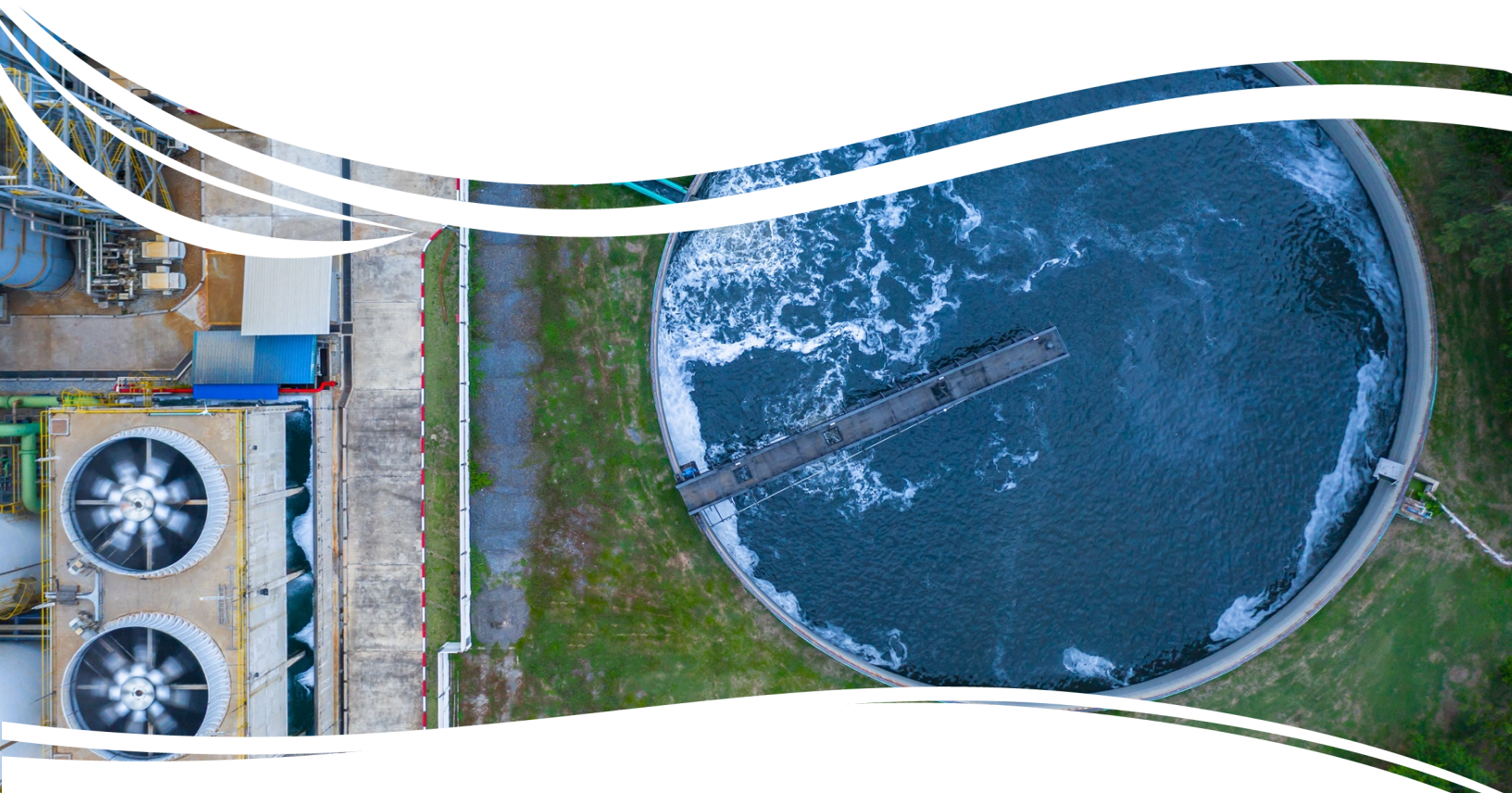




Best Practices

Digital training on management and financing of sanitation projects for local counterparts



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Lessons learned on digital training for regional and national counterparts involved in the formulation of sanitation projects

Lessons learned from Central America and the Wider Caribbean Region

Background

The Wider Caribbean Region faces crucial water and sanitation challenges. It is estimated that 70 % of the region's population lacks access to hygienic sanitation services, and 80 % of wastewater is discharged into the environment without any kind of treatment.

