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Financing access for local actors to invest in water and sanitation services in Africa

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This synthesis « **Financing access for local actors to invest in water and sanitation services in Africa** » was performed by **Nicolas Sauvignon**, student in the AgroParisTech-ENGREF specialized master "Water Management" (post-master degree) in Montpellier.

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TECHNICAL SYNTHESIS

Financing access for local actors to invest in water and sanitation services in Africa

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RESUME

L'Afrique est aujourd'hui le continent qui connait le plus fort taux de croissance démographique urbaine de la planète, il se prépare à accueillir 300 millions de personnes supplémentaires dans les vingt prochaines années. Les besoins d'investissement qui vont en résulter s'ajouteront aux montants nécessaires pour rattraper le retard accumulé dans la fourniture des services essentiels d'eau et d'assainissement. Malgré les objectifs du développement pour le Millénaire et après environ vingt années de décentralisation, le continent accuse encore de fortes disparités dans les modalités d'accès au financement pour les collectivités et les opérateurs locaux.

Cette synthèse permettra d'abord une évaluation des besoins de financement pour les services d'eau et d'assainissement, et plus particulièrement du financement de l'investissement, selon le type d'infrastructures, les différents acteurs concernés et la taille des collectivités.

En effet ces dernières disposent de modalités d'accès bien différentes aux aides internationales et aux transferts d'état selon leurs tailles, mais il existe toutefois des outils et des mécanismes financiers mobilisables pour des petites et moyennes collectivités. Nous reviendrons sur ces différents outils, les expériences les plus prometteuses et leurs critères de viabilité. Le secteur privé peut aussi intervenir sur certaines filières et apporte parfois une réponse là où les gouvernements et les collectivités n'ont pu s'adapter aux enjeux locaux et à la demande des populations. Quel est donc son positionnement et quelle contribution peut-il apporter, selon quels critères d'exigence et de viabilité ?

ABSTRACT

Today, Africa is the continent that has the highest urban demographic growth around the world. Within the next twenty years, there will be 300 million more people. As a result, investment needs will be added to the amount that already exists, in order to catch up with the accumulated delay in water infrastructure investments. Despite the millennium development goals, and after twenty years of decentralisation, there are still disparities in the way local and community operators can access financing.

Governments need to find a solution to the delay by putting in place new institutional structures and funding models for effective strategies that will lead to prompt water and sanitation infrastructure provision.

This synthesis will first evaluate the financing needs for these infrastructures according to the type of infrastructure, the concerned stakeholders and the community scale.

In fact, communities have very different funding models for financing investment and they do not all have access to aid and state transfers. Nevertheless, there are also funding models for small and medium communities that are to be developed. The review looks at all of these models; highlighting the most effective and promising experiences along with viability analysis. Private companies also take part in some specific areas and provide some answers where the government or the community struggle to find solutions. Therefore, what is their position and what contribution can be made, and according to what requirement and sustainability criteria?

SOMMAIRE

Contenu

GLOSSAIRE

3Ts : Tariffs, Taxes, Transfers

ANICT : Agence nationale d'investissement des collectivités territoriales (Mali)

ADL : Agence de développement local (Sénégal)

ADM : Agence de développement municipal (Sénégal)

BERD : Banque Européenne pour la Reconstruction et le Développement

CPSCL : Caisse de prêts et de soutien des collectivités locales (Tunisie)

DBSA : Development Bank of Southern Africa

DDF : District Development Facility (Ghana)

FEC : Fonds d'équipement communal (Maroc)

FEICOM : Fonds d'équipement et d'intervention intercommunale (Cameroun)

FCR : Full Cost Recovery

FDA : French Development Agency

FPCL : Fonds de péréquation des collectivités locales (Burkina Faso)

GLAAS : Global Annual Assessment of Sanitation and Drinking-Water

GPOBA : Global Partnership for Output-Based Aid

IFI : International Financial Institutions

IMF : Interanational Monetary Fund

INCA : Infrastructure Finance Corporation Limited (South Africa)

MDG : Millenium Development Goals

MFI : Micro Finance Institution

OBA : Output Based-Aid

ODA : Official Development Assistance

SCR : Sustainable Cost Recovery

SFI : Specialized Financial Institution

UDB : Urban Development Bank (Nigeria)

WHO : World Health Organisation

WSS : Water and Sanitation Services

INTRODUCTION

In 2000, New York organised for the Millennium Summit, the biggest meeting of all time including heads of state and government. 189 States Member adopted the Millennium Declaration, which outlined the eight Millennium Development Goals (MDGs). The third part of Goal 7 announced:

« By 2015, reduce by 50% the population that has no access to safe drinkable water and basic sanitation services. » The sanitation objective will not be met, even if the drinkable water appears to have reached it five years in advance, due to the full development of China and India that record half the World's progression. According to GLAAS 2010 report, the MDG achievement cost on water and sanitation were estimated at USD 33.5 billion and USD 375 billion for all developing countries. Two years from due date, current fund allocations will certainly not be enough. Africa still says it will be late in having access to those services, particularly in sub-Saharan Africa and rural areas.

Water and sanitation services (WSS) generate significant health, economy and environment benefits. Access to drinkable water reduces health risks, makes time for education available and improves productive activities. Proper sewage disposal preserves the surface water and the environment quality and indirectly improves economic sectors such as fishing, agriculture and tourism. WHO has estimated that achieving the MDGs related to WSS could generate about 84 billion USD per year, or 7 times more than its cost.

On the continent, water services have known significant changes over the past three decades. Socio-political and economic developments that have made an impact during this period contributed to the coming up of new principles to reorganize water service governance. These principles have replaced the old model based on public monopolies and the leading role of the states, the final results in terms of access was considered disappointing, and economic balance, unsustainable. Through the concepts of merchandising, decentralization and public- private partnerships, these new principles have inspired the water services to reform in many countries. These developments have led to the use of new tools (decentralized public authorities, small private companies and regulatory authorities, etc.) appealed to play key roles in the drinkable water supply and sanitation services.

