28th AGUASAN Workshop (2012): Briefing Note

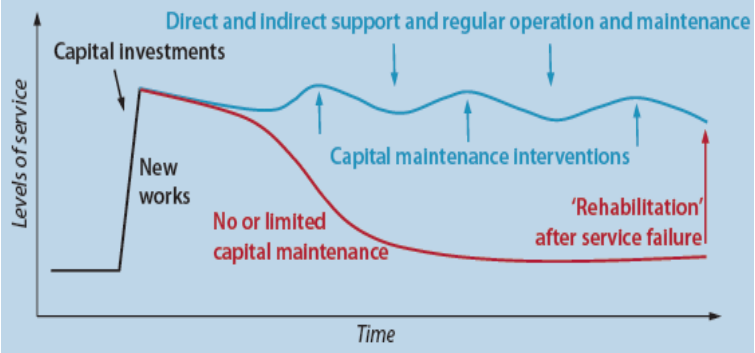
FINANCIAL SUSTAINABILITY OF WASH SERVICES

About mindset change and an eye for the future

Topic

Although in recent years considerable effort has been directed towards scaling-up the spatial coverage of WASH services and reaching targets, it remains crucial and vital to ensure that the services are sustained in the long-term and current approaches need to be re-considered with that requirement in mind. Supplying water as well as providing sanitation and hygiene services have an inherent financial cost not only with regards to capital investments but also during the operation and maintenance, rehabilitation, upgrading and expansion phases. Therefore, financial sustainability focuses on how the governments, donors, civil society and private sector responsible for WASH services ensure revenue streams to cover those costs.

The investments needed to deliver sustainable WASH services meeting current and future social and environmental expectations are huge. Yet, most services are underfunded with dire consequences for the users, especially the poorest. This occurs despite that people in developing countries spend a significant portion of their income on WASH services through contributions in cash/kind for capital expenditures, connection fees, tariff payment or investments in improving their individual water system (self-supply) and in installing on-site sanitation. Hence people continue to face unacceptable problems with systems that fail prematurely, leading to wasted resources. Studies from various countries indicate that 30-40% of all WASH systems either do not function or operate significantly below design expectations.



Providing sustainable WASH services requires sound strategic financial planning to ensure that existing and prospective resources are commensurate with investment needs as well as the costs of operating and maintaining services. One issue is that in the current way of thinking and working, accounting for the capital maintenance, direct and indirect support costs in the life-cycle of services is often "forgotten" and the mechanisms and institutional changes catering for them left unaddressed. Another issue is that in most cases those responsible for WASH services enabling, developing and sustaining have basic knowledge of financial systems and mechanisms only. Still, there is a wide range of experiences with approaches to financial sustainability of WASH services, including established practices and recently developed innovative mechanisms. Finally, improving the financial sustainability of operations of systems in place is crucial and practitioners are experimenting with new models and enabling approaches to either increase revenues or decrease operating costs.

Process

Against this backdrop, an international group of 43 water and sanitation practitioners and wider development specialists from both humanitarian aid and development cooperation gathered in Gwatt, Switzerland from 18 to 22 June, 2012 within the framework of the 28th AGUASAN Workshop. The event was dedicated to the key question of *"What kind of change in*

mindset is required to achieve long-term financial sustainability of rural and small town WASH services - what will it take and how can it be put into practice?" Presentations from resource persons, plenary discussions, group work on topic cases, a crash course on life-cycle costs, individual sustainability clinics and an excursion into Swiss solid waste management (as neighbouring sector) supported the learning process as well as the development of new ideas.

Workshop process

Day 1	Basic groundwork	Key inputs from resource persons
Day 2	Deductive analysis	Case studies, group work
Day 3	Inductive analysis	Case studies reports, LCCA wrap-up, Excursion
Day 4	Deductive/inductive analysis	Clinics, identification of main threads of the framework
Day 5	Validation	Refining the framework, reflecting with invited guests

The workshop was designed as a full week constitutive process allowing for a progressive and cumulative learning experience. The inputs of the resources persons to the plenary and the five topic cases explored in working groups were well prepared in advance, whereas the sustainability clinics, where participants could expose specific financial sustainability issues of their activities to a group of peers, were called in spontaneously during the event

Results

At the end of the workshop, various results could be highlighted and presented to invited Swiss decisions-makers:

Collective learning of the participants: The key inputs from the resource persons on costing WASH services, valuing benefits and using cost-benefit analysis for advocacy, as well as a short training on the life-cycle cost approach (LCCA), provided concrete "take-away" knowledge for the participants: new approaches and practical applications, tools and tips, documentation and resources for further involvement.

Peer assistance to topic cases and clinics presenters: The group discussions provided an opportunity for collective brainstorming on similarities and specificities of concrete cases (from Benin, Haiti, Kosovo, Mozambique and Peru) as well as on specific issues (e.g. tariffs, maintenance funds, supply chains). The audience could share their experiences on financial sustainability, suggest ways for improvements and develop practical recommendations for the case owners and clinics hosts. In turn the peers could equally identify ways of improving their own work.

Development of a framework outline: Throughout the continuous learning process, the reflexions of the workshop participants evolved towards key elements of a successful approach regarding financial sustainability issues. The **six key elements** identified and composing the outline of a **"Framework for Financial Sustainability of WASH Services"** are:

- An appropriate sector governance;
- A comprehensive cost analysis;
- Financially viable and socially equitable services;
- A solution suitable to the context;
- Organisational capacity of relevant actors;
- Ownership and commitment.

Financial Sustainability Framework

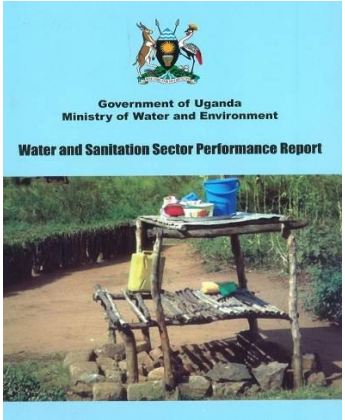
Defining financial sustainability of WASH services

"Sustainability is about whether or not WASH services and good hygiene practices continue to work and deliver benefits over time. No time limit is set on those continued services, behaviour changes and outcomes. In other words, sustainability is about ***lasting benefits*** *achieved through the continued enjoyment of water supply and sanitation services and hygiene practices (Sustainability framework, WaterAid, 2011)".* Focusing on financial sustainability, there should be **adequate revenue to cover all costs**, with appropriate tariff structures that include the poorest and most marginalized and with due attention to the environment, in order that the services last indefinitely.

Key element 1 - Appropriate sector governance

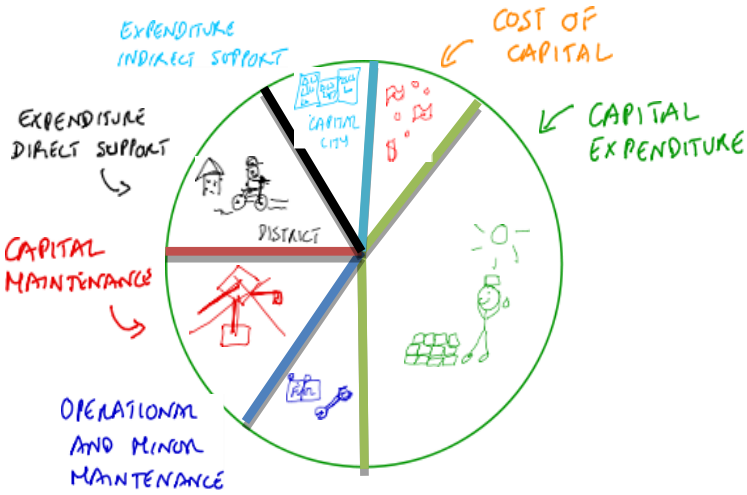
A conducive **legal and policy environment** is crucial for the sustainability of WASH services; in particular **roles and responsibilities** of the various stakeholders have to be clearly defined. **National governments** are ultimately responsible for ensuring that WASH services are delivered to their citizens and for deciding how this is achieved. **Households** have a key role in demanding improved services and taking responsibilities in management and recurrent financing. An **independent regulatory body** for both urban and rural WASH services should guarantee access for all, monitor quality and equity and supervise the service providers.

Predictable sector financing and planning mechanisms and practices are an additional key factor for an enabling environment: national mechanisms for planning and monitoring should be set up and strengthened (such as yearly sector reviews, budget programming by objectives), whereas donors should commit to long-term engagements. **Monitoring & evaluation** be it global, national or local should be highlighted as it performs two distinct functions: first it aims at guaranteeing accountability for donors, national governments and users; second it constitutes a mean to improve the performance and a space for sector learning. Finally existing mechanisms should be supported to assure **accountability and transparency** at local, regional and national levels.



Key element 2 - Comprehensive cost analysis

Initial investment costs for WASH schemes and their long-term management, operation, maintenance, replacement and extension/upgrading of services have to be accounted for. However, it is commonly acknowledged that system managers don't usually know e.g. what the recurrent costs truly are. The same is also the case at regional or national level regarding indirect support costs or costs of capital. Hence, **recurrent costs need to be identified in their entirety and thoroughly quantified and monitored.** Taking this fact into account, policy makers and regulators should focus on identifying all costs, highlighting financial gaps and implementing sound strategies to **match costs with revenues**.



At local level, managers should identify the costs they need to finance, including **often forgotten costs** (e.g. guaranteeing water resource protection in quantity / quality or dealing with risk mitigation). One main reason for investigating these cost issues is to ensure the **availability of necessary capital maintenance funding** before systems fail and are abandoned.

Cost categories (Source: Fonseca et al., 2011.)

One time expenditure on providing a new or extended service where there was none:

- **Capital expenditure:** Initial costs to develop or extend a service. 'Hardware' such as pipes, pumps, excavation, lining, and concrete structures and one-off 'software' such as community training and consultations.

Recurrent expenditure on maintaining an existing service at its intended level:

- **Cost of capital:** Cost of interest payments on micro-finance and any other loans.
- **Operating and minor maintenance expenditure:** Typically regular expenditure, such as wages, fuel, and the purchase of cleaning products. Neglect can lead to service failure and expensive capital (maintenance) expenditure.
- **Capital maintenance expenditure:** Asset renewal and replacement cost; occasional and lumpy costs that seek to restore the functionality of a system, such as replacing a handpump or emptying a septic tank. It is required to avert failure and to maintain a continuous service.
- **Expenditure on direct support:** Cost of support activities for service providers, users or user groups, not directly related to implementation, e.g. training for a community or a private sector operator. Critical to achieve long-term functionality and scale.
- **Expenditure on indirect support:** The cost of macro-level support, planning, policy making and capacity building. Includes support to decentralised service authorities or local government. These costs have a direct impact on long-term sustainability.

