# Universal Access to Safe Water and Sanitation



#### Recommendations

#### **Headline Recommendation**

Address gaps in service delivery models, technology, and behavior change which limit access to sustainable drinking water and sanitation for all – including the needs of women, girls, people with disabilities, and communities in vulnerable situations, recognizing access to water and sanitation services as a fundamental human right.

#### **Detailed Recommendations**

- Innovate, share best practices and replicate successful initiatives.
- Adopt national targets and scale-up solutions and interventions at national, subnational, and community levels involving all stakeholders.
- Give special attention to the needs of women, girls, people with disabilities, and communities in vulnerable situations.
- Governments, in a position to do so, are encouraged to join the Sanitation and Water for All (SWA) Partnership.

#### **CHALLENGES**

The SDG baselines prepared by the WHO-UNICEF Joint Monitoring Programme (JMP) states that in 2015, 2.1 billion people lacked water services reaching the new standards, including 159 million who still drank untreated water directly from surface water sources such as streams or lakes. Almost 4.5 billion people did not use a sanitation facility that safely disposed of excreta, and 892 million people – mostly in rural areas – still practiced open defecation. The HLPW is seized of the fact that the SDGs relating to health, gender equality, education, and poverty are not achievable without improvements in the water, sanitation and hygiene (WASH.) In achieving the universal access to water and sanitation, the world would achieve sustainable livelihoods, better health and better economies.

Challenges in the WASH sector are unlikely to be adequately addressed unless water security concerns, improved water resources management, and water and sanitation infrastructures are factored altogether with increased wastewater treatment and reuse. Those lacking improved access to drinking water still drink from the unsafe sources. Those lacking access to improved sanitation services still defecate. In other words, the actual challenge is even more critical than one may think. The gender dimension is critical. Women and girls spend up to six hours every day for fetching water. On an average, a 15 year old girl spends twice as much time as a 15 year old boy in guaranteeing water access for her family. Those girls who do not have access to proper sanitation after their first menstruation, either leave school or remain registered but regularly miss one week in every month. Sanitation is also a cultural and behavioral challenge which varies largely among societies, clans, and distinct geographic locations.

The implementation of the Water and broader Sustainable Development Goals should go beyond just basic access to water and sanitation. No country can thrive and prosper without ensuring water and sanitation for all in urban, rural, and hard to reach areas. Water is a human right and sanitation is the enhancer of human dignity. Effective water and sanitation services in vulnerable communities, requires new public narratives to support improved sanitation practices and reliable sources of water that are free from contamination. The HLPW has committed itself to a range of initiatives to spur progress on SDG 6 and other water related SDG targets, one of which is dedicated to ensuring universal access to safe drinking water, sanitation and hygiene for the growing world population, estimated to reach around 10 billion people by 2050.

#### PRINCIPLES FOR APPROACHING THE PROBLEMS

Accelerated progress requires WASH – as part of the achievement of SDG 6 as a whole - to be higher on the political agenda, and WASH needs to be mainstreamed into national, sub-national, and community-level planning.

The sector requires predictable and sufficient finance that reaches the countries and people that need it the most. Transparent and strong governance and realistic country specific planning should be encouraged; however, such planning must be based on reliable data and rigorous analysis for planning, making decisions, and tracking progress.

Greater mutual accountability and coordination is required among the developing countries, development partners, supporting governments, and their citizens.

Motivational works, in tandem with administrative policies, will be required to address maladaptive practices that impede the access to safe drinking water and sanitation.

#### CONTRIBUTIONS OF THE PANEL

The panel issued a statement on 21 September 2017 that calls on the governments, as part of their transformational efforts to achieve a water secure world, to:

- Mainstream drinking water, sanitation and hygiene in national, sub-national and community-level planning.
- Establish a transparent and multi-stakeholder sector review process.
- Take an integrated approach to the implementation of all the water related SDG targets.
- Work towards innovative and sustainable financing strategies that will ensure universal access to safe drinking water, sanitation, and hygiene.

