

RCDN Wastewater Programme CURRICULUM

“Introduction to Wastewater Systems for managers and engineers”

Curriculum for “Introduction to Wastewater Systems for managers and engineers”			
<p>Overall learning objective of the programme: Managers and engineers are able to take an active role during planning and implementation of the wastewater infrastructure.</p>			
<p>Target group: Strategic level</p>	<ul style="list-style-type: none"> • <u>Management and technical staff of PUCs, implementing or operating WWCT systems:</u> (1) Technical Manager; (2) Members of PIUs / PITs; (3) Technical staff; secondary: (4) Laboratory Staff (5) Department for Customers Relations³ • <u>Municipal staff:</u> (1) Department for communal affairs Department, (2) Department for investments, (3) Mayor's office. 	<p>Duration¹</p>	<p>Overall duration flexible, up to 6 months</p> <p>Module 1: 2 Day</p> <ul style="list-style-type: none"> • Training 1: Regulations – Legal, institutional aspects and financing aspects <p>Module 2: 3 Days</p> <ul style="list-style-type: none"> • Training 2 Technology (3 Days) <p>Module 3: 3 Days</p> <ul style="list-style-type: none"> • Training 3: Project related (2 Days) • Peer Exchange 1: Project related (1 Day)
<p>Specific learning objectives of the modules</p>	<ul style="list-style-type: none"> • M1: Participants are able to interpret status of wastewater sector and legal and institutional wastewater framework at the national and LGU level. • M2: Participants are able to explain different wastewater collection and treatment systems with an emphasis of the technical aspects and can define their importance. 	<p>Key topics²</p>	<p>Module 1: Regulation and Financing (Training 1)</p> <ul style="list-style-type: none"> • Brief overview of governance issues including the status of the sector in the region / country: <ul style="list-style-type: none"> ○ coverage with WW collection ○ coverage with WW treatment ○ existing strategies on national level ○ legislations (compared to EU requirements) ○ existing strategies on the level of municipalities, e.g. master plans • Legal and administrative environment • Regulation and standards • Actors in wastewater collection and treatment

			<ul style="list-style-type: none"> • Financing management • Tariffing (wastewater collection and treatment) • Consumer relations - Customers awareness on needs and benefits from the wastewater collection and treatment <p>Module 2: Technology (Training 2)</p> <ul style="list-style-type: none"> • Type of sewage systems (mixed, separate...) (technical appraisal) • Decentralised vs. centralised systems • Wastewater systems (WWTP site selection, collection & treatment systems – pipelines and structures, sludge disposal and/or reuse, operation & maintenance, energy requirements, effluent quality, environmental issues) • Integrated water resource management IWRM, Integrated urban water management IWUM, Natural-based storm water management <p>Module 3.1: Project related (Training 3) Module 3.2: Project related (PE 1)</p> <ul style="list-style-type: none"> • Project Cycle for WWCT Infrastructure Projects (Intro) • Feasibility Study • Development of municipal wastewater management plan /Master Plan/ – planning process, phases, priority investment plan, priority investment plan, life-cycle costs including operational costs and depreciation <p>Note: highlight is on more technical part and topics since the target group is in direct interaction with consultants and need to be able to make informed decisions.</p>
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<p>Format:</p>	<ul style="list-style-type: none"> Up to 3 CD modules (training and peer exchange) plus collaborative elements (e.g. interactive group work) <p>Additional possibilities:</p> <ul style="list-style-type: none"> Preparatory webinar before F2F event to prepare participants and collectively answer questions at the event Use Internet platform or similar virtual platform (e.g. Facebook, Viber, WhatsApp) to stay in touch afterwards Develop a Question and Answer facility and produce Frequently Asked Questions (FAQs) 	<p>Methodological aspects:</p>	<ul style="list-style-type: none"> Participant-tailored input and group-based co-construction to facilitate knowledge transfer and application on selected topic: <ul style="list-style-type: none"> Tailored input by expert/resource person, adoption of the national context and based on the selected topic– short, yet comprehensive Peer Exchange and sharing and reflection of experiences to foster learning of participants from each other Formal and structured exchange on the internet platform. Interactive group-work to reflect and apply the learning, e.g. <ul style="list-style-type: none"> Online conference Webinar with a “hot” topic re. wastewater
<p>Material:</p>	<ul style="list-style-type: none"> Tools for visualisation (i.e. pin boards and cards, magnetic boards, flip charts) Manuals Power Point presentations, and Handouts (good practice description/case studies, brochures, video clips), templates and check lists Guidelines for online accompaniment/ collaboration, transfer possibilities, Optional: Learning cards for WWTP Steps. 	<p>Trainer/ Moderator profile:</p>	<ul style="list-style-type: none"> Experience in Capacity Development Experience in facilitation/moderation of different CD formats Profound and broad technical knowledge of wastewater systems and treatment technologies Profound knowledge of common challenges of LGUs and/or PUCs related to WWCT Profound knowledge of PUCs’ work environment and/or its interrelations with LGs Attendance of programme specific ToT course Profound knowledge of RCDN methodological approach and Quality Standards.
<p>Output:</p>	<ul style="list-style-type: none"> Compilation of materials (agenda, handouts, background information) Established group of participants in a similar situation (optional, depending on decision of participants) Report and photo documentation. <p>Optional:</p> <ul style="list-style-type: none"> Introductory & additional webinars Post- curriculum internet platform or similar platform for continuous exchange of the group 	<p>Preparation:</p>	<ul style="list-style-type: none"> Assessment of trainees Assessment based preparation – conduction of the assessment prior to each cycle of delivery Preparation of the sessions (good practice selection and description, session design and materials, case studies), esp. for the Peer exchange and online collaboration/accompaniment Establishment of an online platform for the collaborative elements in between the two sessions and registering the participants on it. Using guidelines for online accompaniment to develop context-specific materials and questions retransfer possibilities and other accompaniment elements.

Possible additional benefits for participants	<ul style="list-style-type: none">• Short communication channels based on modern social media (e.g. WhatsApp groups, etc.) with colleagues from other PUCs• Increased power to negotiate (e.g. with management)• Having a good position for advising management on technical issues, either in the planning phase or in operation and maintenance
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Date: 03.06.2021