Against this backdrop, the GEF CReW+ project seeks to provide innovative, nature-based solutions to mitigate the effects of untreated wastewater on the environment and public health. The GEF CReW+ Project is a partnership project funded by the Global Environment Facility (GEF) and co-implemented by the Inter-American Development Bank (IDB) and the United Nations Environment Programme (UNEP) in 18 countries of the Wider Caribbean Region. This innovative project builds on the successful previous phase called "The Caribbean Regional Fund for Wastewater Management (CReW)" (2011-2017). CReW+ is being executed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the Organization of American States (OAS) and the Secretariat of the Cartagena Convention (UCR/CAR) on behalf of the IDB and UNEP respectively.

The Global Environment Facility (GEF) has provided \$22 million in grants and financial resources and mobilized nearly \$120 billion to co-finance more than 5,200 projects and programmes. The GEF is the largest trust fund focused on enabling developing countries to invest in nature and it supports the implementation of international conventions on biodiversity, climate change, chemicals, and desertification. It unites 184 governments, as well as civil society, international organizations, the private sector, and other partners.

In the framework of the GEF CReW+ Project, the CReW+ Academy was developed. It is a cost-free platform, accessible via <https://academy.gefcrew.org/> and launched in 2021 by GIZ. It brings together all the training initiatives led by the GEF CReW+ project in a single point. Its purpose is to provide both knowledge and a space for the co-creation of water and sanitation solutions in the Wider Caribbean Region. One of these initiatives of the CReW+ Academy was the "Academic Programme: Capacity building in project formulation for integrated water and wastewater management", held in June 2022, which aimed to contribute to the training, strengthening and updating of professionals involved in the subject, with a view to influencing their own local realities.

The Challenge

The Sustainable Development Goals promote in their target 6.3 *Clean Water and Sanitation* the reduction by half of the proportion of untreated wastewater discharged into water bodies. This is of utmost relevance, as the UN points out that 3 out of 10 people do not have access to safe drinking water, and 6 out of 10 do not have access to safely managed sanitation facilities. In addition, 80 % of the wastewater derived from human activity is discharged into rivers and seas without any treatment, causing pollution and environmental problems (UNESCO, 2017)¹.

The effects of contamination caused by the lack of sanitation in wastewater is an issue of great importance, since water- and sanitation related diseases are among the leading causes of death of children under 5 years of age. Approximately 7,600 children of these ages die each year from diarrheal diseases² (PAHO, n.d.), and in general, more than 829,000 people die each year from diseases linked to this problem worldwide (WHO, 2022)³. In order to solve these problems and to meet the Sustainable Development Goals (SDGs), it is estimated that around \$180 million per year need to be invested until 2030 (IDB, 2022).⁴



Figure 1: Regional Environmental Quality Laboratory located in Los Canelos de Divisa, Panama

Source: Ministry of Environment Panama (Ministerio de Ambiente de la República de Panamá)

With this in mind, it is vital to invest in and make progress towards better infrastructure and better management to avoid affecting not only the lives of millions of people, but also the environment and ecosystems that are currently affected by this problem. Finally, it is up to all of us, governments, private companies, and civil society, to invest in research and development for integrated water and wastewater management.

In order to make progress in meeting the Sustainable Development Goals, it is necessary to train stakeholders on these issues, with the aim of motivating and promoting best practices for the benefit of the environment. With this objective in mind, the CReW+ Academy Block 4 focused on topics of great interest to the participating countries and with a more interactive and practical methodology to demonstrate learning about project formulation.

CReW+ Academy Academic Programme: Capacity Building in Integrated Water and Wastewater Management Project Formulation

For the development of this academic programme on project formulation for integrated water and wastewater management at the CReW+ Academy, the programme was divided into two phases:

- The first phase consisted of providing the participants with different thematic talks with experts in the field of water and wastewater management.

¹ UNESCO. (2017). Informe Mundial de las Naciones Unidas sobre el Desarrollo de los Recursos Hídricos 2017. Aguas residuales: El recurso desaprovechado. París.