Key element 3 - Financially viable and socially equitable services

Appropriate pricing and financing models are key to financial sustainability. Both revenues coming from outside the service area (transfers in the form of grants, subsidies or loans) as well as from inside (taxes and tariffs) are to be considered and cost covering mechanisms should ensure that the **burdens of improved services are borne equitably** by the different sections of the stakeholder community.

Hence, revenues for covering recurrent costs of WASH services in particular have to be mobilized from the three basic sources of **tariffs, taxes and transfers - the mix of these having to exceed all life-cycle costs of a service whilst assuring access for the poor** (i.e. human right to water and sanitation). Although there may be significant costs implications for governments to reach the un- and underserved populations, achieving sustainable WASH services for all is not only about public financing: better targeting of existing resources and innovative financing approaches involving households (as service users and taxpayers) and the private sector (incentivizing local level self-sustaining, market-driven approaches) are key factors for success.

Key element 4 - A solution suitable to the context

WASH services are sustainable in the long term only if they provide tangible economic advantages and health benefits, provided these are accepted as such by the end users and payers. The integration of the **socio-cultural context**, including traditional practices and traditionally grown rules, rights and decision-making processes of communities concerning the use and management of water as well as of sanitation systems is paramount in designing WASH interventions. Therefore, the solution chosen for services provision should be **appropriate and affordable,** i.e.:

- A **choice of technologies** which are socially acceptable, financially affordable and environmentally suitable. These should minimize administrative burden and require operation and maintenance tasks matching the local capacities of the system managers;

- A **choice of the service level** which fits the users' preferences: a weak demand for service improvement constitutes a serious threat for the sustainability of the services.

The solution should be **responsive to specific institutional and organisational contexts** (e.g. fragile states), developed after an **in-depth analysis of the situation**, flexible and adaptable to context evolution, with a strong emphasis on capacity building. Professional, user and market information combined should yield in a dialogue leading to a choice of options to be piloted and finally a fully informed choice based on the experience gathered: applying **household-centred problem solving** ensures that the choice responds to the needs and demands of the user, rather than to central planner's often ill-informed opinions about them.

Key element 5 - Organisational capacity of relevant actors

Strong and competent institutions at all levels are essential for sustained WASH services. **New approaches need also new skills** and newly assigned tasks have to be balanced with the required professional competence. Existing gaps in know-how, skills and capacities have therefore to be filled through adequate **capacity building**, **institutional development and resources allocation**. Indeed, poor quality of implementation threatens efforts of guaranteeing adequate and sustainable WASH services: good quality of both hardware and software; transparent procurement procedures, appropriate national standards and supervision of implementing partners and contractors are conducive features for improved sustainability. The capacities of key stakeholders should therefore be assessed and further strengthened, be it in **administrational, managerial, technical and analytical** aspects. Moreover, **financial skills** are often overlooked and need enhanced expertise, e.g. to secure financial reserves, manage accumulated funds effectively and mitigate the risks of misusing funds and devaluations.

To strengthen institutional and human capacities, clear objectives and contextual conditions based on national, participative processes involving large sectors of the society need to be established through national sector strategies and long-term human resources and institutional development plans. **Targeted training activities** (short courses, in-depth qualifying trainings), immersion (on the job, horizontal/vertical exchanges) as well as support in the provision of **specific institutional support mechanisms** such as resource centres, business development services, financial services providers and counsel support services may have to be fostered.

Key element 6 - Ownership and commitment

A **committed leadership** is essential as the lack of such guidance can completely undermine any prospects for sustainability. Furthermore all relevant stakeholders need to be identified, actively involved, highly committed and effectively participating. At **local level**, there needs to be a real **demand and understanding** for improved WASH services, otherwise people will not be able to overcome the behaviour change and management implications of the improved system and will return to the former (familiar) lower level of service: be it the use of contaminated water sources or to practice open defecation. At **national level**, **government leadership** is required in streamlining national policies, strategies and programs, creating an enabling environment, monitoring outcomes of programs and strategies, guaranteeing continuity and coordination of legal and financial frameworks, as well in providing the relevant sector information.

As politics determine budget priorities and many sectors compete for allocations in national and local government budgets, **advocacy strategies** are important for the sector to argue its case in the budget process and to retain priority at national and local levels. The case for sustainable WASH needs to be underpinned by facts on returns of investment in financially viable services. Hence, the **economic benefits need to identified, understood and valued** to act as a tool for advocacy at policy level and awareness raising at community level.

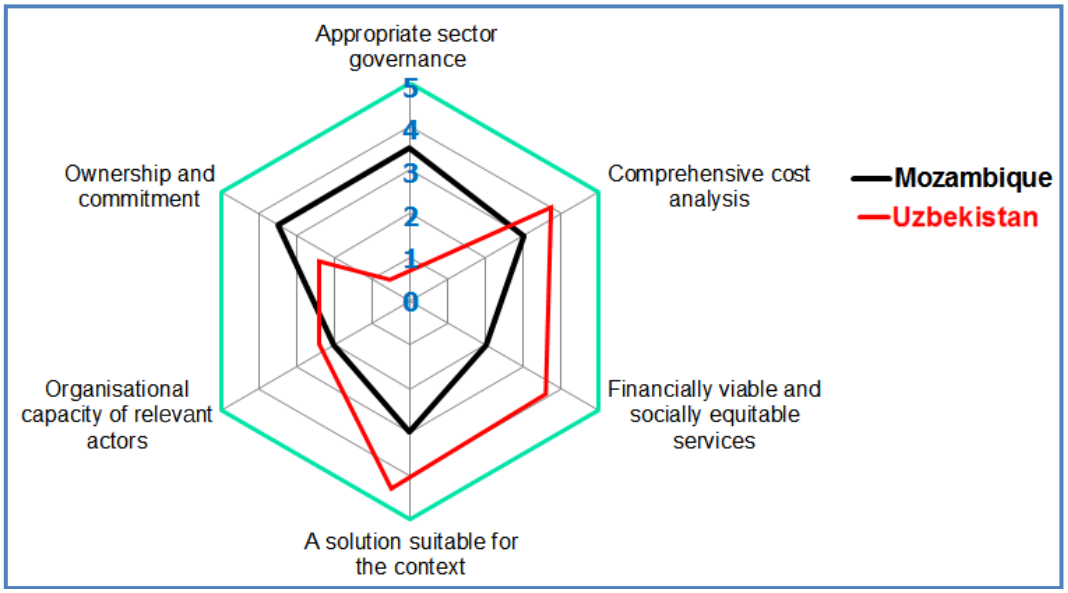
Framework application

The systematic application of the framework allows comprehensively assessing and tackling the key elements underlying financial sustainability of WASH services, i.e. **asking the right questions at the right moment and harnessing the right answers**, for a broad range of contexts, situations and purposes. Several aspects regarding the scope and boundaries of its application need therefore to be sorted out at the outset of an assessment, such as the:

- **Level of analysis:** *what is the starting point and angle of view?* The individual system level, the utility level, the areal (local, regional, national) level, the sector approach level or the supranational level?
- **Point in time of the analysis:** *what is the spotlight on?* Situation analysis (services delivery, stakeholder capacities, sector framework/governance), on designing strategies and interventions (needs, entry points and actions), on budgeting and execution (cost/benefits analysis, prioritisation, capacity building) or on monitoring and evaluation?
- **Projection of the analysis:** *what is the assessment about?* Getting a single snap-shot, an absolute comparison over time (at different stages of an endeavour) or about a relative comparison (across parallel endeavours at the same moment)?

To delve deeper into the key elements of the framework and to find answers to the questions and issues identified, **existing instruments** such as specific guidelines, best practices compilations and toolkits (signposted at the end of this document) can be selected and applied.

The **visualisation** of an assessment can be presented e.g. as **radar chart** (spider diagram), each equiangular spoke representing one of the framework's key elements as variable, and plotting the variable's value (from centre to periphery) proportionally to its maximum magnitude. A qualitative rating for typical initiatives in the drinking-water sector of Mozambique and Uzbekistan is presented below based on a provisional assessment of the six key elements of the sustainability framework developed. This type of visualisation is suited for prominently showing outliers and commonalities: individually low scoring variables would call for **particular attention to be paid to the respective key element** to improve its pertinence; distorted spider diagrams would call for a **more balanced approach** to be adopted towards the six key elements. The visualisation tool can be developed further by introducing a set of indicators and benchmarks for the grading and rating of each of the six elements assessed.



Conclusion

Against the backdrop of the WASH sector context and trends, the red thread throughout the workshop was the **shift in emphasis we need to make, from expanding the coverage of services to delivering services that are sustained into the future**. That is, safe water supply provided day in and day out; clean toilets used by all; effective treatment methods for wastewater and sludge management; and deeply ingrained hygiene habits. All stakeholders need to consider financial sustainability of WASH services as a critical mission and to re-think fundamentally their role in the sector in light of the ideas developed during the workshop. For donors this may mean moving beyond funding increases in coverage to requiring evidence of sustainability of services and behaviours from those they support. For implementing organisations this may mean revising approaches to take into account this critical concept.

The framework outlined during the workshop and described above understands itself as a contribution to this critical concept, **triggering reflection on the financial sustainability of WASH services and sparking off the required change in mindset and an eye for the future rather than the present** of those having a stake in sector development. It is applicable in a broad range of WASH contexts (both drinking-water and sanitation services, at system, utility or areal level) by a large audience (practitioners, utility managers, policy makers, researchers, etc.) at situation analysis, strategy development, budgeting, implementation, monitoring & evaluation as well as lobbying/advocacy stages of sector endeavours. It links to existing instruments for assessing more in-depth the key elements of financial sustainability and for designing as well as implementing the appropriate answers.

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Selection of further instruments

Existing tools, documents and guidelines (click on hyperlinks) / *Key elements of financial sustainability framework*	Appropriate sector governance	Comprehensive cost analysis	Financially viable & socially equitable services	A solution suitable to the context	Organisational capacity of relevant actors	Ownership and commitment
Akvopedia				X		
Blue Books (International Secretariat for Water)	X					
Burden of disease and cost-effectiveness estimates (WHO)						X
Business Platform (cewas)			X		X	
Compendium of Sanitation Systems & Technologies (Eawag)				X		
End Water Poverty						X
Human Rights to Water and Sanitation Toolkit (SDC/WaterLex)	X		X			X
Life-Cycle Cost Approach (LCCA)		X				
Price of Water (SDC)		X	X	X		
Results-Based Financing for Sanitation (WSP)	X				X	X
Series of Manuals on Drinking Water Supply (SDC/Skat)			X	X	X	
Sustainability Framework (WaterAid)	X				X	X
Sustainable Sanitation & Water Management Toolbox (SSWM)			X	X	X	
UN Special Rapporteur on Human Right to Water & Sanitation	X		X			X
WASHTech				X		
Water Integrity Network (WIN)	X					
Water Services That Last (Triple-S initiative)		X				
Water Supply and Sanitation Collaborative Council (WSSCC)						X

For further information, please contact manuel.thurnhofer@deza.admin.ch or roger.schmid@skat.ch.

