NORDIC
INTERNATIONAL WATER

www.niw.dk

ABOUT US

We want to create the best framework for urban life.

We combine knowledge from the rapid urbanization in Asia and Africa with Scandinavian quality of life.

Nordic International Water ApS (NIW) is an engineering consultancy firm specializing in water, waste climate, and environment related urban infrastructure projects across low-to-middle income countries. We combine the latest knowledge, technology, and supplies from the Nordic tradition with over 30 years of experience working in developing countries; all of which enables us to deliver outstanding results under challenging circumstances.

NIW provides professional advice and assistance in all aspects of the project cycle - from project identification, to design and implementation, and project evaluation. Nordic International Water ApS (NIW) is a multidisciplinary engineering, management, and development consultancy firm dedicated to delivering high-quality innovative solutions for infrastructure projects across low-to-middle-income countries.

At NIW, we aim to provide sustainable, state-of-the-art, and cost-effective engineering and project management services in all our projects. We strive to set the bar higher than our competitors, and we do our utmost to meet our clients' expectations by providing services of the highest standards and by following the given timelines and budgets in all project phases.

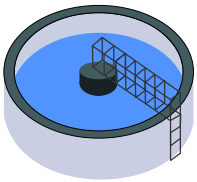
NIW is ISO 9001:2015 certified; this serves as the foundation of our company-wide policies, procedures and working practices. This is how we guarantee our clients consistently receive professional and reliable services throughout concept development, planning, feasibility and design, to procurement, implementation, and project completion.

For more information, please visit our website (https://niw.dk).

SECTORS

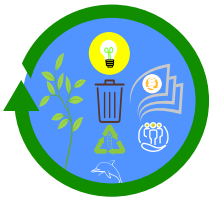
Sectors

Water Management: We help the city authorities to reduce their carbon footprint by reducing their water usage and conserving water with safe and secure water systems such as those throughout Scandinavia. We focus on solutions that are technically achievable, environmentally sustainable, and financially feasible – and most specifically solutions which are context specific – meaning our customers always receive information and guidance tailored to their needs.



Water & Wastewater Treatment: At NIW, we bring our knowledge, skills, and experiences from the industry to ensure that our clients receive a product of the highest standards. We help our clients to design and construct treatment plants that are cost effective, long lasting, and equipped with the most advanced technology to combat the increasing demand for wastewater treatment.

Water & Wastewater Networks: We assist city authorities to reach 24/7 water supply with high quality drinking water and reduce non-revenue water loss. We have extensive experience in pipe laying and rehabilitation using trenchless technology with minimal disturbance to traffic as well as designing water networks based on district metering area (DMA) and SCADA. We plan cost-effective and long-lasting projects, including services for design of pipelines, river and sea outfalls, basins, canals, drains, pumping stations, and overflows.



Waste Management: We look at waste as an important resource of its own. Our approaches involved waste to energy and integration of waste into the circular economy. When we design and implement waste management projects, our priorities are protection of nature and the environment including terrestrial and marine and human health. We combine empirical knowledge with innovation to reduce the GHG emissions for ensuring a sustainable future.

