CReW+

Compendium on Financing for Water and Sanitation

Financing Mechanisms and Institutional Options for Enhancement

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The GEF CReW+ is a partnership project funded by the Global Environment Facility (GEF) that is being co-implemented by the Inter-American Development Bank (IDB) and the United Nations Environment Programme (UNEP) in 18 countries of the Wider Caribbean Region (WCR).

This project builds upon its previous successful phase "The Caribbean Regional Fund for Wastewater Management (CReW)" project (2011-2017). CReW+ is being executed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the Organisation of the American States (OAS) and the Secretariat of the Cartagena Convention (CAR/RCU) on behalf of the IDB and UNEP respectively.

The 18 participating CReW+ countries (Barbados, Belize, Colombia, Costa Rica, Cuba, Dominican Republic, Grenada, Guatemala, Guyana, Honduras, Jamaica, Mexico, Panama, Saint Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago) vary geographically from large, continental countries to small island states, with significantly different political, linguistic and cultural contexts.

About the GEF: The Global Environment Facility (GEF) has provided $22 million in grants and blended finance and mobilised nearly $120 billion in co-financing for more than 5,200 projects and programmes. The GEF is the largest trust fund focused on enabling developing countries to invest in nature and supports the implementation of international conventions on biodiversity, climate change, chemicals and desertification. It brings together 184 governments, plus civil society, international organisations, the private sector and partners.

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Abbreviations

BMZ	German Federal Ministry of Economic Cooperation and Development
BPIP	Public Investment Projects Database
CAF	Corporación Andina de Fomento
CAPEX	Capital Expenditure
DFI	Development Financing Institutions
ECA	Export Credit Agencies
ECLAC	Economic Commission for Latin America and the Caribbean
EIB	European Investment Bank
GCF	Green Climate Fund
GEF	Global Environment Facility
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH.
GWRF	Guyana Wastewater Revolving Fund
IDB	Inter-American Development Bank
IFI	International Financial Institutions
IPF	Investment Project Financing
LAC	Latin America and Caribbean
MEPyD	Ministry of Economy, Planning and Development
MIDEPLAN	Ministry of National Planning and Economic Policy
NGO	Non-Governmental Organization
NRW	Non-Revenue Water
O&M	Operation and Maintenance
OAS	Organization of the American States

OBA	Output-Based Aid
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
ONEA	National Office for Water and Sanitation
OPEX	Operating and Maintenance Expenditures
PCG	Partial Credit Guarantees
PNDIP	National Development and Public Investment Plan
PPP	Public Private Partnership
PRG	Partial Risk Guarantees
PSP	Private-Sector Participation
PWRF	Philippines Water Revolving Fund
RBF	Results-based financing
RedSNIP	Network of the National Public Investment Systems in Latin American and the Caribbean
RFF	Revolving Financing Facility
SAB	Sustainability Awareness Bonds
SDG	Sustainable Development Goal
SNIP	Sistema Nacional de Inversión Publica
SNP	National Planning System
SPV	Special Purpose Vehicle
STP	Sewerage Treatment Plant
SWA	Sanitation and Water for All
UNEP	United Nations Environment Program
WCR	Wider Caribbean Region

WHO	World Health Organization
WWTP	Wastewater Treatment Plant

1. Technical framework and introduction

1.1. Context

The GEF CReW+ is a partnership project funded by the Global Environment Facility (GEF) that is being co-implemented by the Inter-American Development Bank (IDB) and the United Nations Environment Programme (UNEP) in 18 countries of the Wider Caribbean Region (WCR).

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This compendium was prepared within the context of the Sanitation for Millions project, which is a multi-donor program which was set up in 2016 by the German Federal Ministry of Economic Cooperation and Development (BMZ) to contribute to safe and adequate access to sanitation. It operates worldwide focusing notably on the needs of disadvantaged and vulnerable groups such as children, women and girls, refugees and internally displaced people as well as persons with disabilities and indigenous communities Measures are currently being implemented in Africa, Asia, Latin America and the Caribbean Region.

The BMZ is the lead donor and the Bill & Melinda Gates Foundation, the UK-based solidarity fund Water Unite, and the Hungarian Ministry of Foreign Affairs and Trade also contribute to the funding. On behalf of the Inter-American Development Bank (IDB) Sanitation for Millions executes activities within the Global Environment Facility (GEF) funded project "CReW+" - An Integrated Approach to Water and Wastewater Management Using Innovative Solutions and Promoting Financing Mechanisms in the Wider Caribbean Region.

1.2. Scope of the activity

This activity aimed at producing, among other deliverables, a compendium (digital document) for online publication. It covers institutional support (SNIPs), conventional financing mechanisms (for instance tariffs) and innovative financing mechanisms (for instance revolving funds, blended finance, combined financing etc.) for sustainable

water/sanitation services respectively.

As the compendium was to be elaborated based on a regionally moderated process in collaboration with the Latin American Network of Public Investment Systems (Red SNIP for its abbreviation in Spanish: https://observatorioplanificacion.cepal.org/es/redsnip), consultations were held with representatives of participating countries SNIPs and other government entities and an agreement was stricken to include "Strengthening the role of the SNIP network in facilitating access to finance for water and wastewater projects" and for the compendium to cover 1) SNIP approval process as a possible facilitator of the access to finance, 2) the tariff setting mechanism and its role in facilitating access to finance and 3) innovative financing mechanisms for enhancing access to finance.

Activities were also conducted with pilot countries to work on concrete projects, specifically in the Dominican Republic and Honduras.

1.3. About this compendium

This compendium ***is built around the collection of information regarding different financing mechanisms in water and sanitation. Likewise, it shows that the role of the SNIP can go beyond an instance of assessment and approval of investment projects and keeping the public investment registry, and can also the public entities proposing the projects to improve their quality and facilitating the obtention of the required financing for its implementation. It also shows that independent tariff regulation and innovative financing forms can increase investment in water and sanitation.***

A series of moderated discussions were held, including presentations and discussions that contributed to provide the shape and contents of the compendium and enrich the experience of the participants, as they were able to listen from their peers about their

success and improvement stories, as well as cases where a different approach could increase the chances for success. Available public data and documents were used for technical and sectoral descriptions.

After describing the main financing instruments and the hypotheses used as guidance for the discussion, the compendium continues with a description of each case including their derived lessons learned and finally the conclusions of the exercise are presented with a forward-looking aim, to offer some guidance to the participating entities and all those who have a responsibility in assessing development projects and facilitating access to finance for implementing them.

2. Background and Initial Considerations

2.1. Rationale to invest in water and sanitation

Investments in water and sanitation infrastructure are vital for any country. They have important economic, social and environmental implications. The provision of water supply, sanitation and wastewater services generates substantial benefits for public health, the economy and the environment.

Specifically in Latin America, the situation is characterized by the following main features:

- Countries in the region (specially in Central America) possess a high reservoir of water per capita, which is inefficiently extracted and distributed due to a lack of investment.
- Water scarcity worsens inequality in household expenses across income

percentiles and increases the amount of care-work time needed for household demand which usually also deepens gender inequality.

- Water management has also a crosscutting impact on SDGs and economic development sectors in general, as is shown by various to input-output analysis.[1]

- There is also a high rate of non-revenue water. CAF (Development bank of Latin America) carried out a study on water safety in 26 cities in the region and came up with evidence that showed that there was a loss of more than 60% in the supply of water.[2]

- Water consumption in LAC is mainly associated with agricultural activity, which demands approximately 68% of available freshwater, followed by municipal demand which represents approximately 21%, and industrial use 11%.[3]

On a global scale, currently, worldwide economic losses related to water insecurity are estimated to be USD 260.0 billion per year from inadequate water supply and sanitation alone,[4] whereby Sanitation and Water for All (SWA) comes to the same conclusion.[5]

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[1] See for instance UNESCO (2016), WWAP (United Nations World Water Assessment Programme). 2016. The United Nations, World Water Development Report 2016: Water and Jobs. Paris https://unesdoc.unesco.org/ark:/48223/pf0000244318

[2] https://www.caf.com/en/currently/news/2018/03/how-efficient-is-the-supply-of-water-in-latin-america/

[3] MDPI (2022), Water Context in Latin America and the Caribbean: Distribution, Regulations and Prospects for Water Reuse and Reclamation Carolina Rodríguez, Bárbara García, Caterin Pinto, Rafael Sánchez, Jennyfer Serrano and Eduardo Leiva https://www.mdpi.com/2073-4441/14/21/3589

[4] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en

[5] Sanitation and Water for All - SWA (2021) Water & Sanitation: How to Make Public Investment Work, a

Benefits from the provision of basic water supply and sanitation services such as those implied are massive and far outstrip costs. Every dollar invested in water and sanitation returns USD 4.3 and an estimated gain of 1.5% of global Gross Domestic Product (GDP) through reduced health care costs, as well as providing benefits such as reduced pollution, greater workplace productivity, increased school attendance and greater dignity, privacy and safety, according to a report released by the World Health Organization (WHO) on behalf of UN-Water.[6] This finding is confirmed by other sources as well.[7]

Moreover, wastewater treatment interventions can generate significant benefits for public health, the environment and for certain economic sectors such as fisheries, tourism and property markets, although these benefits may be less obvious to individuals and more difficult to assess in monetary terms.

Protecting water resources from pollution and managing water supply and demand in a sustainable manner can deliver clear and sizeable benefits for both investors in the services and end water users. Investments in managing water resources are going to be increasingly needed in the context of growing water scarcity at the global level.

Water-related investments are thus key for sustainable development and inclusive growth. Sustainable Development Goal (SDG) 6, the dedicated goal on the sustainable management of water and sanitation for all, is a crosscutting element in the SDG Agenda, having a direct impact on goals like food security, healthy lives, energy, sustainable cities, sustainable consumption and production, and marine and terrestrial

Handbook for Finance Ministers

[6] UN Water (2014); http://sdg.iisd.org/news/who-un-water-report-finds-investing-us1-in-wash-delivers-us4-3-return/

[7] Sanitation and Water for All - SWA (2021) Water & Sanitation: How to Make Public Investment Work, a Handbook for Finance Ministers

ecosystems.[8]

Water-related investments generate a mix of public and private benefits both from valued goods and services and from reduced water-related risks, now and in the future. According to OECD (2022) USD 1.0 trillion is the estimated global cost of achieving SDG 6, equivalent to 1.21% of global gross product.[9] Other estimates are even more drastic and calculate total global costs of up to over USD 6.0 trillion.[10]

From a regional perspective, according to Economic Commission for Latin America and the Caribbean (ECLAC) an annual investment of 1.3% of regional GDP between now and 2030 would make it possible to universalize access to safely managed drinking water and sanitation, which could generate up to 3.4 million jobs per year, besides positive impact on health, school attendance, nutrition and poverty.[11] A similar figure is estimated by CAF, indicating that USD 25.0 billion in CAPEX and USD 26.0 billion in OPEX are required, equivalent to UDS 79.0 per person (1,2% of GDP) until 2030.[12] CAF and the IDB come to slighter different figures (approx. 0.50% of GDP).[13]

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[8] OECD (2019) Studies on Water; Making Blended Finance Work for Water and Sanitation, Unlocking Commercial Finance for SDG 6, 2019; https://doi.org/10.1787/5efc8950-en

[9] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en

[10] UNECE (2021), Optimizing financing for transboundary water cooperation and basin development worldwide: a way to accelerate progress on SDG 6; https://unece.org/climate-change/press/optimizing-financing-transboundary-water-cooperation-and-basin-development

[11] See for instance UNESCO (2016), WWAP (United Nations World Water Assessment Programme). 2016. The United Nations, World Water Development Report 2016: Water and Jobs. Paris https://unesdoc.unesco.org/ark:/48223/pf0000244318

[12] ECLAC (2022): Report on the Latin American and Caribbean regional process to accelerate the achievement of SDG 6, https://www.cepal.org/sites/default/files/events/files/report_on_the_latin_american_and_caribbean_regional_process_to_accelerate_the_achievement_of_sdg_6.pdf

[13] CAF (2022), Building a Water Security Agenda for Latin America and the Caribbean 2030; https://scioteca.caf.com/bitstream/handle/123456789/1882/Building%20a%20water%20security%20agenda%20for%20Latin%20America%20and%20the%20Caribbean%202030.pdf?sequence=4&isAllo

Specifically, there is widespread consensus that investments in water and sanitation also have to considerably increase in Latin America and the Caribbean. This consensus stretches to reckon the fact that public finances will not be enough to finance the required investments and thus the mobilization of private capital is necessary.

In this context the funds committed to development projects in Latin-America could seem impressive, with the Inter-American Development Bank and the World Bank approving operations for USD 13.6 billion and USD 10.2 billion respectively in 2021, but this funding continuously appears scarce in the face of development needs.