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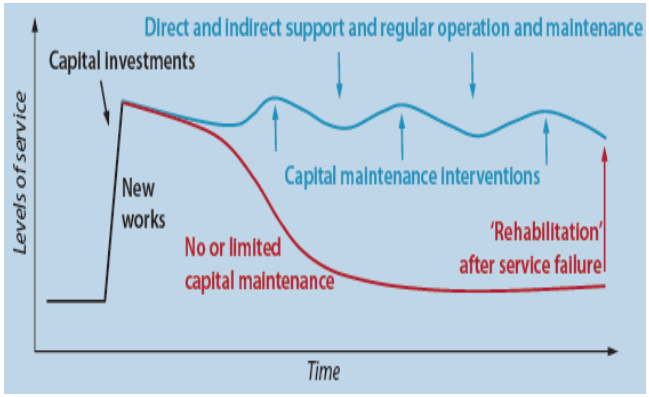
FINANCIAL SUSTAINABILITY OF WASH SERVICES

What kind of change in mindset is required to achieve long-term financial sustainability of rural and small town WASH services – what will it take and how can it be achieved?

Results from the 28th AGUASAN workshop 18th to 22th June 2012, Gwatt, Switzerland



19.11.2012

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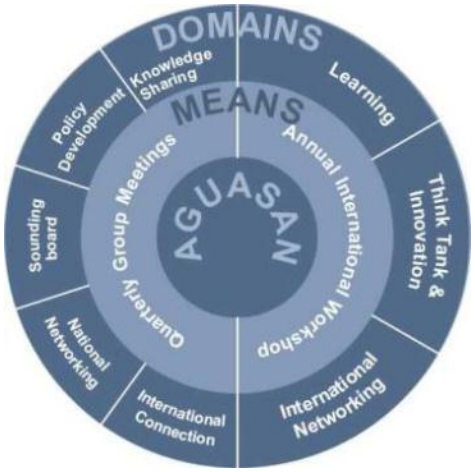
The AGUASAN CoP

- AGUASAN: an interdisciplinary Swiss Community of Practice (CoP) assembling since 1984 a wide range of water and sanitation sector specialists (Swiss Agency for Development and Cooperation, NGOs, Universities, Consultants, International Organizations)
- Main practices of AGUASAN: quarterly group meetings and annual international workshops
- Purpose of AGUASAN: sharing practical experiences, exchanging ideas and opinions, and generating new knowledge to promote wider and deeper understanding of key issues in water, sanitation and hygiene in developing and transition countries



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28th AGUASAN Workshop

The 28th AGUASAN Workshop (2012) was dedicated to the topic of **"Financial Sustainability of WASH Services"**

The workshop **objectives and key questions** were to:

- Learn from established practices and tools for better financial planning
  - *What are the cost components that need financing in the life-cycle of sustainable WASH services and how to value them?*
- Explore innovative financial mechanisms for capital investment
  - *How do different financial sources and mechanisms for capital investment influence the sustainability of WASH services?*
- Foster approaches to improve financial sustainability of operations
  - *How do different financial sources and mechanisms for capital investment influence the sustainability of WASH services?*

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Methodology: knowledge resources brought in

- Create a common understanding on the topic via key inputs:
  - Guy Hutton: “Valuating costs/benefits in support of advocacy and fundraising”
  - Peter Burr: “Experiences with the Life-Cycle Cost Approach”
- Explore topical case studies (practical experiences & tools):
  - Financial sustainability of the SABA model (Peru)
  - Sustainable challenges of the rural water sector (Kosovo)
  - Delegated management of water points (Benin)
  - Financial sustainability of rural WASH services (Haïti)
  - Applying life-cycle costing (Mozambique)
- Crash course on the “Life-Cycle Cost Approach”
- Excursion into the Swiss context
- Financial sustainability “Clinics” (individual cases)

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Methodology: an on-going learning process

Day 1	Basic groundwork	Key inputs from resource persons
Day 2	Deductive analysis	Case studies, group work
Day 3	Inductive analysis	Case studies reports, LCCA wrap-up, Excursion
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Benefits and Costs of improved WASH

Benefits of improved water and sanitation:

- Health benefits (health care cost savings, health-related productivity, avoided mortality)
- Environmental benefits (water pollution, land use, energy carbon nutrients)
- Social and private benefits (dignity, privacy, comfort, security gender, physical access)
- Broader economic benefits (tourism, business benefits, water and sanitation market)

Costs of improved water and sanitation:

- Investments costs (hardware, program support)
- Recurrent costs (*operational, preventive maintenance, capital maintenance, program support, costs of capital*)

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Benefits and costs estimations

Benefits valuation:

- Observe the market prices and use it to value (example: to value polluted water, identify the cost to boil water or add chlorine)
- Hedonic pricing (use proxy market if there's no market, ex: culture)
- Contingent valuation (survey methodology - how much someone is willing to pay for a service)

Costs estimation:

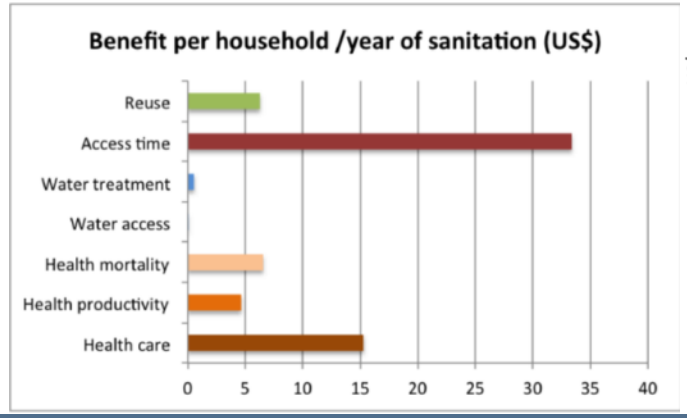
Methods:

- Bill of quantities X unit price
- Price paid by household + subsidy
- Sales price

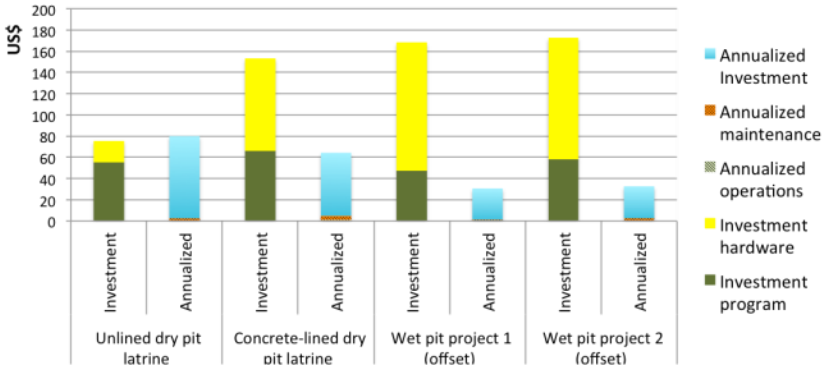
Comparisons / breakdowns:

- Technologies (service levels)
- Investment versus recurrent
- Hardware versus software
- Operations versus maintenance
- Annualized costs

Example: *main benefits valued*



Example*: comparing the different technologies, service levels and costs against lifetime*



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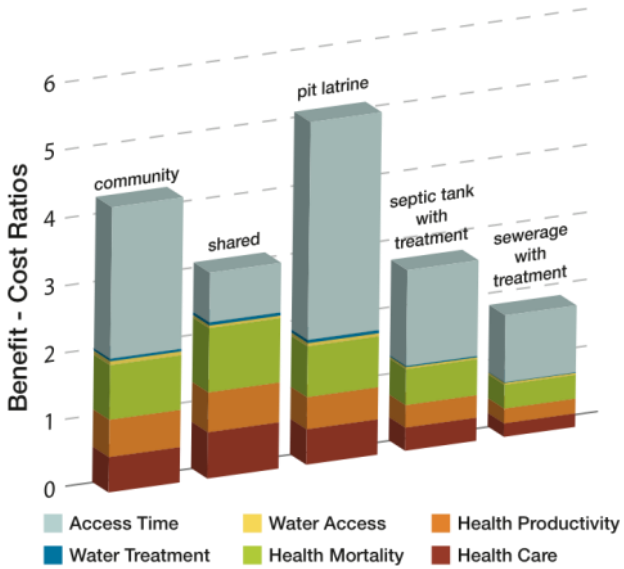
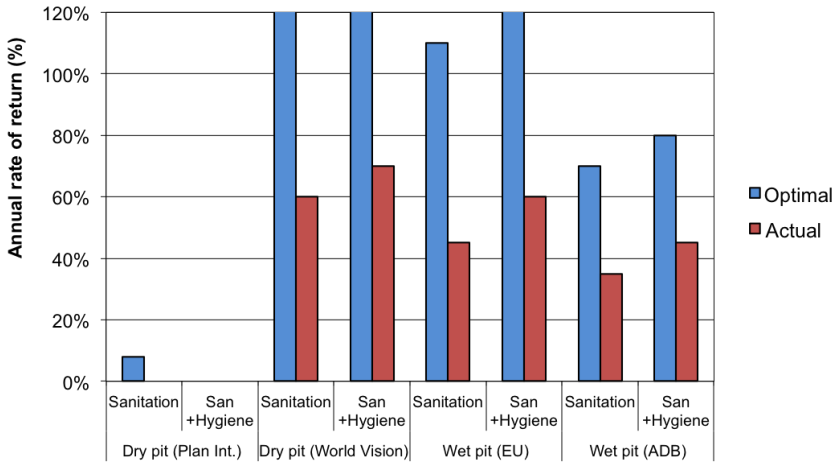
Benefit-Cost Analysis