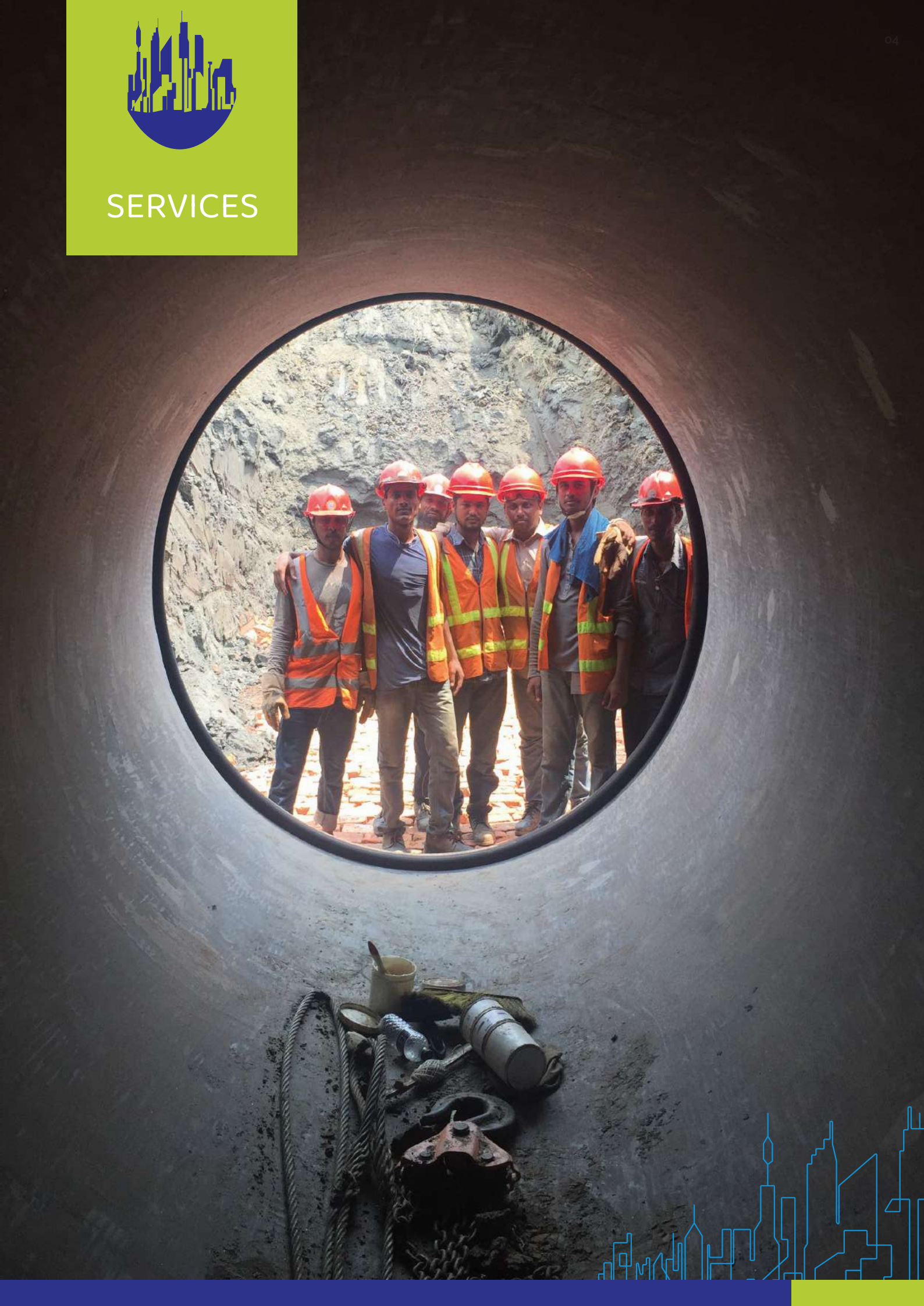
Flood Protection and Drainage Infrastructure: We bring value based on the strategy of analysing all layers (economic, social, and ecological opportunities of the urban complexity) to form sustainable visions. At NIW, we aid our clients to identify and assess the risks related to flooding and thereby formulate solutions to protect their infrastructure. We deploy state art of technology and cooperate with clients at local, regional, and national levels.

Climate Resilience: With our ongoing focus on innovation, NIW is assisting city authorities, public departments, and urban developers to tackle climate change. Our experts on climate adaptation include world-class engineering specialists, hydrologists, and landscape architects who bring nature-based solutions and blue-green-infrastructure which exponentiate our development away from grey infrastructure in favour of more nature-friendly solutions.

Blue-Green Infrastructure (BGI) and Nature-Based Solutions (NbS): Our approach is an integral part of the overall design of policies and measures, or actions needed to address a specific challenge. Through BGI and NbS we combine hydrological and biological water treatment drains into systems so that green features impeccably overlap with blue features. At NIW, we base our strategies from the foundations of other successful stories around the world.