However, this trend's cohesion is deceptive and there are many differences and particularities for each country. When they get close to the truth locally, institutional models are sometimes difficult to implement: the distribution operation is not easy, the principle of full cost recovery is rarely applied, and the institutional regulation is never entirely independent of politics.

One of the keys to develop this sector is in the access to finance, which remains very uneven depending on community size and their geographical location. Therefore, this synthesis will attempt to target these government-funding needs, and determine methods by highlighting the most promising approaches. Finally, it will identify the private sector position among stakeholders, in which market it stands out and what contribution can be made?

FINANCING REQUIREMENTS FOR LOCAL COMMUNITY TO DEVELOP WATER AND SANITATION SERVICES

THE BENEFITS OF INVESTING IN THE WSS

To generate sustainable benefits, the investment must be performed on the entire chain of WSS. Providing access is certainly one of the main components, as outlined in the definition of the MDGs, but the protection of the resource, the storage capacity, the transportation, the infrastructure, the evacuation and treatment, maintenance and exploitation of the whole chain is a necessary investment for the sustainability of services.

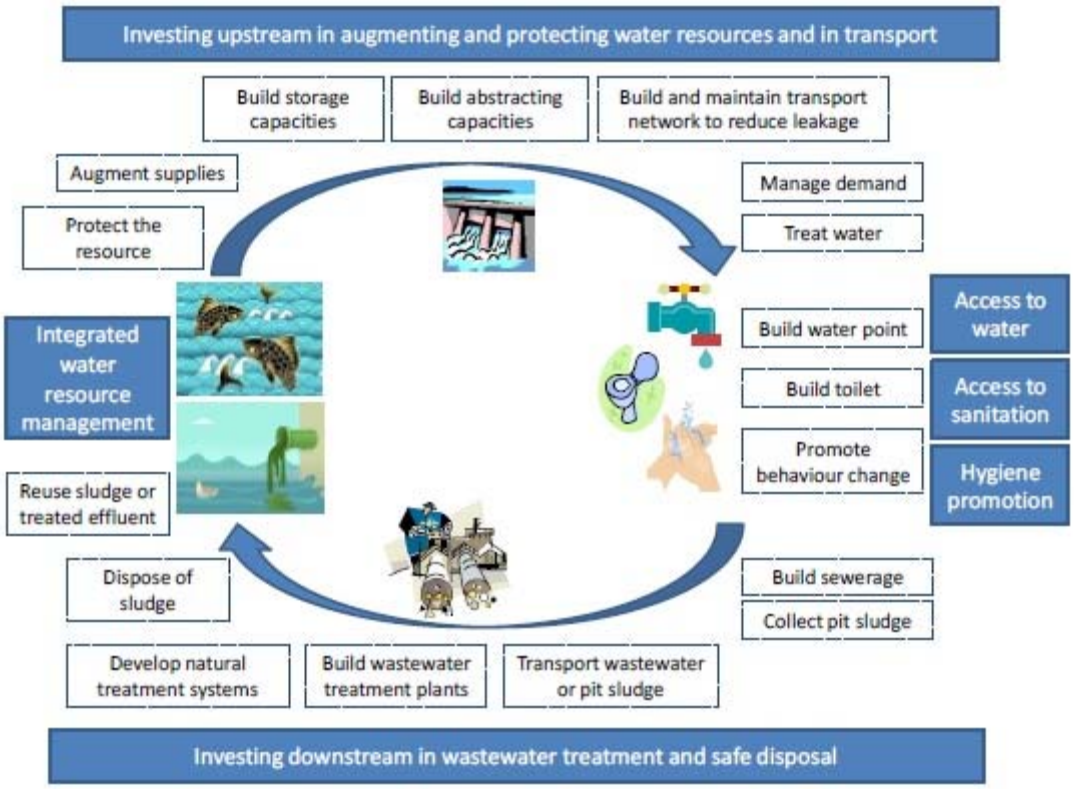


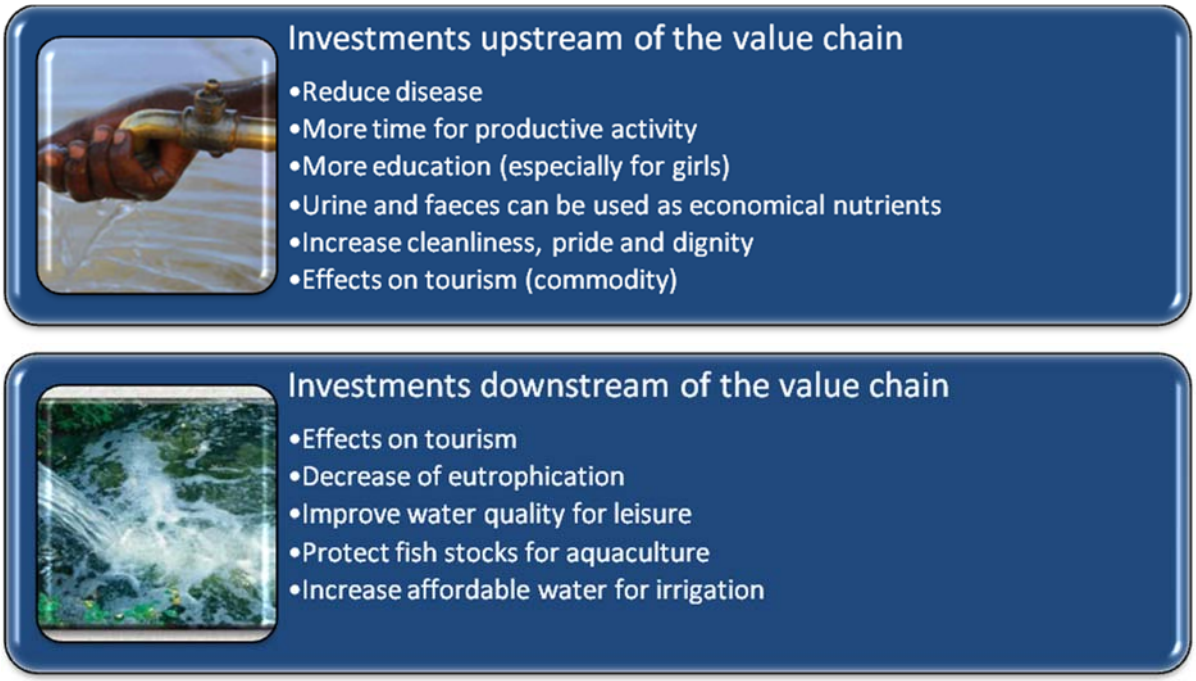
Figure 1: Water services and sustainable sanitation value chain (OCDE, 2013b)