The Interamerican development bank carried out a detailed assessment of infrastructure needs in the region.[14]

In more detail the situation is as follows:

Table 1: Total investment needs in the water and sanitation sector, in USD billion (annual investments as a percentage of regional GDP)[15]

	New Infrastructure	**Maintenance and**

wed=y

[14] IDB (2021), The Infrastructure Gap in Latin America and the Caribbean, Investment needed through 2030 to meet the Sustainable Development Goals by Juan Pablo Brichetti, Leonardo Mastronardi, María Eugenia Rivas Amiassorho, Tomás Serebrisky, Ben Solís, IDB Monograph ; 962 https://publications.iadb.org/publications/english/document/The-Infrastructure-Gap-in-Latin-America-and-the-Caribbean-Investment-Needed-Through-2030-to-Meet-the-Sustainable-Development-Goals.pdf

[15] IDB (2021), The Infrastructure Gap in Latin America and the Caribbean, Investment needed through 2030 to meet the Sustainable Development Goals by Juan Pablo Brichetti, Leonardo Mastronardi, María Eugenia Rivas Amiassorho, Tomás Serebrisky, Ben Solís, IDB Monograph ; 962 https://publications.iadb.org/publications/english/document/The-Infrastructure-Gap-in-Latin-America-and-the-Caribbean-Investment-Needed-Through-2030-to-Meet-the-Sustainable-Development-Goals.pdf

		Replacement
Access to safely managed drinking water	9.,6 (0.13%)	52.0 (0.07%)
Access to safely managed sanitation	148.5 (0.21%)	65.9 (0.09%)
Sewage Treatment	16.8 (0.02%)	

Specifically for water the regional distribution is

- USD 35.9 billion in CID (Central American countries) including Belize, Costa Rica, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Mexico, Panama, and Dominican Republic.
- USD 1.5 billion in CCB (Caribbean Group countries): including Bahamas, Barbados, Guyana, Jamaica, Suriname, and Trinidad & Tobago.
- USD 22.4 billion in CAN (Andean Group countries): including Bolivia, Colombia, Ecuador, Peru, and Venezuela.
- USD 30.9 billion in CSC (Southern Cone countries): including Argentina, Brazil, Chile, Paraguay, and Uruguay.

Specifically for sanitation the regional distribution is

- USD 53.5 billion in CID

- USD 1.7 billion in CCB
- USD 36.9 billion in CAN
- USD 56.3 billion in CSC

A detailed assessment is included in the next pages.[16]

[16] IDB (2021), The Infrastructure Gap in Latin America and the Caribbean, Investment needed through 2030 to meet the Sustainable Development Goals by Juan Pablo Brichetti, Leonardo Mastronardi, María Eugenia Rivas Amiassorho, Tomás Serebrisky, Ben Solís, IDB Monograph ; 962 https://publications.iadb.org/publications/english/document/The-Infrastructure-Gap-in-Latin-America-and-the-Caribbean-Investment-Needed-Through-2030-to-Meet-the-Sustainable-Development-Goals.pdf

Table 2: Total investments needed through 2030 to close the infrastructure gap affecting access to safe water, by country (maximum investment scenario, in USD billions)

Investment Needs	Country New Infrastructure	Maintenance and Asset Replacement	Total
Argentina	8.07	4.23	12.3
Bahamas	0.08	0.04	0.12
Barbados	0.05	0.03	0.08
Belize	0.12	0.05	0.16
Bolivia	2.93	1.32	4.25
Brazil	20.46	16.26	36.72
Chile	0.96	1.15	2.11
Colombia	5.29	3.6	8.89
Costa Rica	0.45	0.36	0.8
Ecuador	2.4	1.3	3.7
El Salvador	1.48	0.7	2.18

Guatemala	4.12	1.69	5.81
Guyana	0.21	0.09	0.3
Haiti	3.93	1.38	5.3
Honduras	2.94	1.18	4.12
Jamaica	0.71	0.33	3.23
Mexico	18	9.59	27.59
Nicaragua	1.28	0.5	1.78
Panama	1.11	0.5	1.61
Paraguay	1.26	0.6	1.86
Peru	5.34	2.59	7.94
Dominican Republic	2.44	1.18	3.62
Suriname	0.13	0.06	0.19
Trinidad & Tobago	0.3	0.14	0.44
Uruguay	0.15	0.23	0.38

Venezuela	6.41	2.95	9.36
Total	90.62	52.04	142.66
Annual Investment (% of GDP)	0.13%	0.07%	0.20%

Table 3: Total investments needed through 2030 to close the infrastructure gap affecting access to safe sanitation, by country (maximum investment scenario, in USD billions)

Investment Needs	Country New Infrastructure	Maintenance and Asset Replacement	Total
Argentina	12.40	5.36	17.40
Bahamas	0.11	0.05	0.16
Barbados	0.07	0.04	0.11
Belize	0.14	0.06	0.20
Bolivia	4.40	1.54	5.94
Brazil	40.13	19.84	59.97

Chile	1.70	1.34	2.04
Colombia	12.77	5.31	18.08
Costa Rica	1.41	0.67	2.08
Ecuador	4.10	1.80	5.90
El Salvador	2.28	0.97	3.25
Guatemala	9.08	3.15	12.23
Guyana	0.24	0.11	0.35
Haiti	6.24	1.97	8.21
Honduras	3.31	1.28	4.58
Jamaica	0.82	0.39	1.20
Mexico	23.62	11.41	35.03
Nicaragua	2.45	0.88	3.34
Panama	1.52	0.62	2.15
Paraguay	1.62	0.74	2.36
Peru	8.55	3.39	11.94

Dominican Republic	3.47	1.55	4.92
Suriname	0.18	0.07	0.26
Trinidad & Tobago	0.34	0.16	0.50
Uruguay	0.80	0.42	1.21
Venezuela	7.13	2.86	9.99
Total	148.50	65.88	214.38
Annual Investment (% of GDP)	0.21%	0.09%	0.30%

Table 4: Total investments needed through 2030 to close the infrastructure gap affecting wastewater treatment (USD billions)

Investment Needs	**Country New Infrastructure**
Argentina	2.20
Brazil	7.50

Chile	0.30
Colombia	2.00
Ecuador	0.60
El Salvador	0.20
Mexico	3.00
Peru	1.00
Total	16.8
Annual investment (% of GDP)	0.02%

2.2. Macro-economic constraints

This ongoing reality is coexisting with a global macro-economic context in which the following main effects materialized:

- Covid-19

The widespread government restrictions during the Covid-19 pandemic led, among others, to a considerable reduction in commercial and industrial water demand[17] and at

[17] Although commercial and industrial water demand decreased during the pandemic, the demand due to higher sanitary standards also provided evidence of the structural inequality in access to water and showed its link to the spread of covid:
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9043095/
- https://desapublications.un.org/working-papers/adding-fuel-fire-inequality-and-spread-covid-

the same time water utilities across the globe suspended action against non-payers or reduced water tariffs[18].

This has put additional pressure on the financial position of many water and sanitation service providers worldwide.

- Global monetary policy

As a response to the crisis a process of monetary and fiscal expansion with very low interest rates was implemented (including negative rates in some countries). This action reinforced similar policies already implemented during the financial crisis in the first decade of the millennium.

Although successful in stimulating global economy, it contributed to latent inflation, which started to emerge in late 2021, receiving an additional thrust from natural gas prices increases due to the war in Ukraine.

Central banks are currently proceeding to increase interest rates and monetary contraction that reduces financing supply.

2.3. Ultimate sources of funding: the 3 Ts

Ultimately the system costs (investments, operational costs, financing) have to be covered by the 3 Ts (Tariffs, Taxes, Transfers) as follows:

Table 5: The 3 Ts

19
- https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-020-01199-z

[18] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en

Tariffs (Population, Legal Entities)	• Operational Costs of Service Providers • Full or partly: IFI loan component of financially viable revenue generating investment projects • Water Supply • Sewerage
Taxes (National, Regional Budgets)	• Full or partly: IFI loan component of financially viable revenue generating investment projects • Water Supply • Sewerage • Institutional Expenses • Regulatory Authority • Grants to local authorities/Service Providers for studies, design, planning, etc.
Transfers (Grants from Development Partners)	• Financially non-viable investments with high environmental and/or economic impact: • Technical Assistance and Training • Onsite sanitation • Grant components of other investment projects • WWTPs (for instance Europe, MENA, Africa)

2.4. Main bottlenecks hindering investment

Apart from these macro-economic constraints, which are posing challenges to adequate investments in the water and sanitation infrastructure there are some sector specific

issues, which need to be addressed:

- Bankability of projects

Local public and sometimes also private utilities often do not have the required capacities to identify and develop proper projects. Also, local utilities do not always have access to external financing and are overly dependent on state subsidies and financing.

Thus, there is a lack of well-prepared bankable projects with clearly defined revenue streams and viable business models. Many water and sanitation infrastructure investments are not realized although they are economically viable, because many projects are not bankable and hence fail to attract financing. To tackle these market failures a focus is on connecting investors and beneficiaries and on supporting project promoters to make their projects bankable. As a result, there is a shortage of high quality, bankable investment projects.

- Perception of benefits

The benefits of investments in water and sanitation infrastructure are of different nature, they can be public and private as well as economic, financial, social and environmental, as well as not evenly distributed over time. Some of these benefits cannot be easily quantified and no clear financial revenue streams can be associated with them, thus, they are not duly perceived by investors. In some cases, it requires grants and subsidies to make investments financially viable.

- Time horizon

There is a mismatch between the needs and characteristics of the supply and demand side of finance. Water and sanitation infrastructure, especially in large utilities, is typically capital intensive, long-lived and with high sunk costs. This calls for a high

initial investment followed by a long pay-back period of about 20 to 30 years. However, commercial investors favor projects with short-term horizons, seeking quick returns. Long tenor finance on affordable terms, which fits the specific needs of the water sector is often unavailable.[19]

- Transaction Costs

At the same time, in smaller municipalities investments in water and sanitation are often relatively small and require considerable planning, preparation and supervision effort. To enable sustainable operations and maintenance substantial efforts in terms of capacity building and training are required. All these factors lead to high transaction costs.

- Sector governance

Water sectors, as shown, among others, later in the example of Costa Rica, are often fragmented with several institutions involved in their governance, which can lead to sub-optimal decision making. There is also a lack of planning and analytical tools as well as a lack of sector data and information. Further, water and sanitation service providers do not always have the skills required to carry out proper project management in all stages along the project cycle. This limits their capacity to generate bankable projects.

It is also reckoned that a lack of financing alone is not the root cause of the water and sanitation sector's problems. Political decisions and policies made at ministries of finance can have considerable impacts on the water and sanitation sector.[20]

In general, this aspect is key to release many of the bottlenecks identified, as well as to identify, manage and mitigate many of the risks associated with water and

[19] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en

[20] Sanitation and Water for All - SWA (2021) Water & Sanitation: How to Make Public Investment Work, a Handbook for Finance Ministers

sanitation infrastructure, including social conflicts. Governance makes it possible to define aspects of sustainability such as water recharge systems, the obligation to invest in treatment plants, penalties for contamination of water sources, etc.

- Financial viability

Water sector investments usually yield high socio-economic and environmental benefits, but these are not always financially tangible. Especially the benefits which arise by avoiding external environmental costs caused by a lack of sanitation are not factored in. Social and political considerations regarding the affordability of tariffs for end users may impede a full cost recovery of investment costs from user fees. These costs can be compensated by environmental fees, taxes, etc. The revenues of such fees can be used to finance projects with high environmental benefits but limited financial viability.

- Project Implementation

The implementation of projects often suffers from quality issues and delays. According to some estimates this makes investments in the LAC region up to 40% more expensive than in OECD countries and still more expensive then in Africa.[21]

3. Documented hypotheses and discussions in the working group

3.1. SNIPs in public investments

The Network of the National Public Investment Systems in Latin American and the

[21] Roberto García López, Desafíos de la Inversión en Agua y Saneamiento en ALC, Presentation June 2023

Caribbean (RedSNIP) was created in 2010 in order to strengthen the functioning of these state systems by systemizing, generating and distributing knowledge; sharing and distributing good practices; facilitating dialogue and cooperation between countries; achieving better efficiency in public investment management; and improving the management of the SNIP; Currently, it is integrated by the SNIP directors in the regions and receives support from ECLAC, the Interamerican Development Bank and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Considering the ever more complex nature of project financing in the water and sanitation sector and the increased requirements of public and private financing institutions and the still not fully developed capacities of public institutions the following SNIPs could enhance project finance and implementation.