The HLPW members also appeal to their fellow colleagues to lead by examples and share good practices amongst themselves. Listed below are some of the highlights, inspiring cases and light house initiatives across the globe to inspire other member states. The HLPW recommends that the following cases may be reviewed and replicated in similar contexts.

CREDIAGUA Water& Sanitation access through Microfinances - PERU

PROCAPTAR Rain Water Harvesting - MEXICO

Participation in the elaboration of a Framework of Rural Sanitary Service Law - CHILE

New National Water and Sanitation Policy - PERU

SABA Integral Model of Basic Rural Sanitation Projects -COLOMBIA / PERU

WASH in Schools - BANGLADESH

Surface Water (Ponds) efficiency in salinity affected coastal areas -BANGLADESH

Leakless Youth Programme Saving Water is Fun - SOUTH AFRICA

The HLPW also highly recommends communication and multi stakeholder dialogues among the regional and subregional levels. The following upcoming events may bring opportunities for the regional leaders to engage for their collective commitments and collaborative actions:

HLPW promotes the following:

- Adopt a River Programme for Rural Communities SOUTH AFRICA
- National Women Incubation Initiative in the Water and Sanitation Sectors SOUTH AFRICA
- Mobilize a new initiative 'Water for Women' in the Asia Pacific region AUSTRALIA 2018
- Sponsor WASH Futures Conference in Brisbane AUSTRALIA 2018
- South Asian Conference on Water and Sanitation (SACOSAN) PAKISTAN 2018

#### FINDINGS AND CONCLUSIONS

The HLPW calls on governments to put in place domestic water governance, policies, and strategies to guide progress, capacity, and financing that make it possible and to establish a planning, monitoring, and review cycle to track progress and make course corrections (water and sanitation for all building blocks).

Governments are invited to replicate lighthouse initiatives and scale these to national level, to work in partnerships for cooperation, to learn successful experiences at water forums and to bear in mind that water and sanitation is a key to better economies, health, and prosperity.

## Universal Access to Safe Water and Sanitation

## LIGHTHOUSE INITIATIVES

## CREDIAGUA Water and Sanitation Access through Microfinance in Peru



Country/Region:	Perú/ South America
Project Title:	CREDIAGUA Water and Sanitation access through microfinance in Peru
Implementation organization:	Interamerican Development Bank IDB, Lima
Contact:	Elizabeth Minaya IDB, Lima www.crediagua.com
Objective:	Train and empower microfinance entities in order to grant loans to low income families in peri urban areas to implement sanitary improvements inside their houses (bathrooms, water in kitchen, others)
Main Partners:	Local microfinance entities in Peru
Budget/Sponsors:	Aquafund and Multilateral Investment Fund through the Interamerican Development Bank, USD 2 million
Beneficiaries Identification:	Arequipa, Callao, Cuzco and Lima regions - Peru More than 38,000 families
Period of implementation	36 months 2014 to 2016

#### BACKGROUND

In Peru, one of the most critical problems faced by peri urban low-income population is that water and sanitation infrastructure is supplied with considerably low intra-household improvements. Although houses have access to water and sanitation public pipelines in the street, in the peri urban segment - to which the project was directed - families have not been able to develop adequate sanitary facilities within their homes, connected to those pipelines. As they have no intra-household connections for practical purposes, no real coverage is achieved; buckets for water and silos for sanitation are still in use, even when water and sanitation pipelines are very close. Health and economy of families are deeply affected.

CREDIAGUA Project is implemented by encouraging micro financial institutions to provide microcredits to low-income families whose homes are located on the outskirts of cities, in vulnerable and unserved sectors, so that they can implement improvements in water and sanitation at home. The CREDIAGUA Project empowers and enables financial institutions to penetrate and develop the market in this socio-economic segment, to contribute to improving the quality of life of Peruvians who begin to live better, with more dignity, better hygiene.