In Africa, the problems of providing access to drinkable water and sanitation systems are amplified by the increasing demand due to various factors such as population growth, urbanization, agriculture water needs for food production, water degradation quality and the doubts related to the climate change consequences. Significantly investing to finance new infrastructure, exploitation and maintenance of the current will be needed.

Each investment made in the value chain will generate many benefits to quality of life by improving health conditions, the environment or economic activities.

It is necessary to invest in the entire value chain. The upstream investment is crucial to provide good quality water in sufficient quantity for all. Downstream, the fund-raising, the storage and treatment can improve health and preserve the resource's quality.

Recycling and reuse can also reduce the consumed amount and generate economic benefits. (OECD, 2013b) (OECD, 2013a)



According to WHO report : ratio advantage/cost = 7/1

IDENTIFICATION OF CURRENT SITUATION AND INVESTMENT NEEDS

In 2010, the WHO / UNICEF Joint Monitoring Programme noted that in the world, 2.6 billion people didn't benefit from improved sanitation facilities, while 884 million still do not have access to improved water sources. Despite MDG, drinkable water partially was achieved with a 10% increase since 2010 of improved sources. However, deep disparities exist between different regions and countries with 37 % of people without access to safe drinkable water living in sub-Saharan Africa. In addition, the MDG indicator does not measure exactly the access to safe water, accessible, acceptable and affordable to a recognized as a human right by the UN General Assembly since 2010. Global averages also mask significant regional disparities within countries, given that 84 % of the population without access to improved drinkable water live in rural areas. Regarding sanitation, the road is still long. According to estimations, by 2015, 2.7 billion people will have no access to improved sanitation and 1 billion people who should benefit from the MDGs will have been left behind. Much is in sub-Saharan Africa, 70% in rural areas. The indicators raise the problem of the access definition, according to the MDGs, that refers to an "improved" source, whereas in Africa one third of travel time required to reach these sources is higher than 30 minutes. Discussions are underway to redefine indicators after 2015 as stipulated in the recognition of human rights adopted in July 2010.

Issues and needs are colossal, considerable investments will have to be made. The main priorities are expanding access to WSS, replacement, maintenance and exploitation of existing infrastructure. Most scenarios tend to favour the financing of

investment but spending related to the operation and maintenance, although partially covered by income, are often insufficient given the cost frequently lower than the cost incurred rates (OECD, 2013b). The Hutton and Bartram report from 2008, highlight several things. First we must define the terms of access to "improved" and "unimproved " (OECD, 2013b).

Chart 1: Definition of improved "access" to WSS (Hutton et Bartram, 2008)

Service	Improved	Unimproved
Beverage water	• Drinkable water connection at home • Tap, pipe • Piped water well, drilling, protected sources • Rainwater collection	• Water well or unprotected sources • Cart with tank • Tanker • Bottle of water • Surface water
Sanitation	• Evacuation to sanitation sewers, septic tanks or latrines • Improved latrines (ventilated or concrete slab) • Dry toilet	• Environment evacuation • Latrine without slab • Outdoor hole • Bucket • Not installation and outdoor voiding

The study gave the following results regarding improvement costs for WSS sub-Saharan Africa in 2005:
For drinkable water: the cost per person of the initial investment is 164 USD for a home connection and $ 50 on average for other improved access.
The annual cost per person of the operation, maintenance and education is $ 13.4 for connection to the home and $ 0.4 on average for other improved access.
For sanitation: the cost per person of the initial investment is 193 USD for a home connection and $ 122 on average for other improved access.
The annual cost per person of the operation, maintenance and education is $ 8 for connection to the home and $ 4.9 on average for other improved access.

The study also estimates the investment needs to reach the MDGs. Result: in sub-Saharan Africa, about 11.6 billion USD for drinking water and 34 billion USD for sanitation, and about 65% in rural areas. Now, taking into account full expenses, including maintaining, exploiting and demographic increase; the study gives the following results :
For drinking water: 37 billion USD, with 33% in rural areas. 35% are the initial investment.
For sanitation: 57 billion USD with 53% in rural areas. 61% are initial investments.
(Hutton and Bartram, 2008)

Another evaluation of the financing deficit in sub-Saharan Africa, issued from the diagnostic of national infrastructures in Africa, had been led by the World Bank. It estimates there are a lack of funds to reach the MDGs. It explains that the current expenses in WSS are about 7.6 billion USD. It also highlights that household contribution is higher than government or Official Development Assistance contribution. They would spend each year 0.3% of GDP to build latrines whereas 0.2% is spent by the State and 0.2% by Official Development Assistance. About half of the investment for WSS would have been supported by households. The private sector contribution is quite insignificant. Concerning the MDGs, authors estimate that there is

22.6 billion USD financing needed to realize water and sanitation objectives (3.5% of countries' GDP).

FINANCING SOURCES FOR LOCAL COMMUNITIES

To reduce financing deficit, local communities can combine various approaches such as reducing costs through more efficiency, using the 3Ts (Tariffs, Taxes and Transfers) or mobilize some repayable finance. The combination should be used with a sustainable cost recovery (SCR) applying the 3Ts to attract repayable finance; opposed to the full cost recovery (FCR) which uses only tariff to recover the cost whereas in these countries, an affordable price is necessary. A SCR public financing sources are used to complete tariff incomes during a transition time. Then, with the system maturation, the community can adapt the 3Ts and change the ratio. To be efficient subventions have to be predictable, transparent and focused.