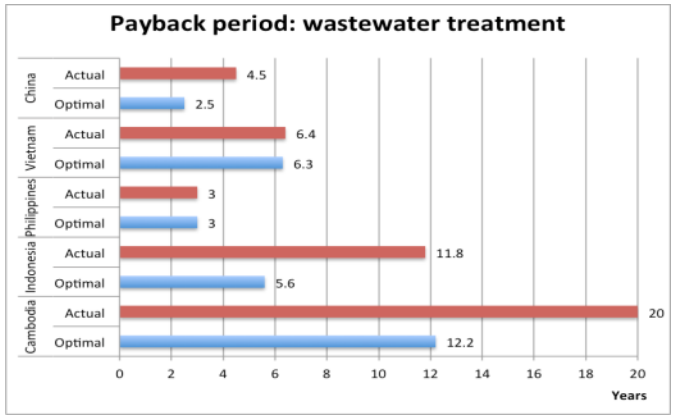
Costs versus Benefits



Annual Equivalent Rate of Return on an Investment



Payback Period



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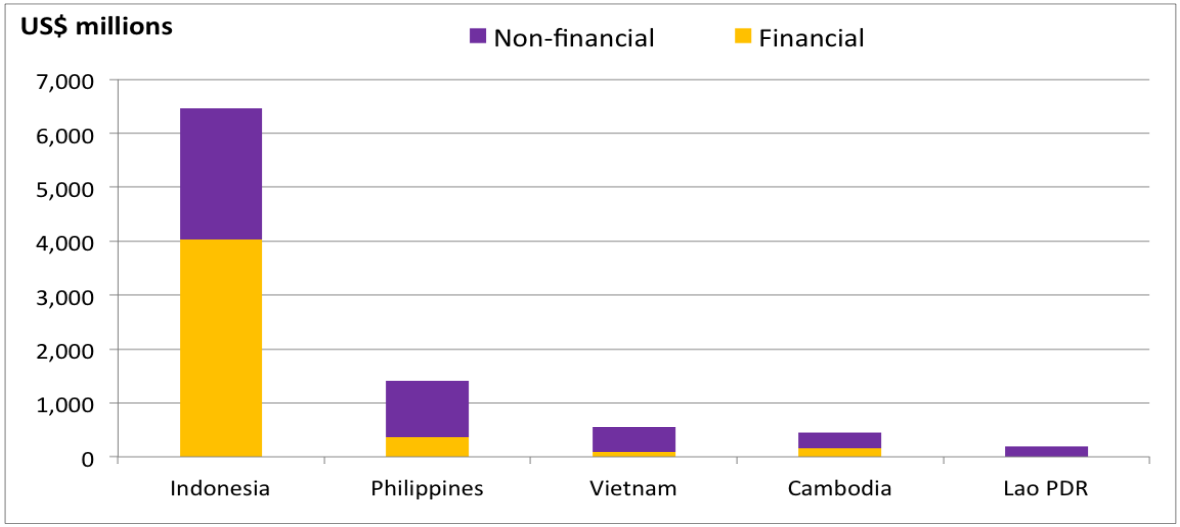
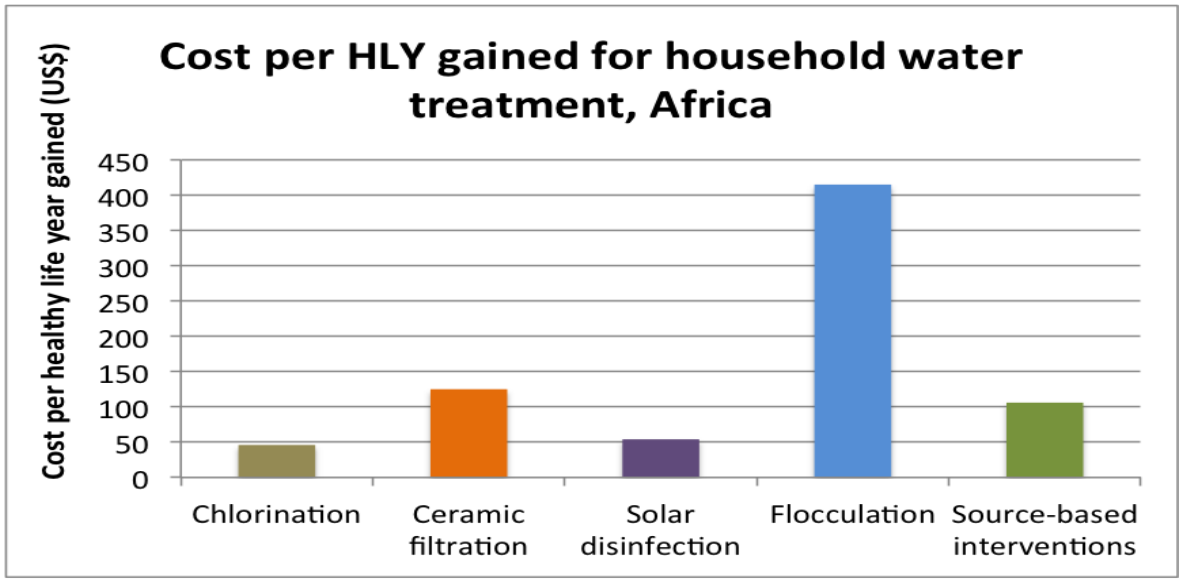
Impact analysis

Total cost of the lack of a development intervention: example of sanitation in Asia



Comparing the full intervention costs versus the health im-pacts over the lifetime of the intervention (deaths averted, cases averted, healthy life-years averted)



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Using results of economic analysis

(See also video Guy Hutton)

Public Decision Making:

- Putting WASH on map (Ministries of Finance)
- Linking with the Regulator (pricing, connection policy)
- Improving the planning & design of programs
- Role of media & academia

PUBLIC HEALTH

Jakarta Post April 21, 2009

RI loses $5.4b yearly from bad sanitation

The Jakarta Post

JAKARTA

The Public Works Ministry urged regional authorities Monday to accelerate the building of proper sanitation systems to prevent yearly losses of up to 2.3 percent of the country's GDP as a result of illness.

"In 2007, the World Bank recorded that Indonesia lost Rp 56 trillion (around US$5.4 billion) each year due to poor sanitation systems, which leads to numerous diseases and counter-productive consequences," Public Works Minister Djoko Kirmanto said in his keynote speech at a gathering of regional authorities in Jakarta.

During the event, 17 regional authorities from various provinces, cities and regencies signed an agreement to speed up the improvement of their regions' sanitation systems.

Currently, only 11 cities in nine of Indonesia's 33 provinces have off-site or centralized sanitation systems that channel wastewater from toilets to a waste processing center. "Off-site sanitation accounts for only 2.35 percent of the country's wastewater processing systems, while 71 percent of the country's household use on-site sanitation systems that usually involve septic tanks," Djoko said.

He added that some on-site systems were still below standard and posed environmental and health risks. According to Djoko, the ministry will try to encourage 228 cities in Indonesia to enhance their sanitation systems.

"There is a possibility the government will provide incentives to regions that show admirable efforts in improving their sanitation systems," he said.

According to Budi Yuwono, director of the ministry's Cipta Karya division that manages housing and residential infrastructure, the government will only allocate sanitation improvement funds to regions seen as having adequate sanitation road maps.

"Only regions that have clear sanitation improvement strategies in their mid-term plans will be considered for sanitation fund disbursements," he said on the same occasion, adding the government must increase investment in sanitation from Rp 200 per capita each year to Rp 47,000 per capita each year.

Previously, the Cipta Karya division was the only one actively involved in sanitation, Djoko explained. "From now on, this is unacceptable."

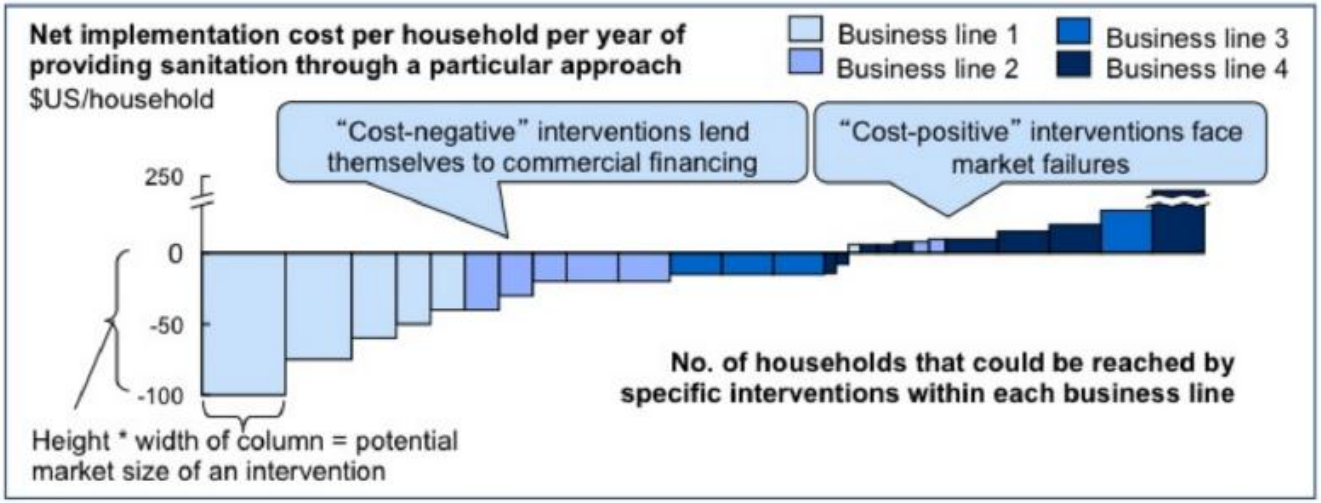
According to the ministry's data, the country needs at least Rp 6 trillion to enhance its sanitation systems. Currently, the government allocates around Rp 600 billion each year for this purpose.

Djoko said that due to insufficient financing, several international organizations, such as USAID, were contributing considerable amounts of funds, as well as program assistance, to improve Indonesia's sanitation.

Last month, head of the wastewater division at The National Development Planning Agency (Bappenas), Nugroho Tri Utomo, revealed that the government's sanitation programs were often misdirected and targeted privileged citizens instead of the poor, who were the frequent victims of disease outbreaks due to poor hygiene. "They target people with money who can support their programs, but these people often refuse to pay the monthly fees for off-site sanitation systems, because they feel their private waste management systems are already adequate," he said. According to Nugroho, people from the lower economic strata are more willing to pay for off-site sanitation systems. (dis)

Business development:

- Market segmentation and pricing policy



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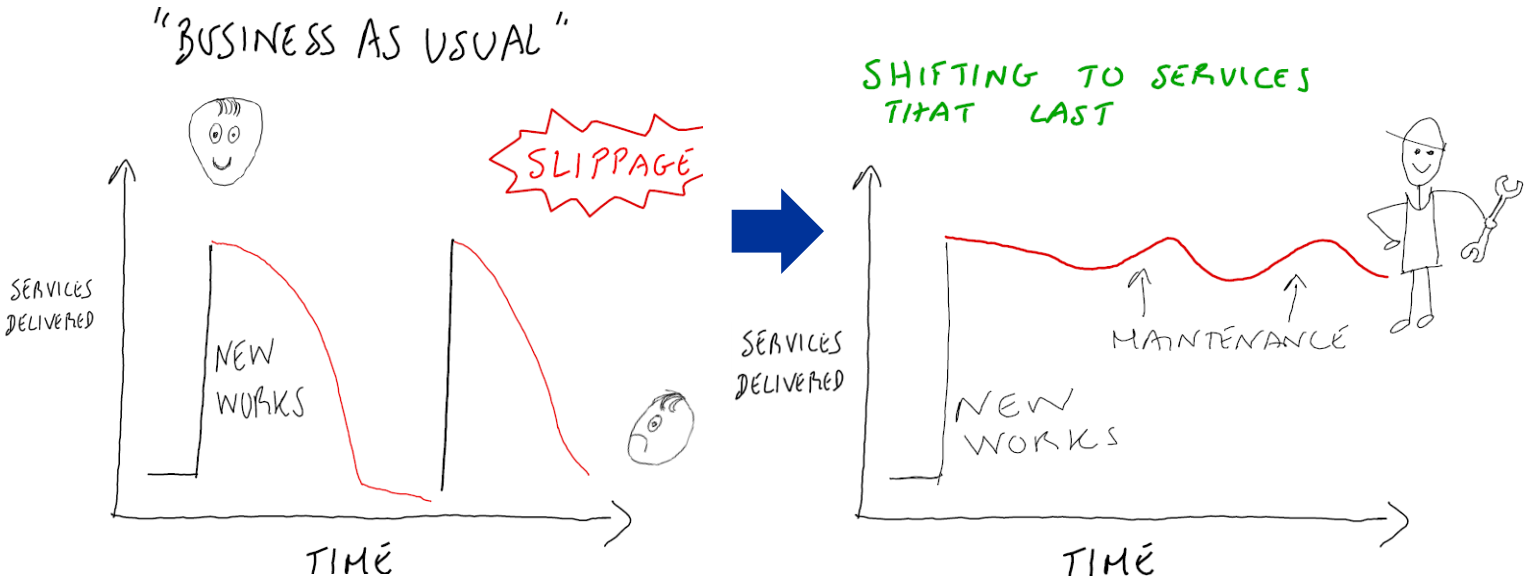
From business as usual to services that last

(See also video Peter Burr)

- Problem being addressed: unsustainability of WASH services and its consequences => many people without (or with poor) services
- Objectives of the life-cycle cost approach: catalyse learning to improve the quality, targeting and cost effectiveness of service delivery



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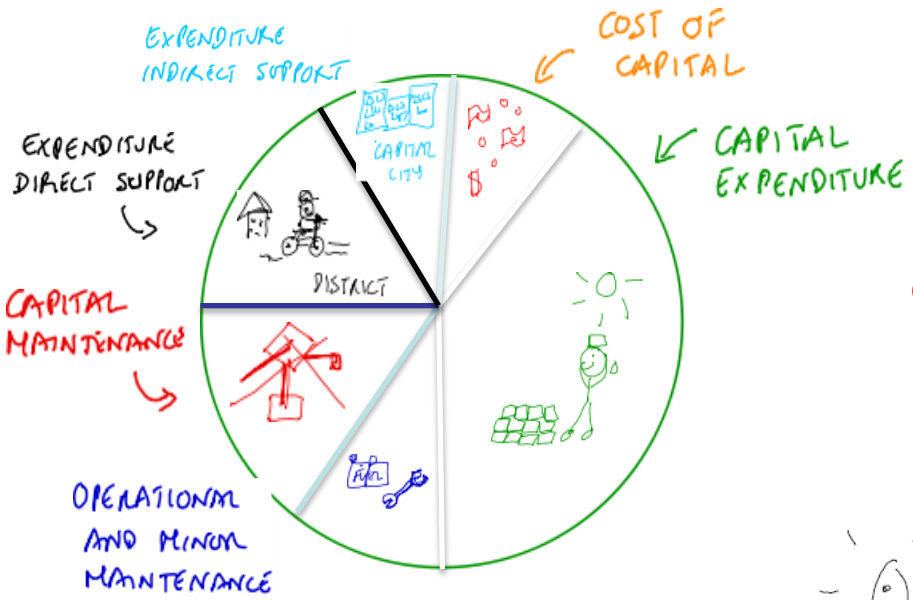
Identifying costs and service levels

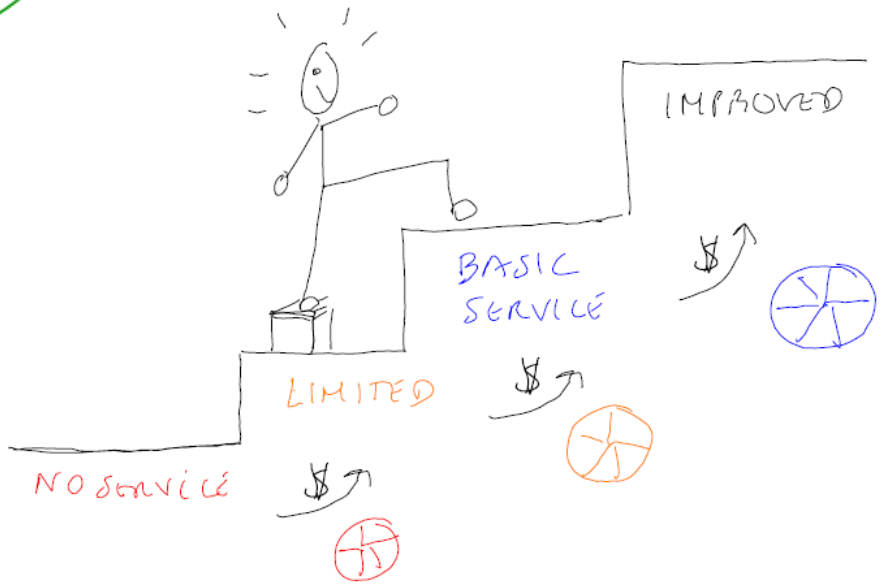


1st step of the life-cycle cost approach:

- **Identify the costs that need financing**

2nd step of the life-cycle cost approach :

- **Compare the assessed costs against levels of service provided**



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Service levels

Assessing water service levels

Service levels	Quantity	Quality	Accessibility, distance and crowding (minutes per round trip)	Reliability
High	>= 60 litres per person per day	Meets or exceeds national norms based on regular testing	Less than 10 minutes (water available in the compound or household)	Very reliable = works all the time
Intermediate	>= 40 litres per person per day	Acceptable user perception and meets/exceeds national norms based on occasional testing	Between 10 and 30 minutes. (less than 500m AND <= normative population per functioning water point)	Reliable/secure = works most of the time
Basic (normative)	>= 20 litres per person per day			
Sub-standard	>= 5 litres per person per day	Negative user perception and/or no testing	Between 30 and 60 minutes. (between 500 and 1000 meters AND/ OR more than normative population per functioning water point)	Problematic = Suffers significant breakdowns and slow repairs
No service	< 5 litres per person per day	Fails to meet national norms	More than 60 minutes (more than 1000 m)	Unreliable/insecure = completely broken down

Assessing sanitation service levels

Service levels	Accessibility	Use	Reliability (O&M)	Environmental protection (pollution and density)
Improved service	Each family dwelling has one or more toilets in the compound	Facilities used by all members of HH	Regular or routine O&M (including pit emptying) requiring minimal user effort	Non-problematic environmental impact disposal and re-use of safe-by products
Basic service	Latrine with impermeable slab (HH or shared) at national norm distance from HH	Facilities used by some members of HH	Unreliable O&M (including pit emptying) and requiring high user effort	Non problematic environmental impact and safe disposal
Limited 'service'	Platform without (impermeable) slab separated faeces from users	No or insufficient use	No O&M (pit emptying) taking place and any extremely dirty toilet	Significant environmental pollution, increasing with increased population density
No service	No separation between user and faeces, e.g. open defecation			

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Feedback from early LCCA adopters

- Non-functionality is very high. How can I understand better the mechanisms and costs for increasing functionality?
- There are lot of investments on infrastructures, but resulting services are low. Can we get more value for money?
- The donor says is too expensive. Can I show that my programme is cost effective?
- I want to monitor sustainability. What are the best indicators?
- My organisation uses different approaches, can I check which one is more cost-efficient?
- As government I need to ensure the maintenance of existing infrastructure. How can I calculate who will pay how much for what?
- As government I need to benchmark costs of providing WASH services
- As local government I need to plan, budget and monitor WASH services

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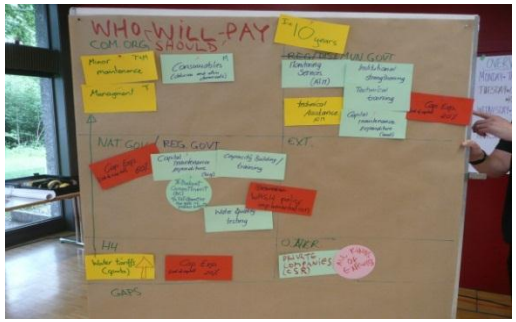
Main findings of the case studies

- Different contexts - but major challenges are often similar
- Water utilities all over the world face the challenges of poor investments, leakage, billing & collection and servicing of the poor
- Identifying costs allows to highlight current gaps at present time and with a prospective view, e.g.:
  - Not enough capital maintenance funding
  - System expansion and social cases not addressed
  - Stakeholders' capacities too low
- Matching costs and revenues: need for identifying all potential revenues funders and more varied financial mechanisms
- Valuing the benefits remains a difficult exercise

See videos of Arjen Naafs, Cesarina Quintana, Monique Gbaguidi, Ramiz Kokollari, Amisial Ledix



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Sustainability clinics topics

- How to attract savings and credit associations to finance water supply and sanitation in rural Moldova?
- How to design tariffs or otherwise create incentives for people to pay for water supply in remote areas (Haiti)?
- How to mobilise maintenance funds of water users committees in innovative ways for O&M in water supply (Nepal)? ***Video Niraj Acharya***
- Financial sustainability ideas for the Uganda water training company?
- Examination of the water supply tariffs structure in Uzbekistan using a LCCA lens?
- Role of efficient operation in supporting financial sustainability (Kosovo)?
- How to link water pump services with light/electricity service in extreme rural areas (Madagascar)?
- How can a utility justify a tariff increase to a municipality – who has to approve it (Bosnia)? ***Video Sanela Arnautovic***

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Financial sustainability framework

What are the key elements of a successful approach to financial sustainability of WASH services?

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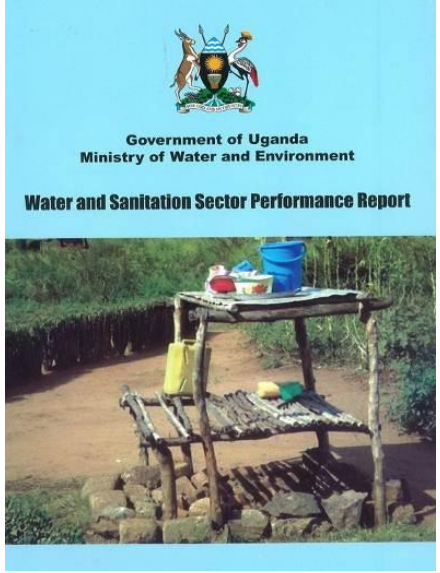
Key element 1: "Appropriate sector governance"

- How conducive is the legal and policy environment?
  - Are roles & responsibilities of key stakeholders clarified and distinct?
  - Is there an independent regulatory body?
  - Is the asset ownership legally clarified?