The SNIP and its staff could render services along the entire project cycle:

- National Programming

For a public investment to be effective, it requires a proper strategic orientation. This orientation may come from a national plan or another kind of long-term strategic document that sets the development priorities of the economy as a whole at the highest levels of decision-making. Sectoral and subnational plans should also be considered.[22]

In general SNIPs ensure that investment planning is more realistic by considering the costs and fiscal limitations of financing. Also SNIP information systems can offer a common platform for ensuring coherence between the plan and budget, and making

[22] CReW+, Presentation: Strengthening the leadership role of National Public Investment Systems (SNIP) in sanitation investment in LAC, August 2022

certain that every annual budget has resources for the planned investments.

- Project Identification

SNIP could render services and technical assistance to local institutions regarding the nature of the project, its location, the served population, the indicative costs, etc. This includes:

    - Issuing and updating standards and technical procedures
    - Ex-ante evaluation of projects
    - Prioritization and selection of projects

- Project Appraisal

After a project is selected a detailed feasibility assessment and the formulation of a project proposal is required. SNIP can facilitate this step by making consultants and other experts available.

- Project Financing

There is often a mismatch between the needs and characteristics of the supply and demand side of finance. Water infrastructure is typically capital intensive, long-lived and with high sunk costs. This calls for a high initial investment followed by a long pay-back period of about 20 to 30 years. However, commercial investors favor projects with short-term horizons, seeking quick returns.[23] Long tenor finance on affordable terms, which fits the specific needs of the water sector is often unavailable. This makes access to tailor-made financing difficult for local institutions. The SNIP with in-depth knowledge of financial institutions and markets can thus provide an added value for

[23] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en

the identification of funding sources.

Also, the SNIP can aid with the financial engineering of projects and the financial negotiations with the relevant entities.

- Project Implementation

As already mentioned, local institutions have little experience and knowledge in project implementation, incl. tendering, contracting, construction and supervision. SNIPs can provide support in physical and financial monitoring (ex dure evaluation) and due budget execution.

- Operations

For what concerns the operations, SNIPs can play a role in monitoring (ex post evaluation) and provide technical assistance for operations.

In summary SNIP could:

- Provide technical assistance for project preparation, so they are better suited not only for SNIP approval, but for assessment by Development Finance Institutions (DFIs)
- Provide advice in identifying the right financial instrument depending on the characteristics of the projects presented to them for approval
- Lead a process to adopt Results Based Financing (RBF), when suitable as a complement to more conventional Investment Project Financing (IPF), working closely with entities responsible for Public Finance, Planning, etc.
- Show to DFIs that national systems are adjusted and are suitable for RBF

- Contribute to improve national programming and planning systems

As further outlined in section 4, information was provided by government officials (from SNIP and other entities) that show instances where SNIP intervention improved the quality of projects, making them more bankable or, otherwise, the fact that SNIP was not involved by the borrowing entity early on, lead to difficulties in accessing financing, issues that were resolved once the SNIP got involved at a later stage.

3.2. Independent tariff regulation

Regulation consists of ensuring that water service providers comply with existing rules with respect to tariffs and quality standards. The purpose of regulation is that the services are provided in an efficient, fair, and sustainable manner, while bearing in mind social priorities set out by the policy makers (both at national and local government levels). Furthermore, investments can be enabled by cost-covering tariffs.

Thus, an economic regulator with a well-established tariff setting procedure, which is objective and independent of political influence can play the role of balancing operation and maintenance costs and investment needs with customers' capacity to pay assessing how far the operators can go in terms of extending coverage and service quality improvement.

In the short-run low tariffs help customers to pay less but it is generally very counterproductive, getting them accustomed to considering water as a non-financial item. In asset management particularly, it is disastrous for all assets. Lack of revenues is directly translated into reduced or even cancelled maintenance. Maintaining financing of operation and maintenance at the same very low level will thus cause a quick deterioration of all assets. When thinking about sound financial conditions, there is no other alternative but to find a solution on how to cover the costs of service

provision. Whether it is customer paid bills (through the cost-covering tariff), subsidies, grants or loans from the Government or any other sources might be subject to political discussions.

Any tariff policy for water and wastewater utilities has always to take into account the following features:

- Necessity for cost covering tariffs

In principle tariffs should be cost covering in a sense that they cover the full costs of service provision comprising O&M, depreciation and capital costs. Since many projects may not be feasible under this principle or the capital for their implementation cannot be raised, grant financing and/or government subsidies can be incorporated into the overall financing structure. In the case of 100% grant financing, the revenues would have to cover only the O&M (including reinvestments) costs in order to achieve a balanced Cash Flow. There are tariff setting methodologies which care for (i) O&M coverage and (ii) investment financing.

- Economic situation of the customers

Each household should not be forced to spend more than a certain percentage of its disposable income (based on World Bank approach: approx. 5%) for water and sanitation services. Furthermore, the customers are more willing to pay if they perceive the quality and reliability of the delivered services as satisfactory. The concepts of ability to pay and willingness to pay are central in this regard.

As further outlined in section 4, it can be anticipated that the relevant case studies reveal that well designed tariff regulation can enable investment and that the absence of tariff regulation can impede investments.

3.3. Conventional funding and financing approaches

Traditionally several financing instruments, i.e., channels through which the money is flowing have been applied.

3.3.1. State budgets

Investments in high priority areas can be financed from the state budget. Also, the institutional expenses for the regulatory function and the policy unit shall be financed out of the state budget.

Globally, in the mid-1990s, the public sector provided 65% to 70% of the sector's resources, while the domestic private sector covered 5%, ODA was responsible for the 10% to 15% and the international private sector investors, consisting of banks and multinational water companies, covered the remaining 10%.[24]

Recently, the breakdown skewed even more to local and public sources, with a notable reduction in private international funding.

Public financing has increased due to stimulus packages including infrastructure investments. According to some estimates more than 80% of the financial investments in water and sanitation come from public sources. Public sector funds are mainly from local or municipal governments and have not sufficiently covered the needs of growing populations and improved the performance of existing water utilities. Developing and emerging country governments are constrained by the total amount of funds they can raise through taxes, and many sectors, institutions and programs compete for these

[24] Similar figures are included in: S. Annamraju, B.Calaguas & E.Gutierrez, Financing water and sanitation, Key issues in increasing resources to the sector, A WaterAid briefing paper, November 2001, https://www.oecd.org/unitedkingdom/2552051.pdf

budgetary resources.[25] The situation was further aggravated during the Covid-19 pandemic, where government resources were spent to mitigate the adverse economic effects and often handed out as direct subsidies to businesses and/or citizens.

On another note, decentralization efforts in the water and sanitation sector have shifted considerable investment responsibilities on local governments and service providers. In many countries these institutions have few own resources from local budgets and/or have limited access to central government funds. Thus, they are not able to cope with increasing investment necessities.

However, there are limits to public financing, esp. the capabilities of governments to contract debt because of legal limitations (for instance debt clauses) or because of the weak financial standing of governments.

Hence public funding is not sufficient to cope with the increasing investment necessities in the water and sanitation sector. It is thus important to use public finance strategically and as a leverage for attracting other financial resources.

In general, the funding from the government and or the state budget can have the following advantages and disadvantages:

- Advantages

[25] Current Trends in Private Financing of Water and Sanitation in Asia and the Pacific, Hongjoo Hahm, Asia-Pacific Sustainable Development Journal, Vol. 26, No. 1

- Can enable basic water and sanitation infrastructure
- Can be used in poor areas or areas with low coverage
- Can be used as a form of social subsidy

- Disadvantages
  - Can be included in generic government budgets without clear and accountable allocations
  - Can be insufficient and unreliable, as public funding limited with different sectors competing and subject to short term change of priorities
  - Lead to water user complacency ("free water") in the form of wastage and pollution
  - Depends on fiscal health of the country, which can vary and be unreliable
  - Can foster poor or corrupt water sector governance

3.3.2. Official development assistance (ODA)

This comprises mainly loans and grants from Development Partners, such as multinational development banks as well as multi- and bilateral cooperation.

Especially financially viable investment projects can be financed. This refers mainly to revenue generating projects.

Grants are mainly used for financially non-viable investment projects with high environment and/or economic benefits, such as WWTPs. Also, Technical Assistance for the set-up of the regulatory and policy functions as well as capacity building can be financed from grants.

Official development assistance (ODA) for water increased steadily since 2002, in line with overall ODA flows rising by a factor of 2.5. Water-related ODA flows were mostly dedicated to large water supply and sanitation systems, followed by basic water supply and sanitation systems.[26]

USD 120,0 billion have been allocated to water-related ODA (out of a total of USD 2.4 trillion for all sectors). "Water-related" ODA includes several sub-sectors regarding water supply and sanitation, waste management/disposal, hydro-electric power plants, agricultural water, and water resource conservation. The share of ODA allocated to water-related sub-sectors remains relatively stable at 4-5% over 2002-18, reaching 5.15% of total ODA in 2018. During that time the split between ODA loans and ODA grants in the water sector is relatively even at 51% for grants and 49% for loans. There is a trend to move away from grants and towards loans. In 2002, loans accounted for 44% of water sector ODA flows and in 2018, they had reached 61% of water sector ODA flows. Among water-related ODA flows, water supply and sanitation (large systems) accounted for the largest share, capturing 21% of the total flows for water, amounting to USD 45.0 billion total value over the period 2002-18, followed by water supply and sanitation (basic systems) capturing a 10% of the total flows for water, amounting to USD 22.0 billion total value of the period. ODA for agricultural water amounts to 6% of total flows for water (USD 13.0 billion total value) and for hydro-electric plants amounts to 4% (USD 9.0 billion total value). ODA flows for waste management/disposal and water resources conservation account for relatively small shares compared to other water- related sub-sectors.[27]

Multilateral development organizations channel a large and growing share of total ODA.

[26] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en

[27] OECD (2022), Roundtable on Financing Water, The reform of the international financial architecture: an opportunity for scaling up finance for water? https://www.oecd.org/water/background-note-global-financial-architecture-9th-RT-on-financing-water.pdf

The volume of ODA channeled through multilateral development organizations amounted to USD 78.6 billion in 2020, or 41% of total ODA. Over the past decade, the multilateral development system has channeled growing volumes of ODA to developing countries. Between 2012 and 2019, core and non-core contributions to multilateral development organizations increased from USD 56.8 billion to USD 70.6 billion (up 24%). In the water sector, multilateral development banks (MDBs) have also played an important role in the past years. Between 2012 and 2021, multilateral 'water-related' ODA flows amounted to over USD 34.0 billion, with an increase between 2012 and 2019 and a slight decrease in 2020. MDBs accounted for about one third of the total "water-related" ODA between 2012 and 2021. The share of the water sector ODA channeled by MDBs has remained at around 7% between 2012 and 2021.[28]

There is the suggestion from evidence that conventional ODA financing models and arrangements favor large, concrete infrastructures (e.g., wastewater treatment facilities, desalination plants, large reservoirs); at the same time, rural sanitation, wetlands and nature-based solutions lack access to finance. There is a conservative bias towards large-scale grey infrastructures with a well-established financing model, and away from alternative options, such as (untapped) small scale green infrastructure, nature-based solutions or distributed water supply and sanitation services. This bias also applies to water-related ODA.[29]

In general, the funding from ODA can have the following advantages and

[28] OECD (2022), Roundtable on Financing Water, The reform of the international financial architecture: an opportunity for scaling up finance for water? https://www.oecd.org/water/background-note-global-financial-architecture-9th-RT-on-financing-water.pdf

[29] OECD (2022), Roundtable on Financing Water, The reform of the international financial architecture: an opportunity for scaling up finance for water? https://www.oecd.org/water/background-note-global-financial-architecture-9th-RT-on-financing-water.pdf

disadvantages:

- Advantages
    - ODA can give access to finance to countries which have a poor credit ranking and have limited access to market-based financing.
    - ODA can complement regional and local finance and can attract other financial sources.
    - ODA finance normally has less strict conditions in terms of (i) loan tenure, (ii) interest rates and (iii) grace period and thus a more evenly distributed repayment schedule.
    - ODA finance mostly comes combined with technical assistance, which also includes the transfer of know-how and capacity building in addition to the provision of finance.
- Disadvantages
    - Loans can further aggravate a country's debt ratio and put a financial burden on future generations.
    - ODA can generate dependency of a country. Further countries can rely too much on ODA, impeding local initiatives and the development of local financial markets.
    - ODA financing is mostly in hard currency, but the revenues from the investments are mostly in local currency. Thus, the exchange rate risk is transferred mostly to the beneficiary. Devaluations can have negative financial impacts.