Financing must be used with a strategic plan, improving network efficiency, and helping to manage the service by selecting good technology at the best cost. For example, household connection is three times more expensive than tap stands but also provide more sanitary benefits.

(Bouhmad et al., 2011) (OCDE, 2013b)

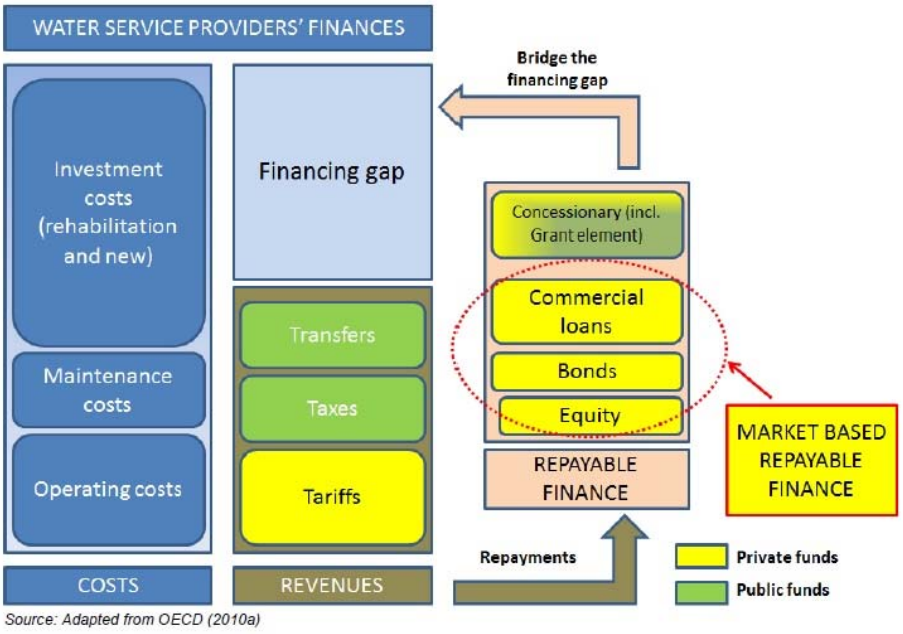


Figure 2 : financing sources for WSS (OCDE, 2010)

INCREASE RESSOURCES THROUGH TARIFFS

In most developed countries, it's considered that tariffs have to achieve full cost recovery. Yet, this method is possible when financial costs are considered but is hardly practicable when social and environmental costs are taken into consideration. The OECD recommend a sustainable cost recovery based on three points: efficient use of the 3Ts, full transparency and predictability of subsidies (well planned), and set an affordable price for all to provide financial reliability for the service provider, which can sometimes be paradoxical and hard to handle, from a social and political point of view.

In Africa, it could be difficult to set up a result which allows the service provider to recover the full costs from utilization and maintenance. It's also quiet rare they generate revenues for investment and renovation on infrastructures, which are covered in some areas, mostly by households. For comparison, incomes represent in France 90% of financial flow to the water sector against 30% in Mozambique or 10% in Egypt. Yet, to solve the paradoxical situation of affordable cost and financial viability, many countries use a progressive price range by growing increments. The first one of subsistence is accorded for free or at a really low price, which is moderated for big consumer provision and constitute an encouragement for consummation. Nevertheless, the effective establishment of this price range is tough because the poorest households aren't always connected to the network, and this is why they can't afford this price range and the price conception is sometimes badly defined. Moreover, in a financial, economic and social crisis situation, the increasing of prices seems hard to set up politically. (OECD, 2013b)

INCREASE RESOURCES THROUGH TAXES

Taxes are defined as receipts from government taxation, which are redistributed to the local communities or local communities' direct taxation. Public credit could be justified for several reasons. They could compensate market failure compensating the suppliers of WSS to public health; prevent underground water from pollution or allowing suppliers to charge with loss from the WSS in the most vulnerable classes. To be efficient, the subventions have to be transparent, targeted, and predictable and decrease in time. They are mostly targeted at the initial investment because exploitation and maintenance charges are supposed to be recovered by the price range. They could be given by donations, hybrid loans or guarantees. In the case of public management of the service, the community budget is often not enough; municipalities need to transfer from the central administration. As for the budget carried out, on average, budget allocation of the state in WSSs in Africa is at 0.9% of GDP. Burkina Faso is the most dynamic with 3%, while South-Soudan and the Côte d'Ivoire are the least enterprising. There is still flexibility about using these budgetary resources, even if they are limited. Moreover, information about spending of national administrations in the WSSs is not always reliable. (OECD, 2013b)

INCREASING OFFICIAL DEVELOPMENT ASSISTANCE (ODA)

ODA can contribute to fill the gap in financing, especially to finance the investment. It can also help in developing capacity to provide WSS. In fact, international actors can provide grants, often attended by technical assistance or training. We can see bilateral cooperation which represents international help from a country (FDA in France, GIZ in Germany, USAID in US …) and multilateral cooperation which engages more internationals actor such as the European Union, World Bank, International Monetary Fund, Development African Bank … Backers follow national strategy and often do not lend directly to local communities which don't have enough guarantee. Nevertheless, they focus on access for more vulnerable and the poorest in the population. ODA can be loan or grant. Grants are really transfers and are considered as a fundamental resource to finance basic services. Loans come as repayable financing resources; and are generally allocated to national water company to bridge deficit to finance big

infrastructure such as network construction which has mobilized most of the contribution of this sector. In 2008-09, ODA for water and sanitation services represented 8% of global ODA (around 7.5 billion USD). ODA is mainly for the drinking water sector at the expense of sanitation. In an economic crisis , ODA will continue to have a main role to play in financing deficit and help to mobilize other resources. Nevertheless, ODA through grants should decrease, as we see with FDA which reduces grants in order to increase loans. . (OCDE, 2013b) (OCDE, 2010)

Beyond multilateral and bilateral help, many actors take part through decentralized cooperation which allows help between two communities. Decentralized cooperation is a way to gain international gratitude and to benefit from the expertise of foreign communities. Backers encourage this cooperation because it strengthens community capacity and the role civil society. (Bouhmad et al., 2011)

REPAYABLE FINANCING RESOURCES

The Role of repayable finance is to fill the gap (gap between?)because they need a payback with interests. They must be used to cover investment expenses to fix, extend or renew infrastructures; and never to cover operating costs, assured by 3Ts. These financing sources can have many particularities but are also really limited especially for WSS in developing countries.