- How predictable is sector financing and planning?
  - Do national mechanism exist for planning & monitoring (yearly sector review)?
  - Do donors commit for mid- to long-term engagements?

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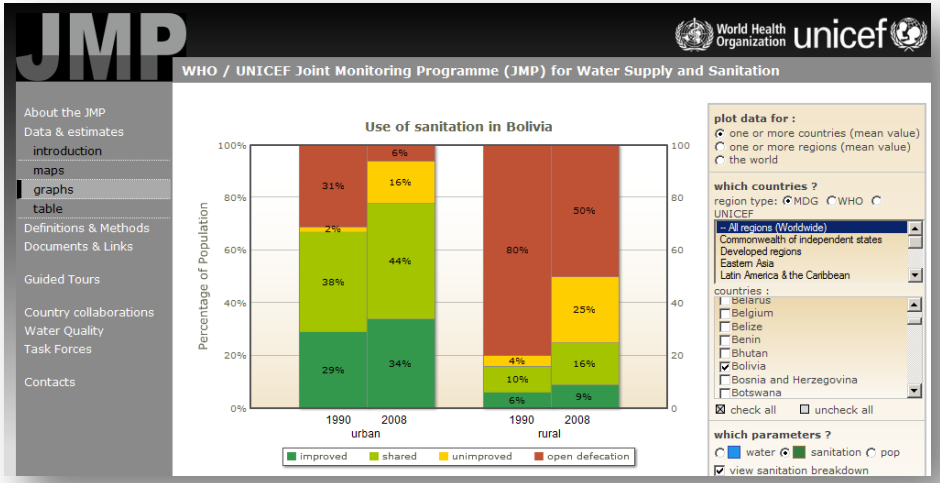
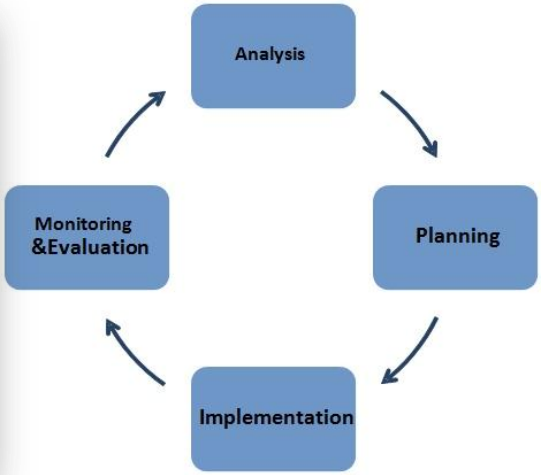
Key element 1: "Appropriate sector governance"

- Are there mechanisms ensuring transparency and accountability?
  - At local level (local governments, water & sanitation committee)
  - At regional & national level (national support agencies, government)
- Is there space for reflection and sector learning?
  - Is there a strategy and a quality system for monitoring & evaluation?





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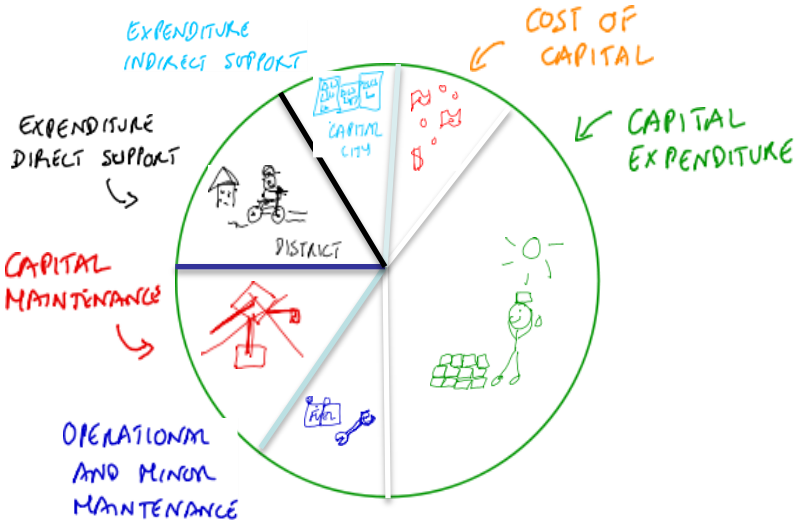
Key element 2: "Comprehensive cost analysis"

- Are all costs identified, quantified and monitored?
  - At service providers level + regional/national level (indirect support)
  - Monitored by policy makers and regulators
- Are in particular the necessary capital maintenance funds available?
- What costs do YOU need to finance?
  - Including often forgotten costs (water resource protection, risk mitigation)



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Key element 2: "Comprehensive cost analysis"

Cost categories (Source: Fonseca et al., 2011.)

One time expenditure on providing a new or extended service where there was none:

- **Capital expenditure:** Initial costs to develop or extend a service. 'Hardware' such as pipes, pumps, excavation, lining, and concrete structures and one-off 'software' such as community training and consultations.

Recurrent expenditure on maintaining an existing service at its intended level:

- **Cost of capital:** Cost of interest payments on micro-finance and any other loans.
- **Operating and minor maintenance expenditure:** Typically regular expenditure, such as wages, fuel, and the purchase of cleaning products. Neglect can lead to service failure and expensive capital (maintenance) expenditure.
- **Capital maintenance expenditure:** Asset renewal and replacement cost; occasional and lumpy costs that seek to restore the functionality of a system, such as replacing a handpump or emptying a septic tank. It is required to avert failure and to maintain a continuous service.
- **Expenditure on direct support:** Cost of support activities for service providers, users or user groups, not directly related to implementation, e.g. training for a community or a private sector operator. Critical to achieve long-term functionality and scale.
- **Expenditure on indirect support:** The cost of macro-level support, planning, policy making and capacity building. Includes support to decentralised service authorities or local government. These costs have a direct impact on long-term sustainability.

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Key element 3: "Financially viable & socially equitable services"

- Is the mix of taxes + tariffs + transfers greater than life cycle costs, ensuring access to the poor?

- Are there diversified and adaptable financing mechanisms to ensure Human rights to WASH?

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Key element 4: "A solution suitable to the context"

- Is the solution appropriate and affordable?
  - Choice of technologies that are socially acceptable, financially affordable and environmentally suitable
  - Minimizing administrative burden
  - With operation & maintenance requirements matching the local capacities of the water schemes managers
  - Choice of the service level fitting the users' preferences
- Is it responsive? (especially for fragile states)
  - Developed after an in-depth analysis of the situation
  - That means flexible and adaptable to context evolution
  - With a strong emphasis on capacities building

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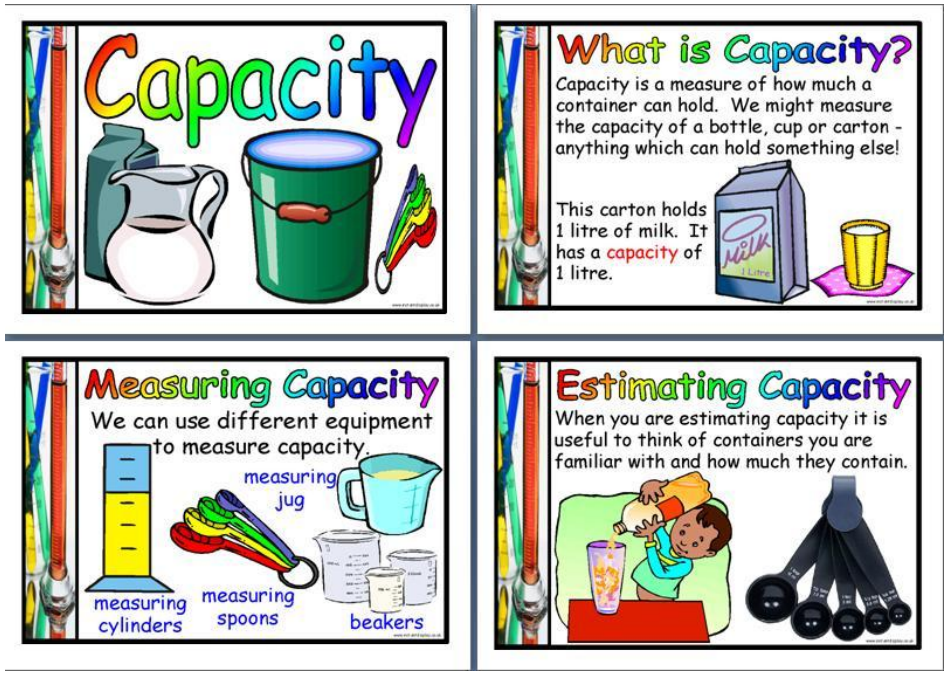
Key element 5: "Organisational capacity of relevant actors"

- Where are the capacity gaps?
  - Administrative
  - Managerial
  - Technical
  - Financial
  - Analytical



- Are financial reserves secured and optimised?
  - What can be done with accumulated funds?
  - Facing risks of misuse or currency devaluation
  - Need to strengthen financial expertise

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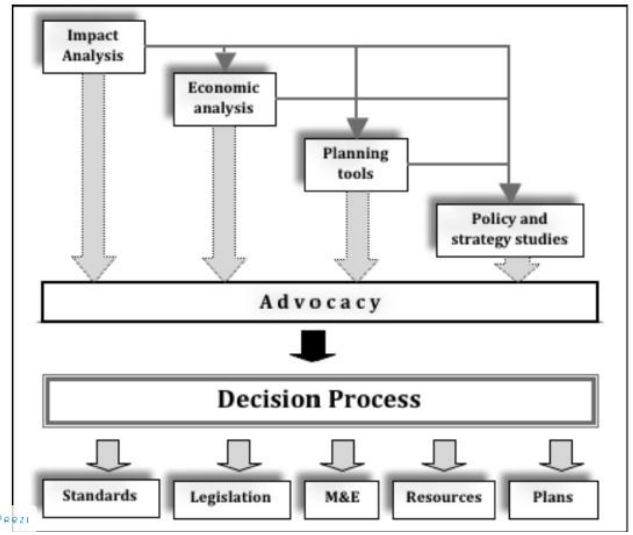
Key element 6: "Ownership and commitment"

- Is there a committed leadership?
- Are all stakeholders involved and participating?
- Are they interested and motivated?
- Are the economic benefits identified, understood and valued?
  - As tool for advocacy at policy level
  - As tool for awareness raising at community level



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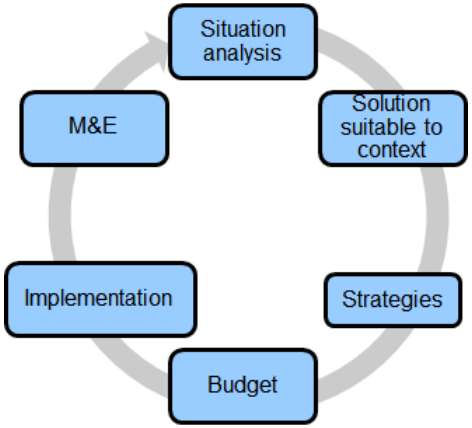
Recommendations for framework application

- **Objective:** Reflect on the financial sustainability of WASH services and spark off the required change in mindset and an eye for the future rather than the present (asking the right questions at the right moment and harnessing the right answers)
- **Context and audience:** Applicable in a broad range of WASH contexts (both drinking-water and sanitation services, at system, utility or areal level) by a large audience (practitioners, utility managers, policy makers, researchers, etc.)