CREDIAGUA Project sensitize and train families to acquire a decent bathroom, with private toilet and shower, multipurpose sink for laundry and kitchen and other improvements.

CREDIAGUA proved that credits to implement sanitary improvements in peri urban areas in Peru registered an exponential growth, showing high profitability for the micro financial companies and an average rate below 1% is observed. Three Peruvian microfinance entities developed CREDIAGUA loans during the Project.

#### **OUTCOMES**

- What are the direct and indirect, positive and negative effects of the project at population level?
  - +38,000 families accessed to CREDIAGUA loans, microfinance entities disbursed about USD 100 million dollar.
  - 33% of peri urban families were new banking clients.
  - 47% of loans beneficiaries were women.
- What are the direct and indirect, positive and negative effects of the project at institutional/organizational level?
  - 03 Microfinance entities developed a new credit product, disbursing about USD 100 million dollar.
- Provide an approximate analysis of costs/benefits of achieved outcomes
  - Micro finance entities found a sustainable business, with high profitability; less than 1% average rate, as the market penetrates this segment and reaches new un-banked clients.
  - Government does not make public expenditure; all the investment is provided through the private sector.
- What are the effects of the project/programme with regard to the reduction of inequalities between men and women?
  - 47% of loans beneficiaries were women.
  - Women who are part of the benefited families were trained, as well as the men, in the installation
  - of sanitary improvements.

#### **OUTPUTS**

- What are the main tangible products (goods, services) of the project?
  - · CREDIAGUA product for micro finance entities
- What is the outreach of the project (e.g. population groups covered, area covered, institutional levels covered)?
  - 38,000 families

#### LESSONS LEARNED

- Description of relevant aspects that have contributed to success/failure of the project.
  - The elements that contributed to the success were (i) research on what families required, loans and technical guidance (ii) flexibility on the part of microfinance entities to understand that families self-constituting and did not want to follow a rigid bath model (Ii) that microfinance entities reduce the requirements to access microcredits.
- Description of main difficulties faced during the phase and efforts made to overcome them.
  - There is no current and accurate information in the country about the real magnitude of the gap in sanitation intra household services.
  - The interest rate is still high, there is dispersion between minimum and maximum rates and therefore competition must be promoted, so as not to become a barrier to market expansion.

#### REPLICABILITY AND SCALING UP

- Where is the project with regard to replicability and scaling up?
  - Other NGOs have replicated the Project and have motivated more microfinance entities to grant loans with the same purpose, more than 150 thousand credits to date.
  - In relation to scaling up, other microfinance companies are imitating the pioneers and the market is expanding at the national level.

### Leak Less Youth Programme "Saving Water is Fun"



Country/Region:	South Africa / Africa
Project Title:	Leak less Youth Programme "Saving water is fun"
Implementation organisation:	WHC {Water Hygiene Convenience}
	www.whcpty.com
Contact:	Name: Paseka Lesolang
	Position: Managing Director
	e-mail: paseka@whcpty.com
Objective:	What is the aim of this project?
	The aim of the project is to upskill youth and women with accredited plumbing and entrepreneurial skills, in order to create jobs, while saving mega litres of water, through the installation of the WHC Leak-Less Valve <sup>TM</sup> in toilets.
Main Partners:	South African Department of Water & Sanitation, and GWP (Global Water Partners)
Budget/Sponsors:	\$75 000.00 / City of Tshwane Municipality and WHC
Beneficiaries Identification:	Community: Soshanguve block PP1 and block PP2
	City: City of Tshwane
	Country: South Africa
	Number of beneficiaries: 20 Direct beneficiaries
Period of implementation	12 months

#### BACKGROUND

According to the United States Environmental Protection Agency a toilet leak wastes ~250 000 litres (66043 gallons) of water {equivalent to 2500 bathtubs} every year. The toilet is the single largest water consumer in the house consuming approximately 30% of the entire usage. Toilets, just like cars, start depreciating from the first day of use; thus, they inevitably leak.