We can find intermediation financing, assured by commercial banks or Specialized Financial Institutions (SFI) with short term payback but they are often afraid to work with water sector working long term. This process is especially observed in Africa because it is tough to increase tariffs, lack of efficiency and corruption. But most African countries have SFI : South Africa (DBSA et INCA), Nigeria (UDB), Tunisia (CPSCL), Morocco (FEC), Senegal (ADM or ADL), Ghana (DDF), Cameroun (FEICOM), Mali (ANICT), Burkina Faso (FPCL). National development banks work more on big big cities projects that are richer and solvable. Small cities and rural areas are totally excluded from bank financing. However, Solutions can be found from microfinance that we will see later.

Bond emissions from companies, states or local communities are another way of repayable financing. These loans without intermediation need legal framework defined and equity market well developed. Most markets didn't offer community bond because of their lack of solvability or transparency but there are some exceptions, as in South Africa. But another time they are not really applicable for non solvable small and rural cities.
(Bouhmad et al., 2011) (OCDE, 2013b) (Paulais, 2012)

INNOVATIVE FINANCING MECHANISMS

The hybrid loan or mixed funding combining loan and grant

It is a subsidized loan. The interest rate is lower than usual thanks to the contribution of the donation element. Hybridization can be done within an SFI or an ad hoc vehicle. It mobilizes a larger amount of adequate resources in terms of cost, or time (deferred payment). This solution was used to finance Maputo urban program of water and sanitation. This joint funding can take various forms: grants from Official Development

Assistance can be provided as interest subsidies, seed financing for revolving funds or contribution to the creation of advances for project preparation. This tool has a real potential to attract repayable finance. (Paulais, 2012; OECD, 2013b)

The revolving fund

Fairly close to the hybrid loan, loan repayments abound to the funds. The latter can be reloaded using federal grants. It also requires the establishment of a guarantee fund. It represents an important lever for mobilizing funding. This type of mechanism or other types such as investment, maintenance and expansion fund can be supplied by local taxation, Official Development Assistance or charges levied on water price. They can be used to subsidize various types of operators throughout the chain of water and sanitation value.

Microfinance

The main interest of microfinance products is to spread investment costs over time, either for households or for small operators. Microfinance can therefore play a role in financing access (savings or loans given to households in order to finance their connection or their equipment) and financing operators (investment, maintenance or extension), or community projects. A study commissioned by the Gates Foundation (Mehta, 2008) estimated the potential market at $ 12 billion and 125 million borrowers by the end of the decade. Microfinance seems to have a significant and largely untapped potential. Individual loans to households are generally short or medium term (less than three years) and usually a small amount intended for network connection, construction of a particular wells, latrines or installation water purifiers. The experience of loan products to small businesses and community projects in the area of water and sanitation is more limited than those of loans to households. However, some recent projects using microfinance to finance community projects of water supply in Kenya (K-Rep with several facilitators), Senegal (CMS and Regefor project) and Côte d'Ivoire (Coopec and Crepa) have interesting potential

Despite existing studies and experiences concluding that there is a large potential, sustainability and ability to replicate large-scale financing of water and sanitation in microfinance are still unknown. Some limitations arise which lead to qualify its potential role. First of all, concerning the financing of operators, it should be understood that a large proportion of needs concerns mesofinance and not microfinance. Most of the operators have funding requirements that lie between the ceiling on loans granted by MFIs and the floor of bank loans (between 2000 and 100 000 euros). We are reaching the common problem of the "missing middle" here, with a lack of financial service providers tailored to the needs of small businesses in many developing economies. Moreover, in the study by Mr Mehta, the term microfinance refers to a very broad definition ("amount of less than $ 500,000 Loan"). The microfinance sector understands the needs of water sector and vice versa, the latter having little knowledge of the tools offered by microfinance. The duration of credits required is generally longer than for conventional microcredits. Furthermore, these loans are intended to finance essential services and not income-generating activities.
(French Development Agency and GRET, 2011) (OECD, 2010)

Requirements and role of facilitators

For microfinance to reach a significant scale in the financing of water services, several conditions must be met: a significant potential demand, a level of development of microfinance elaborated and adapted to this demand and water policies and sanitation that encourage recourse to microfinance.
Some key activities should support the development of microfinance services dedicated to the water and sanitation sector:

- Study of water and sanitation sector / market research, in order to understand the demand both from the perspective of households and MFI;
- Provide service support to companies to support SMEs in the sector;
- Support research for product conception (duration, interest rates, etc.).
- Support the development to reduce the cost and risk;
- Security to mitigate the risks for MFIs when entering the market

To carry out these activities, there are three types of potential partners:

- Established MFIs;
- Credible promoters capable of providing the necessary facilitation and act as catalysts;
- MFI associations: potentially good vehicles to spread the teachings and promote interest for this sector among MFIs.

Donors are clearly part of the facilitators. They have an important role to play through "smart" subsidies, guarantee schemes or any other tools to support product development, and promote in a more general way activities aimed at the creation of the market.