3.3.3. Tariffs/revenues of service providers

Revenues are mainly generated through user fees which in turn are determined by tariffs. The tariff design can be a useful tool to apply demand management. It can so incentivize consumers to rationalize their water consumption.

The revenues shall cover at least the operational costs of the Service Providers. Investments, esp. in capital repair and maintenance can also be covered from revenues.

Internally generated revenue should always be the first source to cover operating and maintenance expenditures (OPEX) and it is highly recommended that governments (municipal, provincial or national) do not subsidize OPEX. Doing so means that the whole population, those who enjoy the services and those who must pay for alternate modalities for self-provision of services, contribute monies from the taxes they pay, for part of the expenses incurred to provide the services to the former.

In terms of funding for investments in capital works (CAPEX), although there should be agreement on the idea that current customers should pay for the rehabilitation and renewal of existing infrastructure, there could be some discussion about who should pay for the extension of services (new networks, new pumping stations, new treatment plants, etc.). In many countries, the existing infrastructure was built with tax funds so, some may argue that the same policy should be used to continue extending the services.

However, as decades have passed since the systems were put in place, ownership of the properties in the served areas may already have moved and the new owners have paid for the infrastructure in the prices they paid. So, those who moved away enjoy a double benefit of having all the population pay for their infrastructure first and getting paid again by the buyer. Of course, circumstances may vary from one place to the other and it is impossible to track all those moves and transactions.

On the other hand, it could be argued that those that enjoy the services provided through the infrastructure paid by all the population should return to them their contributions by paying for the extension of services.

Therefore, making a decision is not simple when it comes to choosing who must pay for the extension of the services. Authorities should ponder customers capacity to pay, how different groups benefit from the infrastructure to be built among many other factors, if they want to make an informed decision and still it would be impossible to be fair.

In some countries there is a figure in the Tax Code, which is called Special Improvement Contribution, it is a contribution from those who receive a positive externality. For example, in the case of having drinking water and sewerage at home, the value of the property increases, so it is possible to tax that positive externality by requesting the payment of a tax that can be divided over time, and that can be used to compensate a part of the investment made for the extension of the service.

There is no perfect solution, as it is not possible to build the infrastructure to provide the services to all the population at the same time. If that were possible, it would not matter much whether the infrastructure is paid through taxes or tariff, as everyone would be paying for it.

Thus, authorities should do their best to make a grounded decision with the available information, understanding that there will always be a political component to it.

In general, the funding from tariffs can have the following advantages and disadvantages:

- Advantages
    - Revenues from own customers and users are stable and sustainable over

time. They can generate a continuous revenue stream.

- Paying customers can evaluate the value of water and sanitation and the associated services.
- Volumetric tariffs can incentivize the customers to rationalize their consumption of water and induce them to save water.
- Proper tariff regulation can give service providers mid- and long-term security for planning investments.

- Disadvantages
  - Tariff setting always must consider social criteria such as affordability constraints. This can have an influence on the tariff levels and lead to tariffs which are not cost covering.
  - Many service providers face difficulties collecting tariffs and thus cannot realize all the revenues they are entitled to.
  - Tariffs are often subject to short term political considerations which can affect the planning security for service providers.

3.3.4. Private sector participation and public private partnerships

In Public-Private Partnership (PPP)/Private-Sector Participation (PSP) projects the private partner can bring capital injections for investments and operational costs for the initial phase of a PPP/PSP project.

Although there is no binding and legal definition of PPP, the term PPP is commonly referred to as a contractual arrangement between the public sector and a private entity whereby the construction and the demand or performance risk is allocated to the

private entity. In general, a PPP can have the following features:

- A long-term arrangement between the public and the private sector
- Established for the purpose of providing a competitive public service
- With risks allocated to the party best able to bear them
- Supported through private financing

PPP implies that private sector innovation, efficiency and know how are brought into the public sector. The success of the concept strongly depends on the ability to achieve a right level of trade-off between public sector objectives (social benefits) and private sector objectives (fair profit).

Relations and networks within the public sector play an important role in a PPP arrangement, which typically involves multiple national and local government and political bodies.

The initial decision whether to transfer some of the costs of the investment to the future is usually followed by the choice between public and/or private financing. This decision is usually made based on an ex-ante assessment of which procurement approach will maximise the economic return for the cost to the country. This assessment is often referred to as Value for Money assessment.

Private finance should therefore not be considered as a potential expedient when public finance is not available without proper consideration of Value for Money.

The principle of private funding has the following implications:

- Funding recovery

Naturally the costs financed by the private sector must be recovered. This cost

recovery generally can come in two forms.

- Unitary or performance-based payments from the public sector.
- Charges to the users of the public service.

- Minimization of life cycle costs

To optimise the life cycle costs, the private partner will need to have responsibility for the construction, the maintenance and equally important the design. The design will be of significant influence on the cost of construction, the cost of maintenance and even the possible income from user charges when applicable.

- Public sector defines output specifications

To transfer the responsibility for the design, the construction, maintenance and operations without endangering the public sector responsibility for the public service and to avoid misuse of the monopolistic nature of the private undertaking, the public sector will need to define its specifications, ensure adequate monitoring of the private sector's performance and ensure an adequate regulation for setting fair user charges when applicable.

- Risk allocation

Because of the transfer of the responsibility for the design, the construction, the financing, the maintenance, the associated risks are also transferred to the private partner.

- Competitive tendering

To attract the best offers available on the market, there should be a competitive and

transparent bidding and tendering procedure in place.

After peaking in 2007, private investment in the water and sanitation sector has been volatile. The decline in private investment has also been accompanied by a shift in the type and size of investments taking place. Post-2007, private investment is increasingly concentrated in a few large and wealthy countries and municipalities; and are bankrolled and developed by smaller, regional-based investors.[30]

In general, the funding from tariffs can have the following advantages and disadvantages:

- Advantages
    - Operational efficiency - These can be achieved by focusing on outputs rather than processes: by generating economies from integrating design, building, financing and operating phases through a more inventive use of assets.
    - Strategic considerations – PPP projects can enhance accountability by clearly allocating responsibilities and risks.
    - PPPs can isolate the sector from short-term political intervention.
- Disadvantages
    - Investors expect a return on their investments, thus financially non-viable project may not attract the private sector.
    - PPP projects require a complex and articulated regulation, which requires

[30] Current Trends in Private Financing of Water and Sanitation in Asia and the Pacific, Hongjoo Hahm, Asia-Pacific Sustainable Development Journal, Vol. 26, No. 1

extended capacities and capabilities at the public sector.

- In case of bankruptcy of the private partner, the government may have to step in and use public funds for enabling the continuation of services.

These more conventional forms of financing will continue to play an important role in sector development and project financing. Hence, it will be necessary to enhance the capabilities and capacities of the project sponsors along all cycles of the project. This aims to produce project pipelines and projects which are bankable and viable for lenders and investors.

As further outlined in section 4, it can be shown that there are options to make more public and private financing available to the sector also with these options. The cases in Burkina Faso (Mobilize more funding) and Colombia (Targeted public subsidies) show that also with the more conventional forms of financing improvements can be achieved.

3.4. Selected innovative financing approaches

Commercial investors are primarily concerned about the risk-return profile of an investment and are cautious about uncertainty regarding any of the risks related to an investment opportunity. Investors are confronted with a range of risks, including business risks (e.g. credit risks), macroeconomic risks (e.g. currency risk), regulatory and political risks (e.g. changing regulations or political unrest) and commercial and technical risks (e.g. performance). Public funds can be used strategically to reduce these risks and hence improve the risk-return profile of water-related projects.[31] The recognized need to mobilize additional financing, esp. from the private sector cannot

[31] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en

be fully enabled with conventional finance.

Thus, innovative financing approaches for crowding-in additional financial resources are developed. The principal approach will be to make available public funds to mobilise private capital for infrastructure investment.

Examples are:

(i) provision of guarantees for investments,

(ii) participation in projects with a clear exit strategy and/or

A combination of these instruments is possible to apply blended finance for water sector projects.

With these approaches the risk perception of medium sized public and private financial institutions can be improved and their motivation to finance infrastructure projects can be enhanced.

The sector organizations and the financial institutions in the region are not yet fully familiar with such approaches, hence it will be necessary to introduce such approaches gradually.

Thus, finding ways to facilitate access to finance the sector is fundamental in this context and understanding what kinds of operations the lending agencies are more inclined to support is critical in that quest.

Innovative financial instruments can be the following:

Table 6: Summary of Innovative Financing Instruments

	Bonds	**Special Purpose Vehicles**	**Revolving Funds**	**Risk-Financing Instruments**	**Result-Based-Financing**	**Output-Based-Aid**
Financial Approach	Repayable capital from financial markets	Repayable capital from financial markets	Initial endowment Repayments from borrowers	Guarantees	Disbursements after investments	Disbursements after investments
Guarantees	Often no guarantee	Sometimes from beneficiaries	Initial guarantee from IFIs	Sometime back-to-back Guarantee	Often no guarantee	Often no guarantee
Participation	Utilities/ Municipalities	Utilities/ Municipalities	Donors Government Small utilities Customers	Investors Guarantors (among others, IFIs)	Government Utilities IFIs	Utility Private Contractor IFI
Advantages	Pool money	Pool small	Pool money	Better	Disbursement	Can shift risk

	Long term Various types	projects Leverage Lower transaction cost	Targeted and specific Self-sustainable	conditions Attract additional financing Cover wide range of risks	after results Can create incentives Can initiate virtuous cycle	Private sector pre-finances Private sector has incentives
Disadvantages	Liquid markets Credit rating Capacities	Guarantee Complex Liquid markets	High management capacities Administration Accompanying measures	Projects must be bankable Maybe back-to-back guarantee Adverse behaviour	Require pre-financing Management and Administration Accompanying measures	Can distort incentives Close Monitoring Private partner has to be selected carefully.

In the following some more detail is given.

3.4.1. Bonds

Bonds are a fixed income financial instrument to raise capital from investors through the debt capital market. The bond issuer raises a fixed amount of capital from investors, which is paid back after a specific period with an agreed amount of interest.

Bond finance can facilitate the flow of capital for water-related investments with clearly defined revenue streams. Bonds with long tenors, typical of the water sector, can attract institutional investors such as pension funds. Investors increasingly show interest in use-of-proceed bonds, whose proceeds are earmarked for particular projects and purposes, and which need to meet specified standards, concerning for instance social responsibility or sustainable development.

One example for use-of-proceeds bonds are green bonds which are designated as "green" by the issuer or another entity, whereby a commitment is made to use the proceeds in a activities with an environmental benefit.[32]

Similar to green bonds, the European Investment Bank (EIB) has launched Climate and Sustainability Awareness Bonds (CABs and SABs) to raise debt financing including on water-related projects globally.[33] Water supply, sanitation and flood protection projects, which contribute to four defined sustainability objectives, can raise funds through this bond. While SABs attract sustainably responsible investors, they offer beneficial loan

[32] The company Iguá, in Brazil, has been certified for Latin America's first water infrastructure green bond: $171 million USD to finance the supply, treatment and distribution of water and sewage collection infrastructure.
https://www.waterworld.com/drinking-water/infrastructure-funding/press-release/14234500/latin-america-sees-first-green-bond-for-water-infrastructure

[33] EIB (2022, 2023) https://www.eib.org/en/investor-relations/publications/all/eib-cab-sab-presentation.htm
https://www.eib.org/attachments/fi/eib-sab-framework-2021.pdf

conditions, such as long maturity and low interest rates, for project developers. [34]

There are also Development Impact Bonds. In this type of bond, the private sector or a philanthropic foundation provides up-front financing to service providers or microfinance institutions with a promise of a return once the bond is issued to service providers or microfinance institutions with the promise of a return once results are achieved. Once the results are achieved the payer in the case of impact bonds is a donor or development agency that returns the investment once the results are verified, an action usually carried out by an evaluator.[35]

Bonds have the following advantages and disadvantages:

- Advantages
    - They can pool money from different sources and do usually have relatively low transaction costs.
    - They can be with long term maturities, which matches the often long pay back periods of water and sanitation investments.
    - The types of bonds issued can include corporate bonds, sovereign bonds or municipal bonds, depending on the structure of the water sector.
- Disadvantages
    - Bonds require mature and liquid capital markets. In many developing

[34] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en and OECD (2010), Innovative Financing Mechanisms for the Water Sector; https://sswm.info/sites/default/files/reference_attachments/OECD%202010%20Innovativ%20Financing%20Mechanisms%20for%20the%20Water%20Sector.pdf

[35] BID (2021); Instrumentos de financiación innovadores en el sector de agua y saneamiento: diagnóstico/Christian J.Larrea, L. Javier García M., Maria Eduarda Gouvêa B., Keisuke Sasaki

countries such markets are still not in place.