GIS and Digitalisation: We are at the forefront in using digital platforms for stakeholder engagement and to inform decision making. We use StoryMap as a tool for communication and stakeholder engagement where we show the project location on the base map along with short descriptions, images, videos, and conceptual designs. We help our customers use GIS in tasks within planning, case processing, operation and maintenance, and not least communication in citizen-oriented solutions.

SERVICES



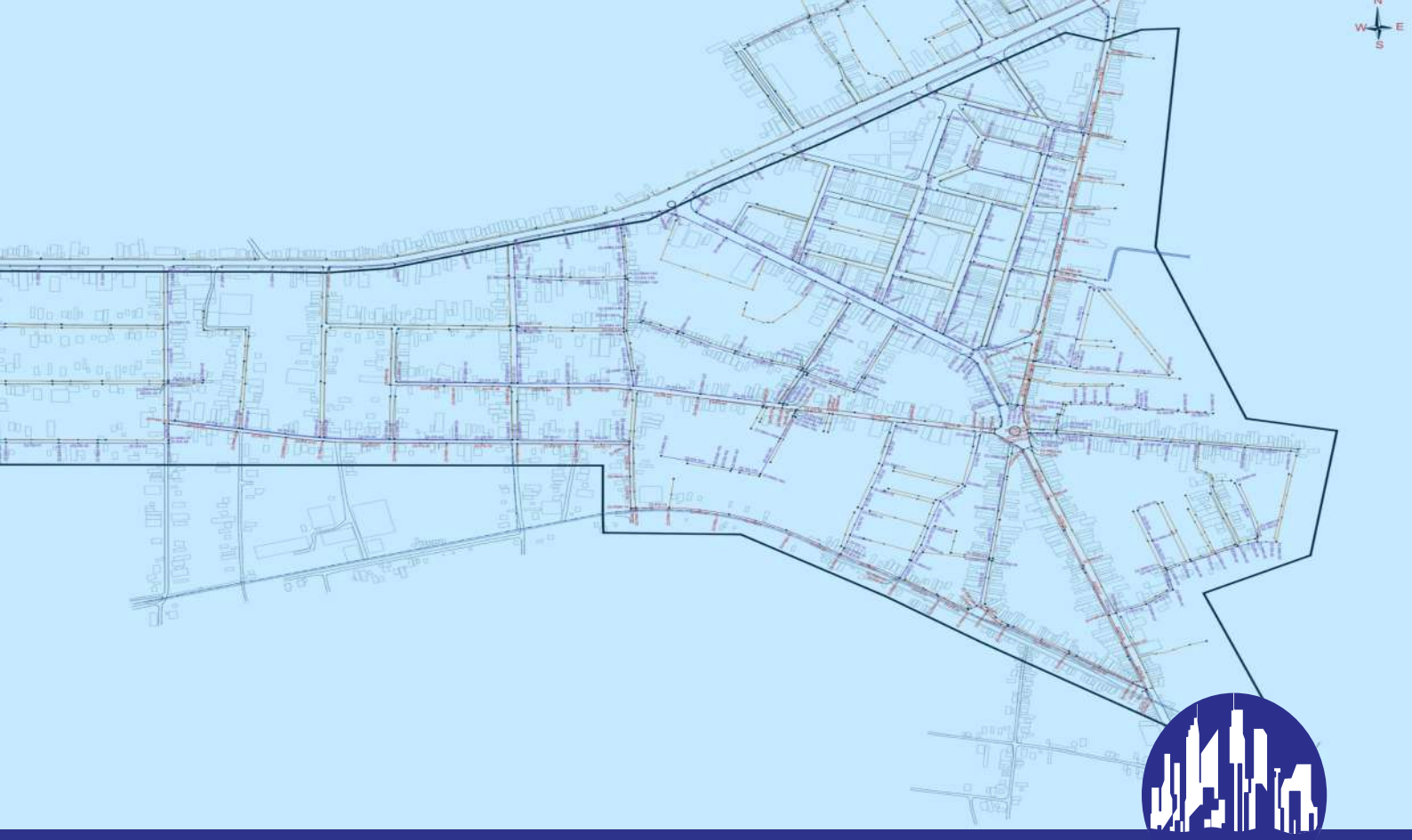
Master Planning and Feasibility Studies

- Technical Scoping
- Technical Feasibility
- Economic and Financial Analysis
- Environmental and Social Impact Assessment
- Cost Benefit and Lifecycle Analysis
- Climate Vulnerability and Risk Assessment