Output Based-Aid (OBA)

The output based aid is composed of grants that are based on investments made that must be effective and measurable. Grants are used to repay the investment. They may be paid in revolving fund type mechanisms. Recourse to this form of financing requires pre-financing that can be obtained using microfinance, as it has been done successfully in Kenya with K-Rep commercial bank, such experience which we will return to in the Returns. There are a wide variety of OBAs that can be applied to all geographic scales (urban, peri-urban, small town or rural), various service providers (operators, LC), all along the entire value chain of water and sanitation. For example, for the latter, it can be used to increase the demand, expand networks or invest in latrines, ensure drainage and transportation, investing in processing, disposal or reuse. For drinking water, it can for example be used to increase the connections, especially among the poorest households, allowing the establishment of credit facilities (the cost of connection is often the main barrier to the entry of the poorest households). An operator must have a minimum amount of cash to start its operation. There are two main means to use this mechanism. Since the objective of the subsidies, is focused, it is necessary to verify the achievement of results which is not always as obvious as it seems. To do this, donors rely on independent technical auditors to determine whether the connections have been carried out well enough, the volumes well served, no "ghost" customers ... But it can be difficult to control the quality of a connection. On the

other hand, the amount of subsidies may be slightly overestimated, leading to a postponement of the excessive sum in the results of the operator, or even on its capital. Some households may also benefit from connections with reduced cost thanks to privilege and not needs. Nevertheless, the main objective is to facilitate access for the poorest households and the risk of inclusion remains negligible compared to the risk of exclusion. (Paulais, 2012) (OECD, 2013b) (OECD, 2010) (Mahé, 2014) (Valfrey, 2014) (Trémolet elaborated and Evans, 2010).

Raising Credit

It increases the security level of a borrower compared to the lender (lower the risk). It is based on financial analysis and provides the ability to secure the loan of a CL or a non-credible and insolvent operator for a lender, while the latter are generally excluded from direct borrowing. It may start up a sub-sovereign debt financed market (?) without intermediation. Credit enhancement can be done by intercepting: the transfer status is intercepted as guarantee (disempowering) or by guarantee: by the state (or lessor) guarantees the loan, usually a SFI. The guarantee may be partial or total, on the credit or the risk (which is more empowering for CL). It may be that the IFIs or donors should act if private entities or states are reluctant to provide guarantees. Indeed, the latter can guarantee the CL or the operator beside the lender banking institution.
However, this convention shall be carried out exclusively between the landlord and the bank to prevent an operator having a short-term vision and wishing to carry out a single operation, decides to reimburse only the non-guaranteed portion of the loan. Especially in Africa, mechanisms for seizure are very difficult so it will be very difficult for the bank to recover property put up as collateral by an operator.
(Paulais, 2012) (OECD, 2013b) (Mahé, 2014)

Grouped financed vehicles

This is about combining all the mechanisms mentioned above to provide access to finance to a large number of relatively small borrowers. They are well suited for decentralized water sector in which operators of small and medium size face difficulties financing on their own qualities. Donors and IFIs should intensify their efforts to create such structures (revolving funds, bank bonds ...) and create an enabling institutional environment (eg tax exemption on bonds issued as in the United States or by requiring the establishment of pooled vehicles for access to public funding). EBRD or the AFD already practice direct lending to communities without requiring guarantees from the central government, even though few IFIs and donors are able to do so. Administrations, on the other hand, may oppose such agreements. Rating can help to improve transparency and facilitate access of borrowers to financial markets although some markets are too small to develop a national rating scale. Comparative evaluation systems such as IBNET developed by the World Bank also maximizes the reliability and comparability of the information produced.
(OECD, 2013b)

The valuation of land

This financing method was particularly used in France in the 19th century in order to finance the establishment of drinking water networks in Paris. However, one of the

consequences of this mechanism lay in the expropriation of many small owners unable to repurchase the valued lands, which ended up in the hands of a small number of people able to acquire them. In Africa, decentralization has had the perverse effect of quick sales from community of many alienable lands before valuation. This leaves quite a few valuable public spaces. There might be some solutions to consider upon the valuation of lagoon lands to convert into treatment units that could be fully funded by the land value. However, this strategy always leads to the risk of speculation, and is not ideal. It can only be achieved with the existence of a legal framework, clarifying the mechanisms of appropriation of urban spaces, and defining negotiation frameworks between actors and arbitrations, as well as facilitating the implementation of land tax. (Mahé, 2014) (Paulais, 2012)

POSITIONING AND CONTRIBUTION OF THE PRIVATE SECTOR

In the past thirty years, the sector of drinking water has undergone profound changes in developing countries. The principles of marketization, decentralization and public-private partnerships have evolved a model, so far based on public monopolies and the leading role of states towards a diversification of actors, and a restructuration of public action. Small local private operators succeeded in developing a range of services in order to respond to an unsatisfied demand by other modes of supply (networks managed by public or private enterprises, collective water point in community management, etc.) in precarious areas of towns or rural villages. Strengthening the commercial nature of the services has contributed to the emergence of new funding issues.

FORMAL PRIVATE PROVIDERS OF WSS

They have a contractual relationship with the public authority in charge of the service. It can be a national, international or local operator. Public-private partnerships (PPP) are the most common form of relationship between provider and public authority. After the failures or mitigated assessments of a first generation of PPPs in basic services, especially in developing countries, a second generation of partnership began to emerge in the 2000s.

New contracts tend to moderate the private sector. It assumes a limited portion of the risk, or no risk at all. Concessions that were originally used are progressively abandoned in favour of “leasing”, management or service contracts. In this context, the state or a regulatory authority should assume its responsibilities regarding pricing *via* regulation devices. The regulatory process should not be limited to a confrontation between the state and the operator. There are several methods, often combined, based on the competition for the market, taking information from various actors, such as local authorities, civil society and local business and micro-enterprises involved in the functioning of networks. One of the most significant phenomena of this changing approach appears to be the emergence of national private operators, which leaves (or does not leave?) space for local actors.

