data collection programmes, engineering a remedy and representing clients before regulators and the public.
SITE SELECTION SERVICES

Ramboll experts consider a number of factors when selecting a new production site. Our broad range of services enables us to provide a thorough evaluation of the site under review, including:

- Connection to site utilities, such as water, gas, electricity and telecommunication, among others
- Connection to transport infrastructure
- Geotechnical site investigation for preliminary foundation design
- Hydrogeological site characterization (preliminary assessment of groundwater use and surface water discharge potentials)
- Natural risks survey (earthquake, tornado and flooding)
- Present site use, sensitive site vicinity use and need for relocation
- Regional planning restrictions
- Research and evaluation of national and local legal requirements for site development
- Site assessment to determine a geological profile and potentially existing site impacts
- Site drainage conditions, considering adjacent open water and receiving water bodies
- Site vicinity surveys and identification of competing site uses
- Socio-economic and demographic context
- Topographic surveys and recommendations for site preparation

Value to clients

- Our assessment of potential new production sites identifies the ‘best suitable site’ for the client’s needs. We consider the following criteria during an assessment:
  - Integration of natural risks
  - Planning security and cost control of site-preparation activities
  - Security of supplies (energy, water, etc.)
  - Socio-economical site development
  - Technical understanding of legal requirements
Ramboll has assisted clients in the telecommunication industry with assessing regulatory environmental requirements for equipment. Our expertise covers a wide range of telecommunication services, from hardware manufacturing to supervision of service infrastructure for the consumer, including construction of infrastructure such as fiber cable lines, telecommunication towers and data centers.

We have reviewed waste management practices of contractors during telecommunication tower installations, and provided H&S requirement assistance, including ergonomic issues of transistor production and work at heights during antenna installations.

**Select project experience**
Conducted EHS assessments for the installation of telecommunication systems (3G and 4G) in telecommunication towers in urban (housing, hotel and building) and rural areas (mountains) for a global company. Sites assessed included Mexico, Chile, Colombia and Peru.

Provided health and safety consulting services for the installation of surveillance and telecommunication towers in public areas throughout the city of Monterrey, Mexico.
WATER RESOURCES

Ramboll offers comprehensive services, underpinned by strong technical and policy expertise, to help clients achieve integrated and sustainable water resource management goals. Our team of fishery and wildlife biologists, environmental engineers, geologists, hydrologists and chemists offers worldwide expertise in evaluating water resources. Public- and private-sector clients rely on us for:

• Biological assessment
• Ecological risk assessment
• Ecotoxicity testing
• Groundwater and surface water modelling
• Stormwater management
• Water footprinting
• Water quality assessment
• Water resource economics
• Water resource evaluation
• Water supply planning
• Watershed stewardship
• Wetlands management

We have conducted water and wastewater projects throughout Mexico, and are currently in the process of addressing various large wastewater treatment issues for industrial clients.
Select project experience

• Conducted adequacy determinations for numerous water supply and wastewater treatment facilities at industrial parks in Matamoros, Reynosa, Monterrey and Puebla. Assessed the facilities to determine their ability to meet water supply and treatment needs, and maintain compliance with discharge limitations and by-product (sludge) management/disposal requirements.

• Designed and provided assistance in the installation and operation of new wastewater treatment systems at two plants in Mexico owned by a major multinational corporation that produces hair care products. These installations utilise a state-of-the-art activated sludge process known as the ADVENT Integral System (AIS).

• Retained by a major real estate company to provide technical assistance regarding the resolution of a notice of violation issued by the Comision Nacional del Agua (CNA). The violation pertained to alleged exceedances of parameters in wastewater discharged by wastewater treatment plant at the client’s industrial park in Ramos Arizpe in the state of Coahuila, Mexico.

• Assisted in assessment of the operation of a wastewater treatment plant in Chihuahua on behalf of a large dairy products company. Identified optimal operation conditions to ensure compliance with discharge quality parameters.

• Conducted assessments of several wastewater treatment plants at industrial parks in Mexico on behalf of a multinational real estate company.

• Conducted a review of wastewater treatment plants on behalf of a large multinational company, focusing on systems operations and a potential acquisition of a wastewater treatment company in Mexico.
ENVIRONMENT & HEALTH GLOBAL SERVICES

- Air Quality Management
- Compliance, Strategy & Transaction Services
  - Compliance Assurance and Performance
  - Sustainability
  - Transactional Due Diligence
- Ecological Services
- Health Sciences
  - Environmental and Community Risk Assessment
  - Occupational Health & Safety
  - Product Safety & Stewardship
- Impact Assessment
- Resource & Waste Management
- Site Solutions
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35 COUNTRIES