We help clients plan for future infrastructure investments by combining the Nordic knowledge base and experience with due consideration toward local conditions in terms of culture, demography, appropriate technology, sustainability, financial and economic consequences, and safeguarding aspects such as environment, social, resettlement, gender, and climate. We prepare projects and compare the feasibility of different solutions, enabling development partners and other financing agencies to appraise and assess the projects for future financing.

As we conduct the study of a project's feasibilities, we help our clients to have necessary documentation to provide a solid basis in decision-making and prioritization of infrastructure needs.

Whenever possible, we aim to virtualize the plans and projections using GIS, interactive story-maps, and other digital tools to make the concepts of the projects easy to understand and easy to communicate. This gives our clients a concise and instant overview of the planned infrastructure development and perspectives, and provides the same feelings as if they were on the project site.



Engineering Design

- Conceptual Design
- Preliminary Design
- Detailed Design
- Technical Specification
- Bill of Quantities
- Fidic Book CoC

We prepare designs comprehensively and according to the corresponding stage of the project, and the form of contract selected for the enterprise. We seek to understand the technical and safeguarding issues, the client's expectations and traditions, as well as the contractor's abilities when preparing the designs, to minimize any complications during the construction phase, both from the client's and from the contractor's side.

We bring innovative and established practices from all over the world and integrate our norms and standards to the context specific needs. We aim to avoid adopting a typical bias in the design of water, sanitation, and urban infrastructure to circumvent quick wins. Instead, we take a more progressive stance, adopting long-term views and supporting a progressive management of the assets to be designed and implemented.

We offer design services based on the requirement of the projects, the client, and the development partner. Our management team has extensive experience in managing design projects following the guidelines of the World Bank, Asian Development Bank, European Union, DANIDA, KfW and JICA.

Environmental and Social Safeguards

Environmental and Social Impact Assessment
Strategic Environmental Assessment
Initial Environmental Examination

Social Impact Assessment
Environmental Management Plan
Resettlement Action Plan

At NIW, we have an incontestable ability to manage projects to implement our service contracts and through our service contracts to handle work contracts for our clients. With over sixty years of amassed experience between our management team, our ability to implement infrastructure projects across a range of countries and continents is undeniable.

We strive to be respectful toward the numerous cultures and traditions of project owners we interact with and aim to ensure that projects are completed within the allotted timeframe and to the greatest standards.

Professional project and contract management is essential for the successful implementation of developments. Whilst traditional project management tools are useful, they are not sufficient to guarantee a successful project. Working on development partners and donors financed projects where the owner is often the national authority, requires a profound knowledge and respectful behavior towards the project owner and national partners. At NIW, this is the key to the successful implementation of numerous large scale infrastructure projects implemented under the overall control and responsibility of the founding members of NIW.

Construction Supervision

Treatment Plants | Networks | Drainage and Sewerage

Depending on the form of contract, the complexity, and the geographical spread of the project, the construction supervision can be structured in many ways. Our team at NIW has experience managing contracts and supervising construction of both plants and networks.

In most contracts, the international team leader and the international supervision team only provide part-time input to the project and manage a large team of national resident engineers and field engineers. In such situations, it is of utmost importance that the supervision team follows well-defined and structured methodologies for site visits, physical inspections, approvals, instructions, and the flow of data.

Our team leader and resident engineers are proven performers in supervising and overseeing construction works; we always strive to deliver projects on time whilst adhering to the budget without compromising quality standards, and with maximum attention to safety. We provide a coordinating role between the client, the contractors, and the suppliers where we offer our skills and broad experience acquired through managing medium to large scale projects across Europe, Asia, and Africa. At NIW, we equip our engineers and specialists with the most advanced toolbox to ensure they can supervise the construction works appropriately and maintain the highest quality.