- **Topics:** For situation analysis, strategy development, budgeting, implementation, monitoring & evaluation and lobbying / advocacy
- **Tools:** Select and apply existing instruments such as specific guidelines, best practices compilations and toolkits (signposted at the end of this document) to delve deeper into the six key elements

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Recommendations for framework application

Define **scope and boundaries** at the outset of an assessment:

- **Level of analysis:** is the starting point / angle of view e.g. the individual system level, utility level, areal (local, regional, national) level, sector approach level or supranational level?
- **Point in time of the analysis**: is the spotlight on situation analysis (services delivery, stakeholder capacities, sector framework/governance), designing strategies and interventions (needs, entry points and actions), budgeting and execution (cost/benefit analysis, prioritisation, capacity building) or monitoring & evaluation?

- **Projection of the analysis:** is the assessment about getting a single snap-shot, an absolute comparison over time (at different stages of an endeavor) or a relative comparison (across parallel endeavors at the same moment)?

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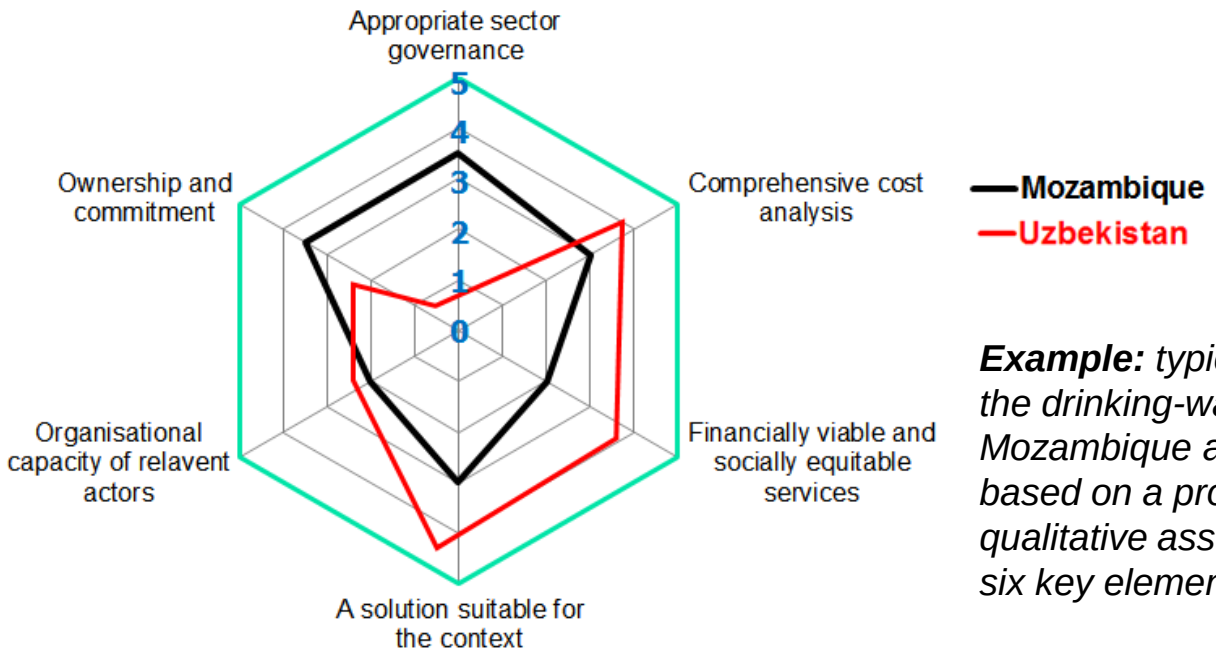
Recommendations for framework application

Visualize the results of an assessment as **radar chart** (spider diagram) showing commonalities and outliers:

- Low scoring variables would call for particular attention to be paid to the respective key element to improve its pertinence
- Distorted spider diagrams would call for a more balanced approach to be adopted towards the six key elements



Example: *typical initiatives in the drinking-water sector of Mozambique and Uzbekistan based on a provisional and qualitative assessment of the six key elements*

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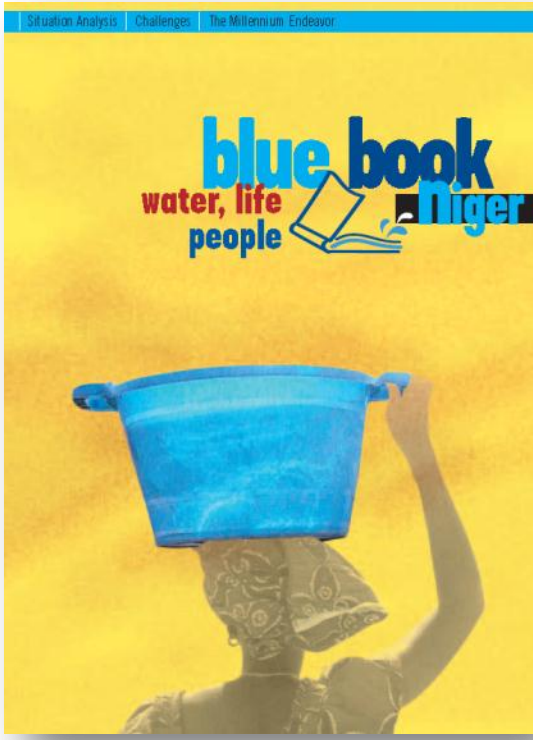
Framework components

☒Sector governance
☐Cost Analysis
☐Financially viable /socially equitable
☐Suitable to context
☐Actors capacities
☐Ownership & commitment

Blue books

- http://www.sie-isw.org/en/lobbying-tools/blue-books
- Blue books are available for Burkina Faso, Mail, Niger, Benin and Senegal
- The Blue Books are developed by all partners of a country and provide an independent assessment of the achievement of the MDGs. They evaluate policies and strategies and provide a platform for action, in order to ensure equitable and sustainable access to water supply and sanitation for all citizens.



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The Water Integrity Network

WIN Water Integrity Network
Fighting corruption in water worldwide

Framework components

☒Sector governance
☐Cost Analysis
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☐Suitable to context
☐Actors capacities
☐Ownership & commitment

http://www.waterintegritynetwork.net/

- The Water Integrity Network (WIN) combines global advocacy, regional networks and local action, to promote increased transparency and integrity, bringing together partners and members from the public and private sectors, civil society and academia, to drive change that will improve the lives of people who need it most.
- The website provides tools, case studies, training materials and news & trends of the network.

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WaterAid Sustainability Framework

WaterAid

http://www.wateraid.org/uk/what_we_do/how_we_work/wash_matters/9874.asp

- This framework sets out WaterAid's understanding of sustainability and how it can be achieved.
- It commits WaterAid to a renewed effort, with others, to bring about the lasting changes which those in low-income communities and nations need and demand.
- It sits alongside other processes for monitoring, reporting and learning.

Framework components

☒Sector governance
☐Cost Analysis
☐Financially viable /socially equitable
☐Suitable to context
☒Actors capacities
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Output-Based Aid

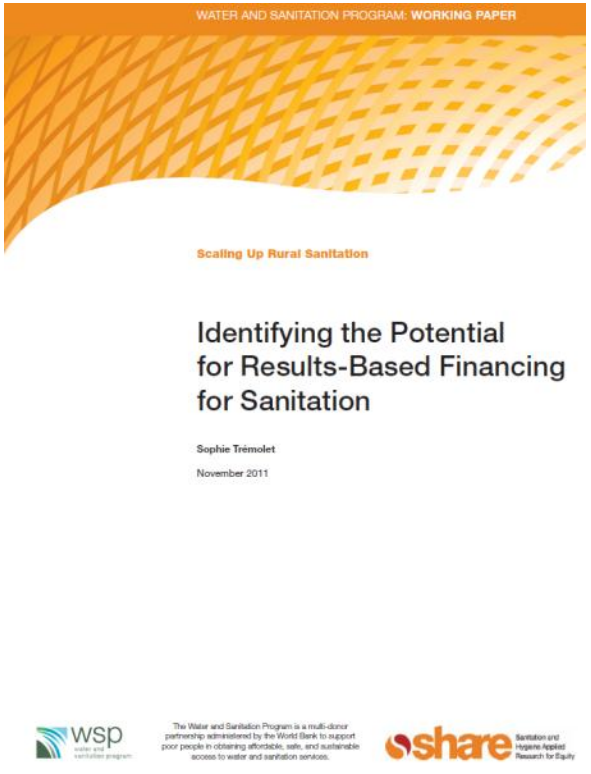
wsp
water and sanitation program

Framework components

☒Sector governance
☐Cost Analysis
☐Financially viable /socially equitable
☐Suitable to context
☒Actors capacities
☒Ownership & commitment

Identifying the potential for Results-Based Financing for Sanitation

- Sophie Tremolet is a finance specialist in the water and sanitation sector. She is currently working on developing innovative financing mechanisms for sanitation.
- This paper builds on earlier thinking undertaken for WSP (see *Output-Based Aid for Sustainable Sanitation* and *Financing On-Site Sanitation for the Poor: A Six-Country Comparative Review and Analysis,* both available at www.wsp.org/scalingupsanitation).