- The emission of bonds also requires a credit rating acceptable to buyers of the bond.
- The management of bonds require appropriate capacities at government and financial institutions.

3.4.2. Special purpose vehicles

Special purpose vehicles can help overcome the small-scale nature of water authorities. They can help grouping together small-scale projects to collectively raise debt finance on capital markets. They can also be used for individual PPP projects.

In this sense pooled financing is a method of overcoming the high credit risks and transactions costs of individual small municipalities and/or utilities by grouping them together with others, to produce a collective bond issue of a minimum threshold size.[36]

Special Purpose Vehicles have the following advantages and disadvantages:

- Advantages
  - They can help finance a large number of small projects and facilitate access to a number of credit enhancement mechanisms.
  - They can leverage additional financing on a group scale.
  - They can lower transaction costs for project that would usually require

[36] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en and OECD (2010), Innovative Financing Mechanisms for the Water Sector; https://sswm.info/sites/default/files/reference_attachments/OECD%202010%20Innovativ%20Financing%20Mechanisms%20for%20the%20Water%20Sector.pdf

financing on a project-by-project approach.

- Disadvantages
  - Usually, it requires beneficiaries to issue some form of guarantee.
  - They require careful and sometimes sophisticated design and strong commitment of borrowing institutions.
  - Without involvement of IFIs this kind of financing requires liquid and mature financial markets.

3.4.3. Revolving funds

Revolving funds can be an effective model to attract commercial finance and to ensure available funding for water-related projects in the future.

Funds of this kind aggregate mainly contributions from various stakeholders such as private individuals, local governments, NGOs and donors, and lend these monies primarily to small service providers for instance for repair and maintenance activities. Lending can also be to individuals for house connections, toilets or latrines. In principle, funds may be local, regional, national or international in structure. The higher the proportion of the money provided by the local population, the more strongly they identify with the fund. Some funds also operate on an interest-free basis.

A further critical element is the legal status of the fund. It must be guaranteed that the relationships between the fund, its financiers and the borrowers are governed by clear rules, and that these rules apply equally to all.

The initial endowment is often provided by donors or government institutions. This means that the monies that can be disbursed are limited. Further amounts can only be

paid out once former borrowers have made corresponding repayments. Where funds are based within the local community, this can often also generate informal pressure to pay back loans. This prevents situations arising where an applicant does not receive a loan because his predecessor has not made the repayments due. Continuous support should therefore be provided to ensure that the funds do actually revolve and are not brought to a standstill once the initial endowment is exhausted.

Community-based and/or revolving funds require considerable capacities and inputs for management and administration. Also required are close contacts to borrowers and investors, and detailed local knowledge of management issues. Management and administration must always be performed by competent personnel.

Revolving funds can also be combines with micro-finance schemes.

Accompanying marketing activities etc. are essential and must also be promoted.[37]

Results-based monitoring can take place after time once it can be determined whether repayment rates and the circulation of the capital employed are satisfactory.

Revolving funds have the following advantages and disadvantages:

- Advantages
    - They can pool money from different sources and contributions.
    - They can be targeted to specific purposes and customer groups.
    - Once repayment takes place revolving funds can be self-sustainable.

[37] Schuen Richard in: Keipp, W., Schuen, R., Hoffmann, H. (2013). Integrated urban sanitation at scale - Discussion paper. KfW Bankengruppe, Frankfurt/Main, Germany https://www.susana.org/en/knowledge-hub/resources-and-publications/library/details/2024

- Disadvantages
    - Revolving funds require considerable capacities and inputs for management and administration.
    - They require close contact with and monitoring of clients.
    - Revolving funds require also accompanying measures and awareness raising for customers.

3.4.4. Risk-financing Instruments

Risk mitigation instruments are "financial instruments that transfer certain defined risks from project financiers (lenders and equity investors) to creditworthy third parties (guarantors and insurers) that have a better capacity to accept such risks".

These instruments can be used to improve access to finance for developing country governments and local infrastructure companies by improving the terms of their commercial debt (extending tenor and reducing interest rates) or helping to attract equity investors. In developing countries, such instruments would typically be provided by international financial institutions, bilateral donors, export credit agencies or private political risk insurers.

Partial Credit Guarantees (PCGs) and Partial Risk Guarantees (PRGs) are two key instruments that can be used to lengthen the terms and reduce interest rates for water infrastructure projects. The key difference between these two instruments is that a PCG covers part of the debt service of a debt instrument regardless of the reasons for default whereas a PRG covers commercial lenders in private projects for the full amount of debt in the event of default caused by certain risks, as specified in the guarantee instrument. Whereas PCGs are used to support public investments projects involving sovereign borrowing, PRGs are usually used to support private sector projects.

Risk-financing instruments are a mechanism to promote the sharing and transfer of risks and losses and reduce (at least part of) the burden on public funds in case of disasters, such as floods and droughts.

Insurances can provide financial protection against water-related risks, such as flood damages and can serve as a risk-communication tool to help individuals rationalize their choices and incentivize behavior to reduce exposure.

Resilience Bonds seek to raise private capital specifically for climate resilient investments and proactive risk reduction projects, while transferring the risks to the capital market.[38]

Risk mitigation instruments the following advantages and disadvantages:

- Advantages
    - They can lead to more favorable financing conditions such as (i) loan tenure and (ii) interest rates. Debtors, which on a stand-alone basis would not be creditworthy can gain access to financing.
    - They can attract additional finance by mitigating the risk for the financing institutions.
    - They can cover a wide range of risks such as political as well as commercial risks.
- Disadvantages

[38] OECD (2022), Financing a Water Secure Future; 2022; https://doi.org/10.1787/a2ecb261-en and OECD (2010), Innovative Financing Mechanisms for the Water Sector; https://sswm.info/sites/default/files/reference_attachments/OECD%202010%20Innovativ%20Financing%20Mechanisms%20for%20the%20Water%20Sector.pdf

- Risk mitigation instruments do not increase the quality of the projects as such. Underlying projects must be bankable anyhow.
- Providers of risk mitigation instruments may still require a guarantee from the government, which puts a further financial burden on it.
- The existence of a guarantee may encourage adverse behavior of the recipient.

3.4.5. Results-based financing

Results-based financing (RBF) provides funding to improve delivery of basic infrastructure and social services through targeted public funding. In contrast to conventional pre-financing, RBF is a financing arrangement in which funding is only disbursed to service providers after predefined results have been realized and independently verified. Aligning financial incentives/rewards with positive social outcomes is intended to promote a customer service approach, as providers are encouraged to think of the service users as 'clients' (instead of more passive 'project beneficiaries'). Demanding accountability for a set of measurable results rather than activities per se introduces some flexibility for service providers to adapt their approach to local circumstances, whilst the incentive payment helps overcome market barriers.

The payment mechanism is an important consideration in successful RBF design: incentive payments should be large enough to encourage market entry, but in keeping with the available budget and expected public gains, nor should a subsidy result in windfall gains for service providers. Besides payment schedules and fund transfer mechanisms, the verification mechanism must also be agreed or established. Verification must follow strict and transparent rules and must be undertaken by an independent party. Facilitating access to finance is generally viewed as an important

accompanying measure.[39]

Aiming at improving the effectiveness of the projects they support, development financing institutions (DFIs) are implementing new instruments, as results-based financing, which is the mechanism that is gaining an ever-increasing share of the total volume of operations funded by these institutions. The most relevant characteristics of this instrument are:

- Disbursements linked to achieved results: to ensure that the financing they provide is rendering a high impact among the intended beneficiaries, DFIs disburse the funds once the agreed results are independently verified. Results are defined in terms of benefits or outcomes rather than products or outputs, for example, volume of wastewater treated to the required standards instead of a new wastewater treatment plant with a certain capacity.

- Local procurement, social, environmental and financial systems: This approach seeks to avoid the need to train staff of the implementing agencies on the systems used by the DFIs, which requires time and other resources that could be used to increase the reach of the projects. These trained people may leave once the project is completed and the skills are lost to the government institutions. Besides, using government systems is done after an assessment of their strength and weaknesses that leads to another advantage of this approach, which is explained next.

- Program Action Plan: This is a result of the assessment carried out on government systems consisting in a set of actions that will be performed in

[39] Increasing Access to Safe Sanitation and Hygiene through Innovative Financing Mechanisms in Uganda Experience From The Sanitation For Millions Programme, GIZ 2021 https://www.giz.de/en/downloads/giz2021-en-increasing-access-to-safe-sanitation-and-hygiene-innovative-financing.pdf

parallel to the implementation of the project aiming at strengthening those systems. So, once the operation is completed, not only does the country enjoy the benefits of the results achieved, but also its procurement, social, environmental and financial systems may be improved.

Results based financing has the following advantages and disadvantages:

- Advantages
  - Disbursements are linked to the achievement of pre-determined results by the beneficiary.
  - They can create additional incentives for the recipient to accomplish with these results.
  - They can initiate a virtuous cycle for continuous improvement.
- Disadvantages
  - Results based financing can require some pre-financing from the beneficiary.
  - Considerable management and administration efforts are required in order to monitor results achieved.
  - Results based financing may require accompanying measures and awareness raising for customers.

3.4.6. Output-based aid

So far, few experiences are available in the sanitation sector with output-based aid (OBA), output-based finance, results-based financing, cash on delivery or similar approaches. A large number of similar terms are being used almost synonymously.

The purpose of output-based finance is to design market incentives such that existing market failures can be corrected. The key aspect of OBA involves assigning the performance risk for delivery of service to a private enterprise, which then receives a remuneration supplemented by subsidies as an incentive to successfully delivering the services in question. This presupposes that the investment costs are paid in advance by the operator until the agreed service is delivered. The operator thus has a vested interest in delivering the agreed service. Financing approaches of this kind are conceivable in all market segments.

In cases where the operator makes payments in advance, the costs of the household connection or latrine for example are settled by the end user in instalments through surcharges added to the rates. The end user is therefore relieved of having to pay the whole amount in a single payment. However, this presupposes that the operator has the financial capacity to pay for the household connections or latrines in advance, and that debts can be collected regularly from the end client. With non-sewer-based systems with irregular emptying intervals the latter is not guaranteed. It may be possible to alleviate this through appropriate pricing and by managing cash flows such that the emptying of the latrine is also paid for, for example, with the water rate.

A further key aspect of output-based financing is the involvement of private enterprises, which is designed to increase operating efficiency, transfer risks and mobilise additional capital. Here it is important to ensure that the financial capability of the operator is sufficient to enable that operator to finance the latrine and the household connection in advance partially or fully.

The measurement costs for determining the extent to which objectives have been achieved must be included when calculating the costs. These measurements should be performed by a neutral body, such as a monitoring consultant. It is important not only to monitor the service to be delivered by the provider, but also to measure the

performance of the public partner institution.

It is also important not to view the service to be delivered in isolation. Here too we need to include the entire sanitation chain. Otherwise, there is a risk of creating false incentives. For instance, many toilets might be built to obtain the output-based financing, without any guarantee that disposal actually takes place, because this was not included in the service contract.[40]

Output-based aid has the following advantages and disadvantages:

- Advantages
    - Output-based aid can shift the performance risk to a private enterprise.
    - Some investment costs can be paid in advance and thus pre-financed by the private contractor.
    - Incentives for the private partner to fully and timely comply with its quantitative targets can be created.
- Disadvantages
    - Output-based aid may create distorted incentives in a sense that the private enterprise focuses exclusively on quantitative outputs neglecting the broader sense of the intervention.
    - Contracts with the private operator must be carefully designed and monitored, which requires considerable capacities.

[40] Schuen Richard in: Keipp, W., Schuen, R., Hoffmann, H. (2013). Integrated urban sanitation at scale - Discussion paper. KfW Bankengruppe, Frankfurt/Main, Germany
https://www.susana.org/en/knowledge-hub/resources-and-publications/library/details/2024

- The private partner has to be selected very carefully in order to safeguard its financial capacity to pre-finance investments.

As further outlined in section 4 Sanitation and Water for All (SWA), where innovative financing instruments contributed to address specific challenges, four major policy principles would enable increased sector investment:[41]

- Maximize value from existing public funding by incentivizing sector performance, improving subsidy, targeting and promoting better sector planning and management.
    - Incentivize sector performance (Indonesia, Peru)
- Mobilize more funding by setting up adequate cost recovery policies, reforming tariff systems, introducing earmarked taxes and establishing an array of options for cross-subsidization.
    - Set up adequate cost recovery policies for the sector: tariff reforms (Burkina Faso)
- Increase repayable domestic finance through mechanisms that reduce perceived risks and pool finance at national, municipal and household levels.
    - Using guarantees to de-risk and mobilize private domestic finance (The Philippines)
- Encourage innovation and least-explored new approaches such as

[41] Sanitation and Water for All - SWA (2021) Water & Sanitation: How to Make Public Investment Work, a Handbook for Finance Ministers

climate funds[42] and social impact bonds, to tap sources of finance rarely accessed by the water and sanitation sector.