Moreover, we ensure that all staff involved in supervision from the team leader to field engineers are given ade quate training in compliance and anti-corruption to enable them to take a firm position against any wrongdoing during the implementation of the projects.

Environmental and Social Safeguards

Environmental and Social Impact Assessment
Strategic Environmental Assessment
Initial Environmental Examination
Environmental Impact Assessment

Social Impact Assessment
Environmental Management Plan
Resettlement Action Plan
Social Development Plan

We help our clients to avoid, minimize, or mitigate adverse environmental and social impacts, including protecting the rights of those likely to be affected or marginalized by the development process. Our preemptive approach to avert or diminish involuntary resettlement and land acquisition helps clients reduce project costs and adverse impacts on the community and environment.

We implement a structured proactive process of impact assessment, planning, and mitigation to address adverse effects throughout the project cycle and thereby inform and consult the affected people. We aim to integrate technology into a participatory approach, both during surveys and investigations to keep documentation and information accessible and transparent, and for dissemination and disclosure purposes. This enables us and our clients to better engage with communities and affected people as they are informed and consulted on potential impacts, their rights and obligations, as well as where and how they can lodge grievances.

At NIW, we have vast experience with the requirements of ADB, WB, DSIF, IFC, EBRD, EIB and many countries in Europe, South/East Asia, and Africa; we are familiar with most specific requirements from both the development partner financing the project and the country in which the project is undertaken.

Institutional Capacity Building

Training Need Assessment
On-the-Job-Training
Peer to Peer /Mentoring
Study Tour
Workshop
Knowledge Sharing

We provide institutional, organizational, and capacity needs assessments, including mapping the present structure of institutions, as well as the tasks and roles which are expected to be impacted during the implementation of the projects. For example, this could be the available human resources within an organization, and the training needed to enable the organization to take full ownership of processes and to operate and maintain the new infrastructure.

We follow a strategic and analytical framework, powered by data-driven insights that are required for institutional capacity strengthening through change management processes. As a result, our clients receive our services in a range of ways - from PowerPoint presentations made for executive decision making, extensive reports and evaluations, to data generating surveys, training and capacity building, group processes, on-the-job-training and one-on-one sparring.

Our capacity building process starts with rigorous training needs assessments where the highest priority is on-the-job training. Our counterpart employees receive direct guidelines on how to efficiently perform their jobs whilst on the actual worksite. This way, employees learn the skills that are required to be performed in real-life work conditions and they become accustomed to the working in the environment.

Knowledge Management and Transfer

StoryBoard / StoryMap
GIS and Remote Sensing

Cloud based Knowledge Sharing
Digital Platforms

At Nordic International Water we believe in the concept of "Knowledge is power - share it".

Our focus is to share knowledge through involving experts across our industry ad young scholars from the region in our projects. Our team has extensive experience in knowledge management and transfer using new tools and technologies. In today's age, it is becoming even more important, also for government agencies and public/private utilities, to reach out to people and communities.

We help to connect the dots between people and organizations so that everyone is on the same page and in a better position to build a future together.

We are at the forefront of utilizing web/GIS based knowledge sharing platforms and have vast experience in the preparation of consumable knowledge products such as, brochures, leaflets, bulletins, videos, and short interviews. We also guide our clients to share their expertise using social media (e.g. LinkedIn, Facebook, YouTube) to reach a large audience within a short time.

PROJECTS

Livelihoods and Social Entrepreneurship from Plastic Circularity

Country: Philippines
Financier: World Bank
Client: World Bank
Duration: 06/2022 - 10/2022

The objective of the study is to analyze vulnerabilities of informal waste sector workers in the Philippines, potential sustainable livelihood and community models, and innovative solutions for vulnerable community groups.