² PAHO. (n.d.). Agua y Saneamiento. <https://www.paho.org/es/temas/agua-saneamiento>.

³ WHO. (2022). Agua para consumo humano. <https://www.who.int/es/news-room/fact-sheets/detail/drinking-water>.

⁴ IDB (2022). How is Latin America in Terms of Sanitation? <https://www.iadb.org/en/improvinglives/how-latin-america-terms-sanitation#:~:text=Indeed%2C%20about%20490%20million%20people,use%20outdoor%20bathrooms%20or%20latrines.>

- In the second phase, the participants were trained in project formulation, specifically in the identification phase, which gave them the skills to develop specific wastewater treatment projects based on the conditions in each country.

During the first phase, 14 two-hour sessions were held with experts, 7 in Spanish and 7 in English. In the second phase, 8 three-hour sessions were held, 4 in Spanish and 4 in English, to provide participants with a project formulation guide from the Central American Institute of Public Administration (ICAP). A total of 114 participants from 14 countries registered for the programme and, at the end of the course, rated it satisfactorily in terms of "fulfillment of course objectives" with an average of 91 %. In addition, participants came from different organizations, as listed below:

Organization	Number	Percentage %
Academia	3	2,63 %
Government Officials	80	70,17 %
School staff	2	1,75 %
Technical staff of NGOs, CSOs, or other community-based organizations and institutions	4	3,51 %
Utilities	24	21,05 %
Others	1	0,87 %

The following topics are the corresponding topics of the sessions with experts, as well as the lessons in project management

Thematic sessions with experts	Thematic Project formulation sessions
Pre-feasibility and Selection of Innovative Nature-based Sanitation Technologies	The Project and its Cycle of Life Technique: Issue Tree
Biogas Production and Energy Utilization in Wastewater Treatment Management	Project Document: Project Identification
Shit Flow Diagrams (SFD) for the Design and Management of Future Sanitation Infrastructures	Analysis of the Problem and its Objectives Technique: Objective Tree
Irrigation Systems with Treated Wastewater	Background: Stakeholder Analysis Analysis of Alternatives of the Project and Selection of Alternatives
Designing Business Cases in a Circular Economy	The Logical Framework: Objectives and Indicators The Logical Framework: Means of Verification and Assumptions

	Project Scope and Components
Revolving Funds and other Financial Mechanisms for Capital Financing	Project Justification Development Strategies and Resource Availability
Tariff Systems	Dynamics of Project Formulation by Groups

Expected impact

During the training sessions, a total of 7 countries were able to complete the process and prepare a project document according to their reality, based on the technical knowledge acquired in the expert session, as well as the project guide provided and guided by ICAP. The 7 countries that completed the process and the title of their project document are presented below:

Country	Project developed and elaborated
Mexico	Proyecto de Saneamiento en Zonas Rurales de la Península de Yucatán con Soluciones Innovadoras (<i>Sanitation Project in Rural Areas of the Yucatán Peninsula with Innovate Solutions</i>)
Colombia	Optimización del Sistema de Aguas Residuales del Municipio de San Antero, para el Reúso de Aguas Residuales y Biosólidos en Producción Agrícola (<i>Optimization of the Wastewater Reuse System in San Antero for the Reuse of Wastewater and Biosolids in Agricultural Production</i>)
Dominican Republic	Proyecto Sistema de Tratamiento Sabana de la Mar (<i>Wastewater Treatment System Project in Sabana de la Mar</i>)
Costa Rica	Proyecto de Saneamiento Sibuju (<i>Sanitation Project Sibuju</i>)
Panama	Sistema de Abastecimiento de Agua para Comunidades de Gardi Sugdub-Gardi Muladub (<i>Water Supply System for the Gardi Sugdub-Gardi Muladub Communities</i>)
	Operatividad del Laboratorio Regional de Calidad Ambiental ubicado en Los Canelos de Divisa, República de Panamá (<i>Operation of the Regional Environmental Quality Laboratory located in Los Canelos de Divisa, Panama</i>)
Suriname	Setting up a Small Hydropower Plant to Provide Electricity for the People Living in the Region of Tapanahony River
Trinidad and Tobago	Wastewater and Sludge Entering the Environment

During the evaluations, 91 % of the participants indicated that the academic activity was successful. This project formulation phase was carried out according to the methodology taught in the classes and guided by the training facilitators.