3.5. Gap analysis and conclusions

The potential of the strategies and innovative financing instruments described in the previous section is not fully realized yet by the beneficiary countries and especially at the local, because there are notable gaps.

Funding agencies want:

- To coordinate with few counterparts
- A reliable legal framework
- Quality control
- Credit history

Local institutions want:

- Support to project implementation
- Long-term financing and manageable interest rates

[42] The objective of climate funds is to promote and accelerate the financing of projects that reduce emissions and are resilient to climate change. Funding can be in the form of grants, loans or guarantees, and they focus primarily on two broad types of projects: adaptation and mitigation. While the projects funded cover a myriad of issues, part of the resources of these funds are earmarked for water-related projects. It should be noted, however, that there are currently several different approaches to classifying "water-related projects" in these climate funds, depending on the setting of boundaries for management and their end-use, making it impossible to establish a unanimous criterion. For more information see: BID (2021); Instrumentos de financiación innovadores en el sector de agua y saneamiento: diagnóstico/Christian J.Larrea, L. Javier García M., Maria Eduarda Gouvêa B., Keisuke Sasaki.

- Technical assistance

The match of these requirement is not always happening because there are gaps in terms of skills, knowledge, quality control and credit history. In fact, local institutions have little experience in

- Project formulation
- Ensuring construction quality
- Operation and maintenance

Currently, the Latin American region is characterized by being a region with great challenges in terms of social and economic development of its inhabitants, which has been aggravated by the existence of deep levels of social inequality, for which this region has been called "the most unequal region on the entire planet". 11 of the 20 most unequal countries in the world are in the region. According to the Gini index, the region's average is 4 percentage points higher than that of Africa, 11 higher than China and 16 more than the indices of Europe and Central Asia.[43]

Among the initiatives proposed to promote a change oriented towards improving the quality of public spending, as well as improving the capacity of the States of the region to face the aforementioned challenges, the Network of National Information Systems emerged in 2010, an institution focused on articulating efforts among its members, in order to activate the innate capacities of the National Public Investments Systems - Sistemas Nacionales de Inversión Publica SNIPs in the region, as dynamizers of the endogenous development processes necessary to reverse the challenges of the current situation described in the previous paragraph.

[43] Focus Economics (2017) Latin America: The Most Unequal Region in the World https://www.focus-economics.com/blog/inequality-in-latin-america/

To effectively assume this great challenge, of converting the SNIPs of each country into active agents of change for development, the SNIP NETWORK is currently compelled to face the following problems:

- Impact of the COVID-19 Pandemic

Fewer resources are available at the recipient country level due to the growing needs of governments to support vulnerable sectors affected by the impact of the pandemic.

- Weak Institutional Capacities

Inability of many national institutions to address the complex processes of operational facilitation and due diligence by international organizations and donor countries.

- Deficient and ineffective Inter-institutional Coordination

Lack of inter-institutional coordination of national instances, which makes it difficult for regional organizations and donor countries, responsible for promoting the financing of public investment, to make adequate and necessary information available.

- Limited Access to Resources

Due to the foregoing, limited access to low-cost sources of resources for recipient countries due to weak compliance capacity and inadequate operational and inter-institutional coordination mechanisms.

- Deficient attention in the Drinking Water and Sanitation sector in the region

Growing unsatisfied basic needs in terms of water and sanitation, due to lack of economic, financial, institutional, cultural resources, etc.

Summarizing, it can be concluded that:

- All financing instruments require political and administrative staff of borrowing countries and its entities to understand the key differences between them and the typical financing tools.

- The fact that DFIs are placing emphasis in the utilization of new instruments combined with this need for adapting to the new instruments present an opportunity for those countries that can make the right moves and the SNIP in each of these countries may play an important role in this process.

3.6. Hypothesis

For this compendium now the following hypothesis have been formulated:

3.6.1. Hypothesis 1: Benefits of involving the SNIPs

As an entity with staff that covers technical and financial aspects of project assessment, the SNIP seems an ideal counterpart for DFIs and may act as a critical support to other government entities involved with international financing for development projects, like those in charge of finance, planning, economy, among others.

The SNIPs are pivotal points of public investments in their respective countries. As such they [44] have technical and financial expertise, among others, also of project assessment. This puts the SNIP in the condition to (i) act as a competent counterpart for DFIs and (ii) provide support in all stages of the project cycle to other government institutions, which are involved in international development projects. This support can comprise support in planning, engineering, financial and economic analysis, etc.

[44] CReW+, Presentation: Strengthening the leadership role of National Public Investment Systems (SNIP) in sanitation investment in LAC, 23.08.2023

This enhances the bankability of the proposed projects and can thus facilitate the access to finance for public entities, esp. for modern and more complex forms of financing, such as results-based financing.

3.6.2. Hypothesis 2: Benefits from appropriate tariff regulation

An independent tariff setting procedure or a clear mechanism to allocate public funds to investment projects in the sector are a critical element in terms of facilitating access to finance.

Transparent and independent tariff regulations and procedures as well as mechanisms to allocate funds to public investment projects can facilitate access to finance and enhance investments in water and sanitation infrastructure.

3.6.3. Hypothesis 3: Benefits from innovative financing instruments

The use of innovative financing approaches can finance projects which under conventional financing options would not be financed.

The careful selection of the financing options to use can facilitate the raising of private capital and contribute to appropriate risk sharing arrangements.

4. Case examples

The selected cases are examples from projects in the region and beyond and aim to prove the hypothesis formulated in the previous section.

There are seven types of cases:

- Cases enabling finance (Hypothesis 1)

These are cases which are focused on the creation of the condition to involve the SNIP as well as render finance easier available and thus to enable local institutions to access finance.

- Case showing the implementation of concrete projects (Hypothesis 1)

There is a case, where it is shown, how a proper involvement of the SNIP could enhance the bankability of projects, increase their benefits and ultimately make implementation possible.

- Case with a lack of a SNIP and/or its involvement (Hypothesis 1)

This is case where it is shown, that in absence of a proper mechanism, such as a SNIP, the full potential of a principally well-suited approach to address a specific issue cannot be realized.

- Cases, where independent tariff regulations exist (Hypothesis 2)

These are cases which clearly show how an economic regulator can effectively create favorable conditions for tariff-financed investments.

- Case where tariff related issues are determinant for investment (Hypothesis 2)

In this case, the lack of adequate revenue generating mechanisms led to a reduction of the project scope.

- Cases, where innovative financing approaches have been successfully applied (Hypothesis 3)

These are the case presented by Sanitation and Water for All (SWA), where innovative financing instruments contributed to address specific challenges.

- Other cases with innovative financing models (Hypothesis 3)

These cases show that mixed forms and blended finance can use financing of multiple sources and enable investments.

4.1. Cases enabling finance (Hypothesis 1)

4.1.1. Cases in Costa Rica

4.1.1.1. SNIP in Costa Rica

Executive Decree 34694 establishes the Ministry of National Planning and Economic Policy (MIDEPLAN) as the statutory governing body of the National Public Investment System (SNIP). Among its main functions, it gives advice and technical support to the Presidency of the Republic and oversees formulating, coordinating, following up on and assessing the government's strategies and priorities. The Public Investment Unit is part of MIDEPLAN and oversees implementing the SNIP, managing the public investment projects bank, preparing methodologies and instructions and advising the ministries and other government bodies on the formulation, assessment and follow-up of public investment projects.

Through the Investment Unit, the MIDEPLAN has developed a set of general and specific methodologies for the most representative sectors in public investment that guide public officers in the formulation and ex-ante assessment of public investment projects". It considers the assessment of the convenience to execute the projects based on financial indicators (TREMA, NAV, IRR), cost indicators (VAC, CAE) and economic-social indicators (ENPV, EIRR, R-B/C, R-C/E). The Plan, which covers the period 2023-2026, establishes prioritization criteria.

To respond to the specific requirements of the most representative sectors, methodologies have been developed too for training and education projects in the public sector, infrastructure in small irrigation areas, police equipment and operation, road infrastructure, final ordinary solid waste disposal, water pipelines and water

sewage, construction and equipment of education centers. To facilitate the assessment calculations the document "Social Prices – Guide for their application" is available. To perform the ex-post assessments, there is the "Public Interventions Assessment Manual".

In accordance with the "Technical Regulations, Guidelines and Procedures of Public Investment", investment projects must transversally consider the environmental and social impact, as well as the identification of potential risks by natural disasters, for which the "Natural Threat Analysis Methodology for Investment Projects" is used.

4.1.1.2. Case: Proposed technical-financial mechanism to finance sanitation

Main Features

The OECD[45] acknowledges that establishing institutions at the national level that can channel funds (public and private) into the sector in order to finance relatively small projects rather than focus on a few landmark transactions could lead to higher sustainability.

Thus, as part of the activities of CReW+ a concept for a technical-financial mechanism to finance sanitation has been developed. The proposed mechanism has the following objectives:

- Encourage simpler and more direct access to finance for stakeholders
- Increase the amount available for sanitation system development
- Target investment to service improvement needs and the following functions:

[45] OECD (2010), Innovative Financing Mechanisms for the Water Sector, OECD Studies on Water, OECD Publishing, Paris, https://doi.org/10.1787/9789264083660-en.

- Management/disbursement of funds
- Evaluation of investments
- Supervision of the operation of the fund
- Compliance monitoring
- Support for the preparation of proposals and continuous technical assistance.
- Fiduciary risk management

To achieve the intended objectives, the mechanism would carry out the following activities:

- Technical assistance for water operators (for example ASADAS) to improve the bankability of projects
- Maintenance of a network of consultants
- Training of the ASADAS in general
- Support for investment planning
- Provide financing for investment projects, mainly to ASADAS
- Search for additional financial resources
- Intermediary between operators and financial institutions
- The first activity could be a mapping of possible sources of financing (local financial institutions, funds, IFIs, bilateral donors, etc.)
- Instead of traditional financing, the fund could provide guarantees to leverage

additional financing and Public Private Partnerships (PPPs).

Key Lesson Learnt

SNIP involvement could lead to efficient fund operations along all its activities, especially for the allocation of public funds in line with national requirements.

4.1.1.3. Case: Opportunities to further empower SNIP

Main Features

Within the CReW+ project also opportunities to further empower SNIP have been explored.

Given the functions of SNIP outlined in section 4.1.1.1 SNIP may contribute to the improvement of the bankability of projects. A further empowerment of the SNIP may encompass the following components of the national investment framework:

Table 7: SNIP Components – Costa Rica

Component	Possible opportunities
Methodologies to formulate and evaluate projects	Formulation of projects may include the selection of the objective in terms of output or outcome to link it to the kind of financing to seek or the other way around.
Public Investment Projects Database (BPIP)	May include the kind of financing sought/obtained allowing searching for examples to guide the formulation of new projects.

Training – Capacity building	Getting training and sharing knowledge regarding available financing instruments.
Public investment plan (PNDIP)	Assist in aligning plans and projects objectives.

Adequate norms, which enable SNIP to guide the selection of the financial instrument best suited for the achievement of the objectives for which it shares responsibility may also render a further contribution to relevant objectives of adequate public investment management:

- Harmonization of investments and development objectives
- Ensure that projects contribute to improve goods and services for the population
- Guarantee that resources are utilized in a timely and effective manner
- Keep resource allocation at a level that assures investment sustainability during the operational stage
- Ensure the satisfaction of needs and matters of public interest with a sense of fairness, relevance and belonging.

Key Lesson Learnt

SNIP can help in selecting the right financing instrument and may contribute achieving these objectives.

4.1.1.4. Case: Opportunities for strengthening the sanitation sector

Main Features

The context for this case is the fact that there is already high coverage with water and sanitation (>90%) in Costa Rica, but for what concerns sanitation 70% of the coverage are septic tanks, which has the following effects:

- Problem for cities, coastal, aquifer recharge or unsuitable soil zones
- Affects ecologic tourism
- Non-complying facilities

An interinstitutional planning initiative to reduce the gap to adequate sanitation coverage with support from the IDB emerged. This initiative became Policy of the State reckoning that (i) funding needs to implement solutions were identified and (ii) institutional strengthening can contribute to improve the coverage. Internal sources of funding were sought from (i) Users: The Regulator (ARESEP) set tariff covering operating expenses and investment contributions and (ii) population and business: The ministry (Ministerio de Hacienda) included allocations for pre identified investments and commitments for future allocations to implement the Sanitation Policy. There was also some support from the European Union for studies and other pre-investment activities.