The scope of works includes literature review, qualitative and quantitative research, field work with a quantitative survey with informal waste sector workers at four landfills, FGD, interviews, stakeholder consultation and workshops.

The project aims at identifying and recommending livelihood opportunities for the poorest and most vulnerable groups engaged in plastic waste collection, sorting, recycling and upcycling; and innovative models/ initiatives (e.g. plastic banks) to support livelihood options for the poorest and most vulnerable working in plastic debris collection and Undertake case study approach to identify and select business models and potential livelihoods options.

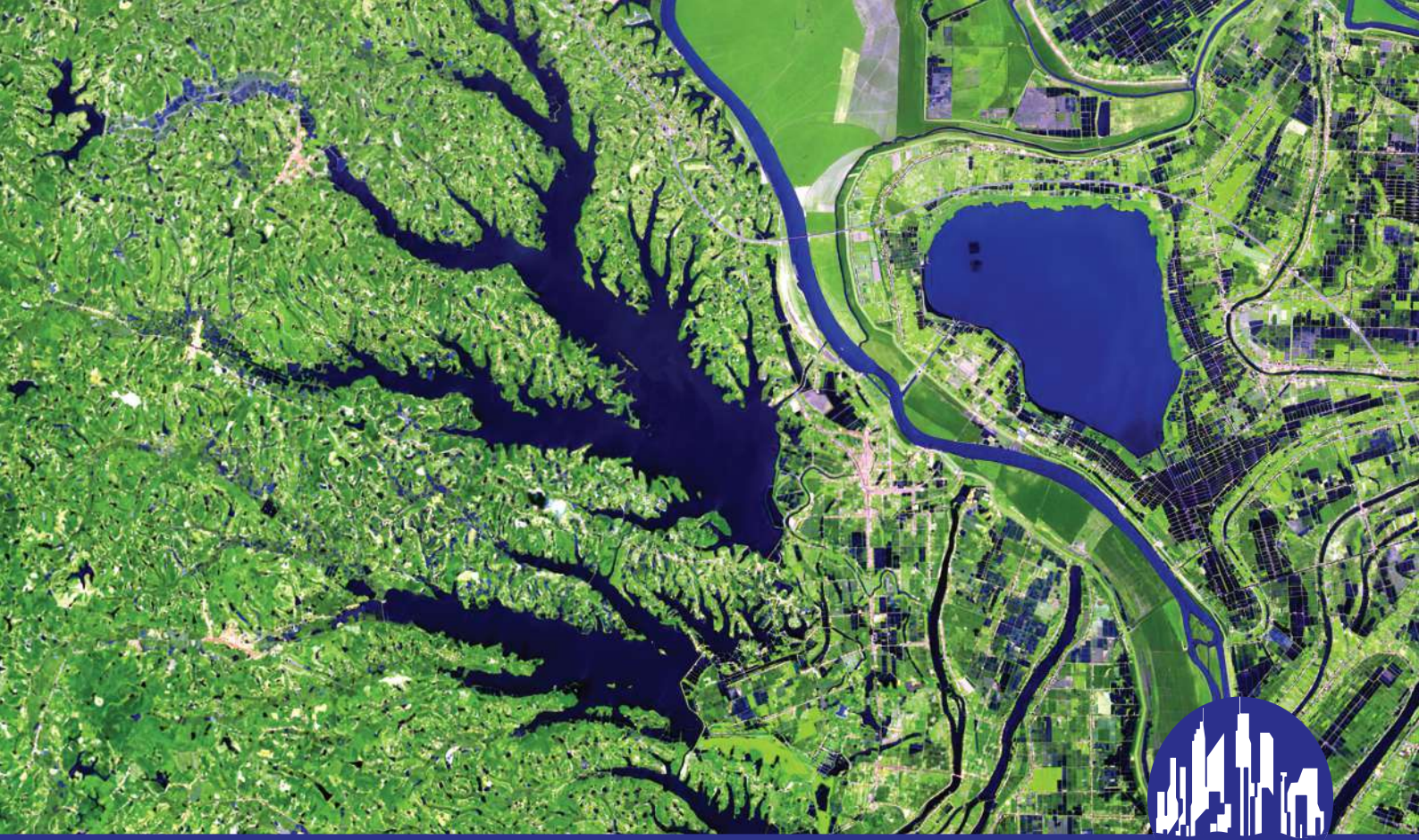
Energy from Waste

Country: Pakistan
Financier: World Bank
Client: Sindh Solid Waste Management Board
Duration: 07/2022 - 06/2023

The main objective of the project is to propose the most financially feasible, technically viable and socially/ environmentally acceptable options for producing energy from the waste being collected at the two main landfills in Karachi.