World Bank also maintains a database on PPPs in developing countries which allows the following observation: the portion of PPP investment in water and sanitation services in Africa between 1990 and 2009 amounts to only 4%.

(Paulais, 2012)

SMALL PRIVATE OPERATORS

Given the low coverage of networks managed by national companies in the informal urban sector and their almost non-existence in rural areas, small private alternative operators (SPO) have sprung up on the WSS market. They adapt their service to customer needs, and their size and field of activity can vary greatly across the continent. They are found in the following markets:

- Tankers ;
- The independent distribution networks;
- Wholesale of water supplied by the distribution company (for example, water kiosks);
- Sanitation services (for example, emptying latrine pits) ;
- Operating and maintenance services (for example, management of public latrines).

They are generally regarded with suspicion by the water companies and municipalities. They often work illegally, without regulation or quality control. This small private sector has a huge potential to increase coverage and access to SEA. Without control and regulation, we can also find situations where users pay a price far higher than they should for a low quality service. Moreover, management is difficult to reconcile with the integrated management of water resources from a qualitative and quantitative point of view. Governments who learn to regulate this sector without stifling innovation capacity reap considerable benefits in increasing access.

Although logical and financing constraints vary depending on the operator involved and the context in which it operates, it is possible to identify some general trends:

- When the service is the concern of the informal sector, the financing of initial investment is almost due to own funds *via* the mobilization of domestic savings or through member contributions in the case of associative structures ;
- The financing capacity of these operators, by mobilizing own funds, are very limited. They generally do not achieve full coverage of the service.
- Finally, the recourse to debt remains rarely practiced by these operators. This is due to the strong mismatch between their needs and the supply of loans from local financial institutions (high interest rates, excessive guarantees, too short maturities) and the difficulty for small entrepreneurs to produce exploitable records of request for funding, according to the lack of sufficient accounting records or ability to perform a financial analysis of their project.

Facing such access difficulties for sustainable and inexpensive funding, local operators often have no choice but to adopt alternative investment strategies in the short term. But such strategies result in high rates of return on capital employed by operators, and cause an escalation of water tariffs, or more generally an increasing cost for the access to the service.
(WUP, 2004) (French Developing Agency and GRET, 2011)

Migrants' savings

Financing transfers from migrants to their friends or family have increased since the end of the 90s. In Africa, the amount reached 39 billion USD in 2009 (against 27 billion USD for Official Development Assistance). Out of the 39 billion, 18 were for North-Africa and 21 for sub-Saharan Africa. These transfers can be really important, especially for a small economy; for example 25% of Lesotho GDP in 2009. Moreover, these numbers are underestimated because most of the transfers come from informal methods (70% in sub-Saharan Africa). These provisions are mainly used for current expenses but sometime contribute to the local investment, especially in rural areas. Nevertheless they are not always used with a solidarity goal. Some focused bond issues could be set up to recover a part of this saving. (Paulais, 2012)

FEEDBACK REVIEW

OBA IN MOROCCO

GPOBA put in place various OBA projects for sanitation network access in an informal urban area. Various public and private partners were engaged in the project. Launched in 2007, it expected 11 300 households to be connected with 7 million USD of subsidies accorded by GPOBA (35% by connection). We find various service providers: AMENDIS in Tanger, LYDEC in Casablanca which are international private operators; whereas RADEM in Meknès is a public operator. Details of the subsidy schemes can change between contracts but they are always based on the effective household connection to the network. The grant is transferred at two times of the project: 60% after the connection realization and 40% after verification by an independent consultant and 6 months of sustainable services. Grants are from 421 USD in Casablanca to 913 USD in Meknès. The difference is due to the gap between cost unity and household capacity to payback. Increase was quite slow at the beginning with 2000 households connected the first year. Reports indicated that it was mostly due to the lack of understanding by operators for the banking process, delay in investment or lack of land legislation. Then, investment increased really quickly over the next few years and the Moroccan government is now trying to scale up the mechanism.
(Tremolet et Evans, 2010) (Bouhmad et al., 2011)

RAISING CREDIT (GUARANTEE): EXAMPLE OF DCA

The DCA (Development Credit Authority) was founded in 1999 by USAID to mobilized local private capital and share the risk. It has been used to facilitate repayable finance for urban development, and especially for water, sanitation, waste, and transport investment. Issues which are solved by guarantees are the absence of risk taken by national bank and their lack of knowledge about the market. Banks make loans with short term payback (not adapted to the WSS) and with high interest rate. Guarantees fill the lack of experience of the local lenders by sharing the risk of loss. It never covers more than 50% of the project cost. Cover more than half of the cost would lead to a local market distortion. Also it would be non-productive because the objective is to let the lender understand how to analyse the risk when they make a loan with long term payback. DCA experience shows that this mechanism can be really useful in a

decentralized framework and support investment at a state scale. At the end of 2009, DCA had guaranteed around 1.83 billion USD (all sector included). (Paulais, 2012)

MICROFINANCE – OBA PROJECT IN KENYA

People with access to drinking water had increased only by 1% between 1998 and 2006. Then a choice was made to resort to small private operators. Then an innovative financial structure was put in place. With WSP help (Water and Sanitation Program), the GPOBA approved a grant of 1.15 million USD to finance a program implemented by K-Rep Bank. The program focuses on rural areas and suburbs of Nairobi. Many partners are implicated, apart from GPOBA, K-Rep and WSP; water councils were found who own the infrastructure and put in place conventions, operators, an independent consultants to check the results and the public-private infrastructure council fund which finance study to apply the project. Community contribution is about 20% of project cost and K-Rep finance the 80% left with a five year loan. The OBA accepted a pay back of half of the loan. A Grant is paid when an “under-project” reaches the result based on a number of connexions and an increase of revenues. Under the project connexion goals, vary between 50 where network already exist and 600 for new installations. To reduce the amount of guarantees, K-rep used DCA of USAID to guarantee half of the loan. Nowadays, 1800 connexions have been settled and 10 776 people have been provided for. Initial situation was appropriate due to a big implication of community associations. Some problems were met despite the lethargy of the banks, financing limitation and guarantee limitation. The “water product” could enter in only one bank strategy despite of a huge awareness work to bank sector. Scaling up possibility is still in question.