In this context the SNIP review and approval process can contribute to: i) Strengthen institutional capacities for project formulation; and ii) Strengthening the planning process by issuing Methodological Guidelines and other support documents. SNIP may also contribute to the formulation of: i) Future financing strategy (depending on the country fiscal situation); and ii) Alternative modalities for managing associated risks

(public-private partnerships); by using its project assessment capacities in evaluating some of the risks involved in alternative financing strategies like leverage through bonds, blended financing, or the issuance of guarantee instruments.

Key Lesson Learnt

SNIP can contribute to plan and implement national sector policies effectively, economically and sustainably.

4.2. Case showing the implementation of concrete projects (Hypothesis 1)

4.2.1. Case in the Dominican Republic

4.2.1.1. SNIP in The Dominican Republic

The Ministry of Economy, Planning and Development (MEPyD), through the General Public Investment Directorate, is the statutory governing body of the Public Investment System (SNIP) in the Dominican Republic. It proposes the regulations on public investment in the country and prepares the methodologies for the formulation and assessment of public investment projects. It coordinates the formulation and ex-ante assessment of the investment projects that are presented by the public entities. Once the projects enter the execution stage, it monitors their physical-financial progress through the project bank. It prepares the National Pluriannual Public Investment Plan and the Annual Public Investment Plan.

The SNIP has the "General Methodological Guide for the Public Investment Formulation and Assessment" prepared in 2017 by the General Public Investment Directorate. This methodology uses the following indicators to assess the projects' economic viability: Internal Return Rate (IRR) and Net Present Value (NPV).

The National Multi-Year Public Sector Plan 2021-2024 contains the "Multi-Year Public Investment Framework" and is prepared by the General Directorate of Public Investment attached to the Ministry of Economy, Planning and Development, in accordance with the provisions of Law 498-06 and Law 1-12. This document, with a 4-year horizon, contains the most relevant investment projects distributed according to the strategic axes to which they belong.

4.2.1.2. Case: "Acueducto Oriental" extension project

Main Features

The case is the "Acueducto Oriental" extension project. It consists of the construction of a new 2 m^3/s potabilization module, 4 regulation reservoirs, a conveyance pipeline to "Sto. Dgo. Norte" and 67 km of distribution networks. No financing could be obtained because of the qualitatively unsatisfactory project documentation.

The involvement of SNIP during the Due Diligence improved the Basic Project Profile, thus leading to institutional strengthening/sustainability of results as follows:

- Implementation in two phases (Phase 1: 40 km of distribution network and traverse pipe to Santo Domingo Norte; Phase 2: Construction of a new 2 m3/s potabilization module, 4 regulation reservoirs conveyance pipeline to "Sto. Dgo. Norte" of 7.5 million gallons each and 27 km of distribution networks.)
- Actions related to the institutional strengthening of the CAASD were included within the scope of the credit operation to guarantee the sustainability of the results over time.

Key Lesson Learnt

The harmonization of instruments of the SNIP and donors can contribute to the adequate bankability and sustainability of investments in water and sanitation.

4.3. Case with a lack of a SNIP and/or its involvement (Hypothesis 1)

4.3.1. Case in Guyana

4.3.1.1. SNIP in Guyana

According to ECLAC there is no there is no data available on Public Investment National Systems for this country.[46]

4.3.1.2. Case: Establishment of the Guyana Wastewater Revolving Fund

Main Features

The Guyana experience with its revolving fund shows that the prospective projects that were not able to show sufficient capacity to generate funds to repay the loan were, as it could be expected, rejected. Some may be able to request funding later once they are modified to resolve this issue and can demonstrate their bankability.

The Project subject to this case study is the Establishment of the Guyana Wastewater Revolving Fund.

The impact of poor wastewater management is a big problem for health, the environment and tourism. Immediate action required to change wastewater management practices. To facilitate this action the Government, with support from IADB created the Guyana Wastewater Revolving Fund (GWRF) as a pilot initiative with

[46] https://observatorioplanificacion.cepal.org/en/countries/guyana
However, according to an ECLAC report from 2006 (https://www.cepal.org/en/publications/5613-national-public-investment-systems-barbados-guyana-jamaica-and-trinidad-and-tabago) states that Guyana's public investment system, or SNIP,is based on projects and is run by the State Planning Secretariat (SPS), a division of the Ministry of Finance. This secretariat coordinates the administration of investment resources, and one of its principal tasks is the preparation of the central government's investment budget.

a four-year duration (July 2011 – July 2015). The objectives were to (i) provide access to finance for innovative, efficient and sustainable wastewater management solutions, (ii) reduce pollution from untreated wastewater to water bodies, (iii) develop a framework for the continued financing of wastewater management improvement projects.

As a result, the fund received six requests for funding, from which only one was ready for signing the financing agreement, but eventually used another financing facility, one was financed privately, and the rest was indefinitely postponed due to various issues. Thus, the funds are still unused. The reasons for this performance were:

- Incomplete submissions to be re-evaluated (iteration delays)
- Difficulty in obtaining guarantees
- Revenue streams do not give sufficient confidence in the ability to repay
- Difficulty in obtaining the land needed to install the infrastructure

Key Lesson Learnt

Although the State Planning Department was involved in the development and approval of the project, bodies such as the SNIP could contribute to these aspects, even if the investor were private.

4.4. Case where independent tariff regulations exists (Hypothesis 2)

4.4.1. Case: Tariffs in Costa Rica, Belize and Jamaica

Main Features

In the case of Costa Rica, additional funds where needed to advance more rapidly, and

government, regulator and service provider agreed upon a clear policy to secure the required funding.

In the case of Jamaica, the dedicated flow of funds created through a regulator's ruling, in agreement with the service provider coupled with support from IADB allowed for the creation of a credit enhancement mechanism that is a source of leveraged financing to accelerate the implementation of non-revenue water (NRW) reduction (efficiency) and wastewater collection and treatment projects.

In this context the highlights are:

- Independent Economic Regulation – Clear Tariff Setting Rules
- Guiding Principles: Economic Efficiency, Revenue Recovery, Cost Reflective (includes Cost of Equity and Debt), Simplicity, Equity, Public Interest Regulator funding is guaranteed for effective economic regulation
- Setting and monitoring compliance with standards

The costs included in the tariff calculations in each country are:

- Operation and maintenance costs (all three countries)
- Depreciation (all three countries)
- Taxes (all three countries)
- Return on Capital (all three countries)
- Specific attribution to pre-approved projects - "K-Factor" (Jamaica)
- Efficiency (returned to users via the "X-Factor") (Jamaica)

The examples of Costa Rica, Belize and Jamaica clearly show how an economic regulator

with a well-established tariff setting procedure, which is objective and independent of political influence can play the role of balancing operation and maintenance costs and investment needs with customers' capacity to pay assessing how far the operators can go in terms of extending coverage and service quality improvement. Specifically

- In Costa Rica, given the recovery of capital invested through the tariff, large operators can access financing for investments. ASADAS will require another solution.
- In Belize, operators must "internalize" the concept of financing projects with debt. Even now they are looking for grants for investments.
- In Jamaica, the specific allocation of resources to pre-approved investment projects allows leveraging resources and accelerating the implementation of projects.

Key Lesson Learnt

Independent and cost covering tariffs can enable investment financing from user fees.

4.5. Case where tariff related issues are determinant for investment (Hypothesis 2)

4.5.1. Case: Tariffs in the Dominican Republic

Main Features

A loan was requested from the World Bank for financing wastewater collection and treatment in two cities (Moca and Gaspar Hernández). But the tariff scheme does not include charges for wastewater treatment and are very low for sewerage services. In addition, the service provider receives central government transfers to pay for energy

bills and part of the salaries. There is also no economic regulator and no procedure to independently fix tariffs. Thus, the original project would have resulted in

- Construction cost for the wastewater treatment plants and networks covered by loan
- Increase of operating expenses is higher than revenues for new services generated by the project
- High sustainability risk for both, investment and results

A project with modified objective was necessary which resulted in the exclusion of two of the four technologies initially considered for wastewater treatment and the inclusion of a drinking water and efficiency component to reduce operating costs and increase revenue to bridge the gap between operating costs and revenues.

Hence, the lack of adequate revenue generating mechanisms led to the transformation of a project intended to build wastewater collection and treatment infrastructure in two cities, Moca and Gaspar Hernández, by reducing its wastewater service scope and forcing the introduction of a drinking water component to improve efficiency through NRW reduction and some critical commercial aspects like billing and collection efficiency. The gap between expenses and revenues resulted in the selection of alternative low operating cost technologies and the search for other sources of funds.

Key Lesson Learnt

The absence of comprehensive tariffs setting schemes and procedures poses obstacles to the financing and funding of service improvement investments.

4.6. Cases where innovative financing instruments were successfully applied (Hypothesis 3)

Sanitation and Water for All (SWA)[47] sees four major policy principles which would enable increased sector investment.

All the strategies above aim to mobilize more financing and funding to the sector, but there is a real challenge of intergovernmental financing arrangement. Fiscal decentralization, in many countries, has not followed functional decentralization. Rural water and sanitation service providers and authorities are generally less able in terms of human resources and the required skills to implement sector policies. Meagre budget approvals arrive late, and disbursements fall short of allocations.[48]

4.6.1. Cases to maximize value from existing public funding

4.6.1.1. Case: Incentivize sector performance (Indonesia)

Main Features

There are two main programmes to implement incentive-based financing in the water, sanitation and hygiene sector in Indonesia. These are the 'Water Hibah' (a grant to incentivize local governments to allocate their budget in order to increase households' connection to piped water supply systems in urban and rural areas) and the 'Sanitation Hibah' (a grant to incentivize local governments to allocate their budget to increase

[47]The cases in this section are taken from: Sanitation and Water for All - SWA (2021) Water & Sanitation: How to Make Public Investment Work, a Handbook for Finance Ministers

[48] The selected examples of practical application are extracted from Sanitation and Water for All - SWA (2021) Water & Sanitation: How to Make Public Investment Work, a Handbook for Finance Ministers. For further reading and more im-depth information reference is made to this publication.

access to improved sanitation: for example, by increasing house connections to existing city-scale sewerage systems, the development of new decentralized sewerage systems, and upgrades to septic tanks at household level).

The programme first requires local governments to allocate their own budgets, for connecting households to sewerage or water systems, or the development of septic tanks. The local governments get reimbursed after technical verification.

Key Lesson Learnt

Incentive-based financing is successful not only in providing incentives to local governments to prioritize and allocate their budget for water and sanitation, but also ensuring that facilities are actually built and used, because the grant is only provided once facilities are technically verified.

4.6.1.2. Case: Improve subsidy targeting (Colombia)

Main Features

In Colombia, utilities have the main responsibility to provide services and must comply with regulations, which include set tariffs and minimum service standards. However, the defining characteristics of rural areas and informal neighbourhoods (e.g., low income, dispersed population, located far from existing infrastructure networks) can make them seem unattractive as prospective investments, especially if penalties for non-compliance are ultimately much lower than the costs of providing services.

The Ministry of Housing and Cities therefore decided to develop additional incentives for the provision of services in these lower-income areas. These included direct subsidies for informal neighbourhoods (where providers are not utilities), as well as for adoption of technological solutions better suited to rural areas.

Key Lesson Learnt

Targeted incentives create the space for utilities to achieve the legal service standards required of them, but in a gradual and more flexible way, and encourages innovation in off-grid solutions.

4.6.2. Case: Mobilize more funding - Set up adequate cost recovery policies for the sector: tariff reforms (Burkina Faso)

Main Features

The National Office for Water and Sanitation (ONEA) is a state company responsible for providing services in Burkina Faso. In 1970, ONEA established the principle of 'national equalization' (péréquation nationale) for cost recovery and tariff setting that applied to 58 towns representing 27% of the national population. Tariffs are set according to consumer type (commerce, industry, household, etc.) and relative wealth of the locality so that cost recovery happens across an entire service area of the utility through cross-subsidization.

Financial balance is achieved because higher tariffs from commerce and industry offset the costs of providing below-cost tariffs for household connections and public standpipes within poorer regions of the service area.

The tariff-setting process is centrally coordinated by the Ministry of Finance, with ONEA presenting and discussing performance and progress annually to a committee. The process for tariff setting is based on analysis of total costs for providing services, applying five criteria: (i) Financial efficiency for the service providers: is the income able to cover expenses? (ii) Economic efficiency: can demand be met? (iii) Equity: are tariffs fair? (iv) Simplicity: is the tariff system easy to understand? and (v) Preservation of water resources: do the tariffs contribute to rational consumption behavior?