The metropolitan city of Karachi generates an estimated 10,000 to 12,000 metric tons of municipal solid waste per day. Around 60 % of this waste is collected and transported to the Jam Chakro and Gond Pass landfills.

The scopes of the assignment include defining the baseline by reviewing current waste composition, the sector and available and appropriate technology options. The project team will consult relevant stakeholders, propose preferred options following on multi-criteria analysis, prepare feasibility study and conceptual design, as well as assist with the technical aspects during project tendering.



Maoli Lake National Wetland Park

Country: China
Financier: French Development Agency (AFD)
Client: Hunan Maoli Lake Daye Ecological Construction and Development Co., Ltd.
Duration: 2021 - 2024

The project focuses on protection and restoration of biodiversity and its ecosystem, community sustainable development, development of the Maoli Lake eco-tourism and environmental education, and capacity building.

The project activities included survey, design, bidding document preparation and construction supervision. The design part of the project is focused on nature-Based Solutions including (a) Ecological Treatment of the Lake and connecting stream (b) ecological restoration for the surrounding forests, (c) wetland park biodiversity protection and flower sea landscaping, (d) waterfront ecological restoration and d) touristic roads, running tracks, and natural trails.

Fujian Pingnan Ecological Restoration Demonstration Project

Country: China
Financier: French Development Agency (AFD)
Client: Pingnan Zhijin Development Co., Ltd.
Duration: 2021 - 2026

The project aims to improve Pingnan county's ecological and living environment, to bring nature and biodiversity back into the city of Pingnan, to strengthen ecological and landscape continuity and to enhance the county's resilience to the impacts of climate change.

The project approaches focus on the introduction and design of Nature Based Solutions, including (a) Ecological restoration of Changfen River – the hydrological functions of the river (river dynamics, self-purification, restoration of the aquatic ecosystems); while connecting households with the river catchment to be connected to the collective wastewater treatment; (b) the creation of urban public green spaces, and network of integrated urban and landscape and river banks, for the benefit of the residents of Pingnan including re-greening of the banks with local flora, qualitative street, furniture, viewpoints, pedestrian lanes network.

Chattogram Metropolitan Sewerage Project for North Kattoli Catchment

Country: Bangladesh
Financier: CDIA - Asian Development Bank / French Development Agency (AFD)
Client: Chattogram Water and Sewerage Authority (CWASA)
Duration: 2021 - 2022

At present Chattogram, the second largest city in Bangladesh with a population of 2.9 million, has no sewerage system or wastewater treatment facilities. In line with the Government of Bangladesh's policy framework to provide 100% sanitation facilities to its citizens, the CWASA, has been mandated to provide the necessary services to collect, treat and safely dispose of the wastewater and faecal sludge generated within its service area.

The scope of works under the project included preparation of the feasibility study and preliminary design for the proposed Chattogram Metropolitan Sewerage Project for North Kattoli Catchment which will include the climate change assessment, safeguard due diligence and financial/economic analysis necessary to facilitate the preparation of an AFD investment loan.

WORK WITH US

We want to create a unique workplace for the industry's talents, where employees experience that they make a difference on a global scale, feel committed, and have a say. We listen to our customers' and employees' voices carefully and we bring multi-sectoral experts together to provide our clients with the best solutions.

We are always open and eager to hear from all prospective parties. We are open to collaborations with individuals, companies, and organizations, and you are always welcome to contact us if you have a project you would like to discuss.

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