Based on the above, the expected impact is that in the future the projects identified and initially formulated by the groups that were part of this Academic Programme will become a reality within a reasonable period of time. The complexity of the projects, as well

as their feasibility and viability are diverse. However, all of them have a solid technical basis that justifies their relevance and impact on people's lives. Therefore, it will be up to decision-makers to continue with these projects in order to implement concrete and effective sanitation and wastewater interventions. On the other hand, it will be the responsibility of the participants to continue developing projects and opportunities for the benefit of their communities based on the tools provided.

Lessons learned

From the implementation of the Academic Programme: Capacity building in project formulation for integrated water and wastewater management, several lessons learned came to light, which are inputs for future efforts of this nature. The following are two groups of lessons learned, firstly those derived from practical experience and the contrast between initial planning and implementation, and secondly, the key aspects that were successful during the course of the training.

1. Aspects that were modified during the execution of the training.

- During the planning of this Academic Programme and the lectures by experts on technical topics, it was initially planned that the same expert or, failing that, two different people on the same topic would provide the content in both Spanish and English. However, during the process it was considered convenient to hire simultaneous translation services from Spanish to English for two presentations. Although the overall experience is considered positive, it meant a particular effort for the participants to have two electronic devices active during the session, both to observe the presentation and to listen to the simultaneous translation.

2. Aspects that were key during the execution of the training.

- In the first phase, the contents taught by the thematic experts were highly technical and relevant to the current context, which was undoubtedly well received and useful for all participants.
- In the second phase, the division of participants into groups by country was a good idea for the group document, which allowed networks to be formed, especially between professionals who did not know each other and who could join forces for local advocacy.
- Once the lessons on projects were completed, and prior to the final presentation of the groups, three tutoring sessions were held with the groups that needed it, in order to review progress and correct, if necessary, the project documents prior to their finalization. Finally, this exercise in which all groups participated, was vital to ensure that the knowledge acquired before was applied in the best possible way in the projects.

Challenges for scaling up the practice and generating sustainability in the participating communities

For the scalability of the project and the sustainability of the participating communities, four important aspects are highlighted for future projects:

- **Application of the learnings at the regional level:**

A central challenge for the application of the learnings has to do with the selection of participants. They must have experience in the exercise of work, public or private, for these purposes. Therefore, it is pertinent to continue shaping and refining over time the call and selection of participants with direct influence in the field of integrated wastewater management and sanitation.

- **Time availability:**

As part of the profile of the participants, it is important to consider the availability of time to attend synchronous sessions, while performing their functions. For this reason, it is essential to manage direct communication with the institutions so that the employee can attend important meetings during working hours. In addition, it is essential for the organizing team to make the recordings of the sessions available and to propose the development of asynchronous activities as alternatives for participation.

- **Replication of the teaching method:**

Virtuality presents an opportunity to broaden the impact of the initiatives, in this case teaching, saving logistics costs and working with people who would find it difficult to participate in these dynamics in person. Therefore, it is essential to continue to rely on local partners, technically trained in the field, who have the appropriate methodologies and technological platforms to generate effective virtual learning processes.

- **Introductory session:**

With a view to future actions, it is necessary to establish an introductory session on the use of the virtual campus, in order to solve possible doubts and improve the experience and the use of the platform.

Conclusion

Through Block 4 of the digital training programme on management and financing of sanitation projects for local counterparts, it was possible to strengthen the knowledge of the participants in two ways: first, in elements corresponding to wastewater management, addressing issues such as irrigation systems with treated water, circular economy, pre-feasibility, nature-based solutions, revolving funds and financing; second, by addressing technical sessions on project formulation, which allowed the approach of 7 projects to address wastewater issues in the Latin American and Caribbean region.

It is expected that because of participating in the training programme, the participating countries will be able to continue generating innovative project proposals to address wastewater issues in the region and that these proposals will be formulated using the tools provided in the training modules.

As a final element, it is essential to emphasize the importance for decision-makers in governments, organizations, and institutions in the region to constantly participate in training programmes to strengthen their technical knowledge on environmental issues and project formulation to promote the implementation of innovative solutions in integrated water management and the use of wastewater with appropriate project formulation standards.

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