SMALL PRIVATE OPERATORS IN MAPUTO WATER DISTRIBUTION

In Maputo, the water network provides only a few of population. Most people, especially in the suburb have to use informal providers. Small private operators (SPO) starting up in the 90s. SPO build their own boreholes and are independent of the official operator. Investment is 100% with their own funds; there is no international or public help. With their proaction, and their capacity to adapt to urban development, SPO are the only way to comply with growth. Backers began to support their initiative and tried to make them become formal, providing them with better access to credit. Competition is a good way to moderate water price and consumers can easily compare and change providers. We have to note that Maputo has abundant underground water resource and it is quite cheap to pump. Also the system doesn’t allow the checking of water quality and in most cases, people pay too much for the quality of water compared to a normal network (five to ten time more). The lack of connexion between these services and public authority is prejudicial for local democracy by marginalizing community role. To finish, how to integrate these services into urban schemes, with a good resource management and an affordable price still remains an issue. (Paulais, 2012)

ANALYSE

Since the implementation of decentralization, it is often attributed to the common general jurisdiction of local services, including water and sanitation. Municipalities are

invested with the functions of organizing and managing these services, or to create an independent board or to entrust the services to a national operator or private company. Changing to decentralization also requires cooperation between different levels of communities. Thus, even if the municipality has the responsibility for water and sanitation services, provinces can help coordinate the actions of municipalities, especially in rural areas. Regions provide the right size for economic planning and development of the wider area. Community resources are quite limited, especially in rural areas; the combination of different mechanisms often means that it becomes necessary to invest in SEA. At the 3rd African Water Week in November 2010, the African Development Bank indicated that the use of ODA and national budgets was clearly insufficient to fill the financing gap in the water sector and sanitation, and called for more innovative sources of finance.

The conclusion is that there are mismatches between repayable finance and the market of SEA. The need for long-term loans in contradiction with the deals offered the small or medium size groups of who operators are the vast majority , leads to the low solvency of CL or the commercial risk associated with the inability to raise tariffs. Nevertheless, financial innovation could significantly help increase the availability of these redeemable for water sector financing.

The use of microfinance to meet the financing needs of poor and low-income groups is one of the envisaged approaches. The combined use of these mechanisms is needed to attract investors. An application of a RDC, with the mobilization of national budgets and ODA combined with strategic financial planning and increased efficiency will attract repayable funding sources; investors need to be aware of the advantages and benefits of investment in these sectors. The SEA sector, although unfamiliar for the microfinance represents a substantial market with significant needs, which could in the future be a significant number of clients for MFI.

Also, the bundled use of mechanisms such as OBA, partial guarantees and the use of small operators has been proven in many cases. They allow credibility to operators and CL who use it, while reassuring lenders. In addition, the results are often oriented towards the poorest who are the primary target and the major challenge of the MDGs. These mechanisms are applicable on different scales for both informal settlements and rural areas. It Remains to be seen how these tools will find their place at the intermediate scale (municipalities and small villages), which sometimes does not meet the criteria for microfinance but mesofinance and are still not solvent enough to fit into the conventional way of borrowing. But tools like the OBA and guarantees should still be applicable in these cases, and mesofinance has to be developed.

Most examples have proven themselves when it comes to access itself with the expansion of connections, either for drinking water or sanitation. Indeed, once the role of subsidies allowed payment facilities for connections that are the main barrier to entry, increasing volumes consumed can make the service run. Certainly, the increase in access was the main focus of the MDGs but now we have to see what else can be done along the value chain of water supply. This is namely the protection of the resource, the storage capacity, transportation, infrastructure for evacuation and treatment, maintenance and operation. The principle of OBA is that they can apply to

many areas from the time where the objectives are specific and measurable. However, certain links in the chain, although they have high socioeconomic benefits affecting international donors, one might wonder how they make themselves attractive to local financial institutions and microfinance institutions that must overcome the lack of funding.

Finally, it should be noted that this overall vision of investment funding has to be weighted depending on the country or regions, all of which have specific characteristics. Indeed, depending on the progress of decentralization, the maturity of the national water services, the initial state involvement, the dynamism of user associations, maturity markets and private provision or availability of the resource itself, it will be more or less easy to implement all these financing arrangements.

CONCLUSION

In view of the progress of the water / sanitation component of the MDGs and their achievement in Africa which is not certain, it seems pretty clear that there remains a lack of funding in the SEA in Africa. Estimated at between USD 45 and 94 billion, depending on whether one is interested in investment or all of the costs incurred, it is for decentralization to communities to support the provision of these services. For deficit financing, the local community can combine several approaches such as reducing costs by gaining efficiency, use sources of financing such as 3Ts (tariffs, taxes and transfers), or mobilize repayable finance (debt or emissions of bonds). The combination of these funds should be used on the basis of a sustainable cost recovery (SCR), which relies on the application of 3Ts to attract repayable finance. Even if it seems obvious now for donors and the international community that the social and economic benefits of investment in SEA far outweigh the costs involved, they are not very attractive for financial markets. Yet they represent a market, albeit average profitability but low risk given the consistency of demand. Also, they require long-term loans. To stimulate investors, some innovative mechanisms such as OBA or partial guarantees were put in place and can dramatically increase the availability of reimbursable funding. The aggregate use of various innovative mechanisms has already proven its worth in several examples, including improving access by facilitating connections to the most vulnerable households, but it is still difficult to generalize its use on a larger scale across the continent.

Indeed, as for microfinance, the water sector and banks have little knowledge of each other and only a multiplication of initiatives and products will enable a real emulation of funding. Finally, we can ask the question of the viability of some financing tools such as land valuation and taxation that depend heavily on legal and regulatory framework in each country.

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