Key Lesson Learnt

Gradual service improvements possible, including expansion to smaller rural utilities and peri-urban areas can be made possible through a cost covering tariff system.

4.6.3. Case: Increase repayable domestic finance – Using guarantees to de-risk and mobilize private domestic finance (The Philippines)

Main Features

The Philippines Water Revolving Fund (PWRF) provided loans to local government units and water districts by on-lending concessional funding sourced from JICA through the Development Bank of the Philippines, blending it with funds from domestic private commercial banks and domestic public funds.

Guarantees played a critical role in the structuring of the PWRF, with JICA's concessional loan to DBP backed by a sovereign guarantee from the Government of the Philippines Department of Finance and private banks, partially guaranteed by the Local Government Unit Guarantee Corporation, a private third-party guarantor, which itself was backed by a partial guarantee from USAID's Development Credit Authority (DCA). In total, USAID DCA provided almost USD 5 million in guarantees, which helped reduce the commercial banks' credit risk exposure, and increased confidence to lend, albeit selectively, to creditworthy water service providers. Another key feature of the facility is the liquidity risk cover provided through a standby credit line, with a take-out feature offered to borrowers who could not afford the short tenures. This feature helped increase the tenure from the usual seven years to 15 years, or sometimes longer. Technical assistance is also a critical component of the PWRF. The PWRF helped water service providers mobilize commercial financing from local banks at a time when public resources were highly insufficient. By 2014 more than USD 234 million in loans had been mobilized for 21 water and sanitation projects, with around 60% of the finance

mobilized coming from private banks. The fund has meant an estimated six million people have benefited from new or improved water supply and wastewater systems.

Key Lesson Learnt

Guarantees can expand the scope for private finance and mobilize additional financial resources.

4.6.4. Case: Encourage innovation and least-explored new approaches – Accessing climate funds (Kiribati)

Main Features

Kiribati is one of the most remote and least developed countries in the world and faces significant challenges due to its vulnerability to climate change. South Tarawa's water supply is almost entirely dependent on underground freshwater lenses (where freshwater sits above denser saltier water); the quality and quantity of which are seriously threatened by climate change-induced heavy rains and prolonged drought. Should such extreme events occur simultaneously or in quick succession, they can reduce the lenses' yield to zero – for periods of up to five years. Given this, the lenses cannot be relied upon as the main source of water in the future. The South Tarawa water supply project aims to reduce the climate vulnerability of the entire population of South Tarawa by providing them with a reliable, safe, and climate-resilient water supply. The project is expected to benefit 62,298 people, and requires a total investment of USD 58 million, of which USD 29.4million (50.7%) will come from the GCF.

Key Lesson Learnt

Innovative approaches such as climate funds can provide access to finance also to vulnerable countries.

4.7. Other cases with innovative financing (Hypothesis 3)

4.7.1. Case: Hybrid Annuity Schemes in India

Main Features

The case here is the Sewage Treatment Plant on Hybrid Annuity-PPP Model Uttarakhand.[49]

Under this model, the development, operation and maintenance of the sewage treatment STPs will be undertaken by a Special Purpose Vehicle (SPV) to be created by the winning bidder at the local level. As per this model, 40% of the Capital cost quoted would be paid on completion of construction while the remaining 60% of the cost will be paid over the 15 years life of the project as annuities along with operation and maintenance cost (O&M) expenses.

One of the most important features of this model is that both the Annuity and O&M payments are linked to the performance of the STP for 15 years period. This will ensure continued performance of the assets created due to better accountability, ownership and optimal performance. Hybrid Annuity based PPP model has been adopted for the first time in the country in sewage management sector. Such a model has earlier been adopted successfully in highway sector only.

Under this model in Haridwar, Uttarakhand a 68 MLD capacity sewage treatment plant was implemented at Jagjeetpur area and 14 MLD capacity sewage treatment plant was

49 https://peyjal.uk.gov.in/files/Namami%20Gange/Sewage_Treatment_Plant_on_Hybrid_Annuity-PPP_Mode.pdf

implemented at Sarai area.

Key Lesson Learnt

This form of financing can distribute the financial burden of the public partner more evenly over time and the life cycle of the project.

4.7.2. Case: Revolving Financing Facility for rural water supply in Uganda

Main Features

The rationale of the planned Revolving Financing Facility (RFF) is to fill the existing gap between day-to-day operations (paid by user fees) and investments in new or completely renovated systems (mainly paid by donor grant funds with contributions from the Uganda Government). Currently these intermediate "capital maintenance" investments are hardly made, which leads to a progressive deterioration of assets and service reliability until a donor or government comes in to rehabilitate the system.

The cycle of construction, deterioration and rehabilitation shall be replaced by a continuous flow of moderate investments, to keep the infrastructure in good working conditions and improve service quality. Apart from emergency repairs and asset replacements this includes investments needed to adapt water production to the growing demand, extend services to unserved people, improve water quality, and bring older schemes up to standards for commercially viable operations.

All piped water schemes, urban or rural, shall be supported by the new facility, except those managed by the National Water and Sewerage Corporation (NWSC). The RFF will be designed to manage funds of different origin, namely user fees, donor funds (through the existing JPF), and Uganda Government funds (conditional grants and MWE counterpart funding).

Key Lesson Learnt

Targeted financial mechanisms can pool resources and enable service providers to undertake routine repair and maintenance activities in order to keep the service levels and expand the lifetime of installations.

4.8. Summary of Cases and Lessons Learnt

A summary of key lessons learnt is shown below:

Table 8: Summary of Key Lessons Learnt

Country/ Hypothesis	Case	Main Features	Key Lessons Learnt
Costa Rica Hypothesis 1	Proposed technical-financial mechanism to finance sanitation	Mechanism to finance sanitation, incl. Technical Assistance	SNIP involvement can increase operations of the mechanisms.
Costa Rica Hypothesis 1	Opportunities to further empower SNIP	SNIP has ample responsibilities for public investment	SNIP may improve bankability of projects.
Costa Rica Hypothesis 1	Opportunities for strengthening the sanitation sector	Sanitation (mainly septic tanks) have can lead to problems	SNIP procedures can streamline financing and improve situation.

Dominican Republic Hypothesis 1	"Acueducto Oriental" extension project	Major construction project	Due Diligence can lead to better results.
Guyana Hypothesis 1	Establishment of the Guyana Wastewater Revolving Fund	Revolving Fund for Sanitation	Improper planning and management can lead to unused funds.
Costa Rica, Belize y Jamaica Hypothesis 2	Tariff regulation	Countries with independent tariff regulation	Independent tariff regulation can generate funds for investments.
Dominican Republic Hypothesis 2	Tariff regulation	No proper tariff regulation	Low tariffs allow only for lost cost solutions.
Indonesia Hypothesis 3	Incentivize sector performance	Incentive based financing	Can lead to improvements in access.
Colombia Hypothesis 3	Improve subsidy targeting	Additional incentives for connections	Targeted incentives can increase coverage.

Burkina Faso Hypothesis 2	Mobilize more funding	adequate cost recovery policies for the sector: tariff reforms	Adequate tariffs can lead to service improvements.
Philippines Hypothesis 3	Increase repayable domestic finance	Using guarantees to de-risk and mobilize private domestic finance	Guarantees can increase access to finance.
Kiribati Hypothesis 3	Encourage innovation and least-explored new approaches	Accessing climate funds	Climate funds can benefit people.
India Hypothesis 3	Construction of STP	Hybrid Annuity Schemes	Form of financing can distribute the financial burden over time.
Uganda Hypothesis 3	Revolving Fund	Revolving Financing Facility for rural water supply	Targeted financial mechanisms can pool various resources.

5. Conclusions and suggestions for the way ahead in financing for water and sanitation

From the analysis carried out and from the examined case studies, the following conclusions and suggestions can be drawn:

- Institutional strengthening of service providers

Service providers often lack the required capacities to sustainably operate their infrastructure. Weaknesses in regard persist in technical/operational aspects as well as in financial management and customer relations. In view of an increased overall sustainability of the service providers and an enhanced capacity to attract financing institutional strengthening of service providers can yield considerable benefits. This means to create the environment to share experiences and training on project formulation. It is relevant in all case studies.

- Assistance to project beneficiaries

Many service providers have weaknesses in project identification, planning, feasibility assessment and financial engineering. This results in a general lack of bankable projects which can be submitted to financing institutions. A targeted assistance can increase the bankability of projects and enhance the chances to obtain financing. This also includes activities as to guide the formulation of objectives and the selection of the financial instrument. Internal funds financing can be made available. The case from Costa Rica (technical-financial mechanism) shows that the proposed technical-financial mechanism can tackle these issues.

- Strengthening finances of service providers

Service providers in some cases cannot raise sufficient revenues to finance their operations, even less to finance investments. This is a result of (i) weaknesses in commercial management (insufficient revenues collection), (ii) tariff levels (tariffs are too low) and (iii) improvable operations (potential cost savings are not realized). To render these service providers attractive for financing institutions their financial standing has to be improved. The case in Dominican Republic (Moca and Gaspar Hernández) clearly shows that insufficient revenues can generate the necessity to downsize investment projects.

- Independent tariff regulation

In many circumstances tariffs are set arbitrarily on the base of political considerations rather than economic and financial necessities. To have a proper tariff setting methodology covering operational as well as at least part of the investment costs, an independent regulatory entity, which is as much as possible isolated from short term political intervention is required. It can be seen in Belize, Costa Rica and Jamaica that there are different options to organize independent tariff regulation and that there are also different tariff methodologies, which are cost reflective and cost covering.

- Cost covering tariffs

Service providers should benefit from framework conditions which allow them to cover their costs provided their operation are efficient and economically prudent. Cost covering tariffs are a crucial element. It can be seen in the case of Belize, Costa Rica and Jamaica that cost covering tariffs put service providers in a position where they can focus on proper service provision.

- Affordability and willingness to pay

Of course, tariffs must also reflect the economic circumstances of the users. Thus, certain affordability criteria must apply. However, experience shows that, as is the case

in Belize, Costa Rica and Jamaica, customers are willing to pay an adequate tariff, if, in turn, they benefit from high quality service.

- Use of innovative financing models

Financing from traditional sources faces increasing limits. On the one hand government budgets are not sufficient to cope with investment necessities, on the other hand also traditional OBA financing cannot make the required resources fully available.

There is consensus at the international level, including high level for a such as the G7 and G20 as well as international financing institutions that the infrastructure investment needs to achieve the SDGs require more financing. There is also consensus that public financing will have to be spent in a more targeted way and that private financing will have to play a more important role.

The use of innovative financing models is thus of utmost importance for the responsible authorities.

For what concerns the SNIP, the following conclusions can be drawn:

- Proactivity

Proactivity of SNIPs is required to successfully face reduced financing supply. SNIPs, as government structures, can access financing facilities which are not accessible for local service providers. Important synergies can so be realized as shown in the case of Costa Rica (Strengthening the sanitation sector), where several sources of financing could be accessed.

- Interaction with lending institutions

SNIPs, as official government structures can have frequent interaction with national and international lending institutions. This involves considering contact with lending

agencies to align processes by type of financing sought. Early engagement improves projects and access to finance. The case in the Dominican Republic (Acueducto Oriental) shows that the interaction of the SNIP with the lending institution led to a significant improvement of the project. On the other hand, the case in Guyana clearly shows that in absence of the guidance, a SNIP could provide, available funds remain unused. The review process that characterizes SNIPs could help in processes such as the process of establishing and operating revolving funds. Thus, it may be thought of SNIP granting an eligibility certificate for eventual use in applying for funding to a revolving fund.

- Consideration of the project cycle

SNIPs can provide targeted support along the entire project life cycle. This, at the one hand strengthens the quality of the projects and on the other hand it increases the probability that service providers will be in a position to be able to pay back loans. The proposed technical-financial mechanism in Costa Rica (Technical-financial mechanism) addresses the entire project cycle.

In summary, the value added by the SNIP and the SNIP Network can be

- SNIP
    - Early involvement with project formulation could improve project design and access to financing
        - Adequate structure/quality of projects
        - Bankability of projects
        - Optimization of benefits
- SNIP Network
    - Provide an environment to share experiences

- Exchange ideas and experiences for financing/Joint learning
- Lead contact with lending institutions to align processes

On the other hand, cost covering and independently set tariffs can lead to

- Better financial standing of service providers
  - Attracting finance
  - Sustainability of investments
- Optimized operations of service providers
  - Incentives to increase efficiency
  - Increase to improve commercial performance
  - Enhance expansion of services and service areas

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