WATER AND SANITATION PROGRAM: WORKING PAPER

Scaling Up Rural Sanitation

Identifying the Potential for Results-Based Financing for Sanitation

Sophie Trémolet

November 2011

wsp

The Water and Sanitation Program is a multi-donor partnership administered by the World Bank to support poor people in obtaining affordable, safe, and sustainable access to water and sanitation services.

share Sanitation and Hygiene Applied Research for Equity

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Life-Cycle Cost Approach

www.washcost.info

- This website is an initiative from IRC through its WASHcost project that aims at developping a new methodology for monitoring and costing sustainable WASH services.
- The website provides publications, training package, case studies and links to further reading on the life-cycle cost approach, progress so far of the WASHcost project.
- Video Peter Burr & Arjen Naafs
- WASHcost calculator: prototyp in development (http://www.washcost.info/page/2145)

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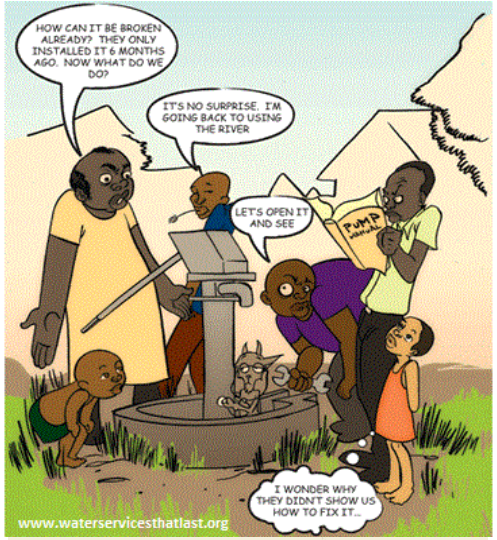
Water Services That Last

IRC

www.waterservicesthatlast.org

- The “Water Services That Last” website is an initiative from IRC through its six-years Triple-S (Sustainable Services at Scale) project to improve water supply to the rural poor.

- The website provides brief information, tools, case studies and links to further reading on sustainability of WASH services, ways to influence, progress so far and possible ways to contribute.



Framework components

☐Sector governance
☒Cost Analysis
☐Financially viable /socially equitable
☐Suitable to context
☐Actors capacities
☐Ownership & commitment

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Human Rights to Water & Sanitation Toolkit

Framework components

☐Sector governance
☐Cost Analysis
☒Financially viable & socially equitable
☐Suitable to context
☐Actors capacities
☐Ownership & commitment

http://www.triagonal.net/files/waterlex/course/

- Based on the outcomes of the AGUASAN Workshop 2010, the toolkit provides development practitioners with methodologies, checklists, top 10 action points, good practices as well as with links to existing (harmonized) tools helping to take decisions, to tackle and to monitor the realisation of the HRTWS along the conceptual/operation framework of the Project Cycle Management.
- The toolkit is currently being field-tested, improved in content and enriched with case studies

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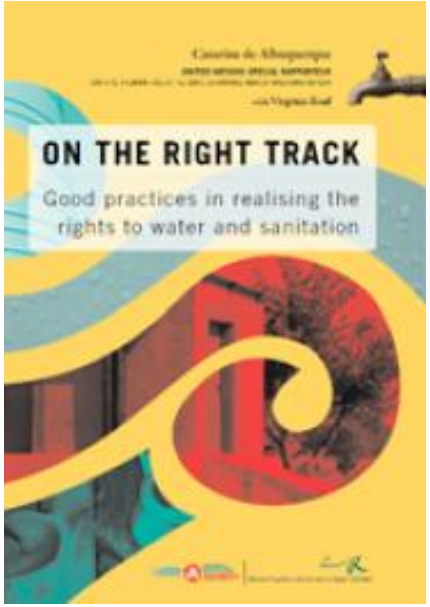
Website of the UN special rapporteur on HRWS

http://www.ohchr.org/EN/Issues/WaterAndSanitation/SRWater/Pages/SRWaterIndex.aspx

- The mandate of the Special Rapporteur on the human right to safe drinking water and sanitation (SRWater) was established by the UN Human Rights Council in 2008. The SRWater, Ms. Catarina de Albuquerque, undertakes country missions, collects good practices, and works with development practitioners on the implementation of the rights to water and sanitation.
- The websites makes available the SRWater's reports to the UN, UN resolutions related to HRWS, International Standards referring to the HRWS and available information aimed at the practical implementation of HRWS, such as good practices worldwide.



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Business Plateform

cewas
international centre
for water management services

http://www.cewas.org/index.php/business-platform/about/

- The cewas Business Platform is the head-quarters of SMEs, which have emerged from the cewas Start-Up Centre.
- It provides home base support and a net-working and exchange platform for cewas SMEs amongst themselves as well as with research and development (R&D) partners.
- The Business Platform is the interface of the cewas service providers in the field of water resource management and sustainable sani-tation and the market and the point of contact for cewas clients.

Framework components

☐Sector governance
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Sustainable Sanitation and Water Management Toolbox

SSWM
sustainable sanitation and water management

http://www.sswm.info/

- The SSWM Toolbox is a comprehensive collection of tools and approaches to improve water resources management and sanitation at a local level.
- It can be used as a pool of resources or as a support for planning and implementing projects.
- It contains six main sections: concept, understand your system, planning and process tools, implementation tools, background, train the trainers.

Framework components

☐Sector governance
☐Cost Analysis
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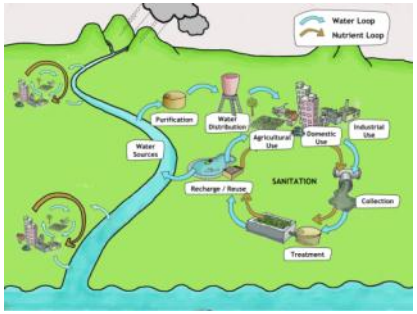
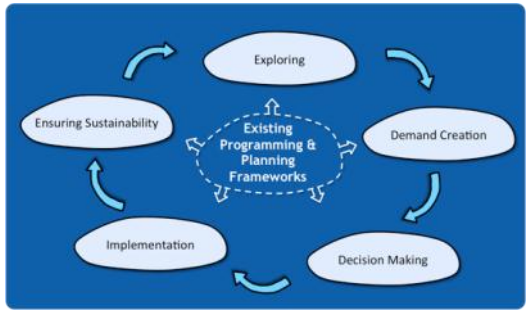
☒Actors Capacities
☐Ownership & commitment





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Compendium Hardware & software

eawag aquatic research

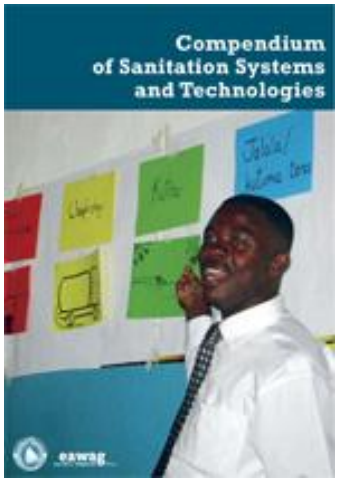
Water Supply & Sanitation Collaborative Council
Inform. Engage. Enable.

Framework components

☐Sector governance
☐Cost Analysis
☐Financially viable & socially equitable
☒Suitable to context
☐Actors capacities
☐Ownership & commitment

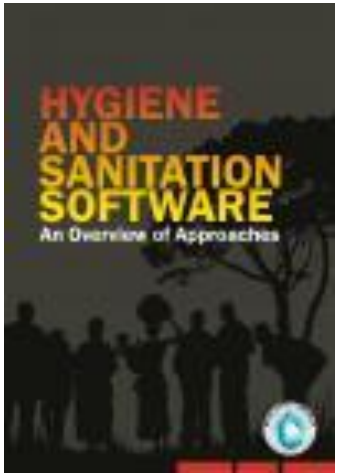
- Compendium of Sanitation Systems and Technologies (EAWAG/ WSSCC): a concise document presenting in a structured form a large amount of information on tried an tested technologies. It provides a useful planning tool for making more informed decisions.

  http://www.eawag.ch/forschung/sandec/publikationen/compendium_e/index_EN



- Hygiene and Sanitation software (WSSCC): this publication takes an in-depth look at the various hygiene and sanitation software approaches that have been deployed over the last 40 years by NGOs, development agencies, national and local governments in all types of settings – urban, informal-urban and rural.

  http://www.wsscc.org/node/745



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WASH technologies

Framework components

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☐Ownership & commitment

http://washtechafrica.wordpress.com/

- The WASHTech project (2011-2013) is involving local partners in Burkina Faso, Ghana and Uganda to introduce a robust Technology Assessment Framework (TAF) that will assess the potential of new innovative technologies which may be used at decentralised level.
- The website offers deliverables related to the various areas of work of the project, such as situation analysis of WASH technologies, framework design process, pilot technology assessment & recommendations for sector strengthening.

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Akvo Website

- www.akvo.org
- Akvo creates open source web and mobile software, and builds networks of skilled partners that can change the way development aid is allocated and reported.
- The website offers resource in order to help people share knowledge on smart water and sanitation technologies (Akvopedia) and gives opportunities for networking, matching funders and projects designers and ways to influence (akvo campaigns).


Framework components

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Literature on Cost- Benefit Analysis

- WHO. Guy Hutton, Laurence Haller, 2004: **Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level;** This study compares the costs and benefits of sanitation interventions, results are aggregated on the level of WHO-regions. pdf

- **WSP Economics of Sanitation Initiative.** This series of studies evaluates the costs caused by the current defi-ciencies in sanitation services on country level. Results are available for several countries in South-East Asia, South Asia and Africa. Studies in Latin America are currently under way. html

- EU. **Guide to Cost Benefit Analysis of investment projects. 2008.** Cost benefit analysis is an important tool that helps national and regional authorities of member states make good choice between projects. pdf

- 2030 water resources group. **Charting our future**. 2009. This report was developed to take a first step in providing greater clarity on the scale, costs and tradeoffs of solutions to water scarcity. An integrated economic approach to water management is detailed, including the use of water availability cost curve. html

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Advocacy campaign

- WSSCC campaign GDP for GDP : WSSCC website

- End water poverty and ist last campaign» the world walks for water and sanitation» website

- WSSCC & World toilet Organization: World Toilet Day WTD website

- Etc…

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AGUASAN Workshop 2012 Contacts

Resource persons:

- Peter Burr, burr@irc.nl
- Guy Hutton, guy.hutton@bluewin.ch
- Francois Münger, francois.muenger@deza.admin.ch

Topic case presenters:

- Monique Gbaguidi, monique.gbaguidi@helvetas.org (Benin)
- Ramiz Kokollari, ramiz.kokollari@kiwerconsulting.com (Kosovo)
- Amisial Ledix, amisial.ledix@helvetas.org (Haiti)
- Arjen Naafs, arjen.washcost@gmail.com (Mozambique)
- Cesarina Quintana, cesarina.quintana@sdc.net (Peru)

Steering commitee:

- Roger Schmid, roger.schmid@skat.ch (lead)
- Manuel Thurnhofer, manuel.thurnhofer@deza.admin.ch
- Agnès Montangero, agnes.montangero@helvetas.org
- Chris Zurbrügg, christian.zurbruegg@eawag.ch
- Ueli Graf, uli.graf@bluewin.ch
- Riff Fullan, riff.fullan@helvetas.org (moderator)
- Anne Sophie Aublet, annesophie.aublet@skat.ch (rapporteur)