The WHC Leak-Less Valve™ is a water control mechanism that detects and prevents 70% of the water loss in toilets. The WHC Leak-Less Valve™ is a patented product that can easily be retrofitted into existing toilets cisterns and installed before sales in new cisterns. The WHC Leak-Less Valve™is the "Intel Inside of Toilets".

The Leak less Youth programme provided an opportunity to explore the magnitude of losses through leaking cisterns and to promote the reduction of the water resource and revenue waste by addressing water leaks. The project was also run to promote behavioural change and attitudes towards household water conservation and infrastructure maintenance, and to test the potential to scale the innovation through leveraging potential strategic partnerships. Scaling of the water leak reduction innovation has the potential to generate employment as was demonstrated during the project.

#### **OUTCOMES**

• What are the direct and indirect, positive and negative effects of the project at population level?

#### **Direct and Indirect Positive Effects:**

Installation Overview:

Area: Soshanguve block PP2 = 521 units installed

Area: Soshanguve block PP1 = 344 units installed

Total units installed = 865

- Average Water Saved per month p/household = 1170 Litres (309 gallons)
- Average Water Saved per year p/household = 14 040 Litres (3708 gallons)
- Envisaged average Water Saved per month by the 865 installations = 1 012 050 Litres (267355 gallons)
- Envisaged Average Water Saved per year by the 865 installations = 12 144 600 Litres (3208263 gallons)
- Youth and Women Upskilled = 20
- Jobs Created = 20
- Total population in project households = approximately 3321 indirect beneficiaries

#### **Direct and Indirect Negative Effects:**

- Tremendous time loss due to factors beyond Project Manager's control i.e. weather, political matters, community demonstrations, individuals with malicious intentions, uncooperative households etc.
- Some of the beneficiaries damaged aspects of some of the households' properties and stole the project equipment.
- What are the direct and indirect, positive and negative effects of the project at institutional/organizational level?

#### Direct and Indirect Positive Effects:

- Institutions/organizations were commended for budget allocation and appropriate expenditure.
- Integrity and dignity of the partners and stakeholders involved was affirmed by the success of the project.
- Project objectives were met and surpassed.
- Great interest from the public and private sector aroused subsequent to the programme success.
- Awards were granted to the institution(s)/organization(s) involved, including, but not limited to exposure of the project on various media platforms i.e. national television, newspapers, promotional videos etc.
- Institutional/organizational brand enhancement.
- Recognition and advancement of some of the Institutional/organizational staff that were directly involved with the programme.

#### **Direct and Indirect Negative Effects:**

- Time management was appalling due to the factors beyond the institutional/organizational control.
- Project sabotage due to inefficient institutional/organizational payment processes and miscommunication.
- Uncoordinated delivery of materials and equipment by the institutions/organizations which lead to unsatisfactory outputs and/or delayed performance in anticipation of the goods from institutions/organizations.

• Provide an approximate analysis of costs/benefits of achieved outcomes

DELIVERABLE	MILESTONES	BUDGET
Initial Assessment & pilot planning	Contract Sign-on	R12 000.00
	Sample Household prioritisation	R0.00
Pilot Readiness	Community Engagement	R12 000.00
	Training	R6 000.00
	Leak-less Valve production	R200 000.00
	Survey	R6 000.00
Product Installation	1000 units installation	R140 000.00
Project Operation	Operational Products	R6 000.00
Project Monitoring	Monthly monitoring and evaluation reports	R12 000.00
Project Closure	Pilot: Project Closeout report	R6 000.00
Training	Accredited Training	R220 000.00
Graduations	GraduationCeremony	R8 000.00
Facilitation	Transportation and mentoringservices	R3 500.00
Moral Development	Recongnitionallowance	R800.00
	Work ethic certificates	R400.00
Extras	Additional Work {material}	R91 050.00
	PPE Supply	R2 500.00
	Onsite Office + security enhancements	R4 000.00
	Overtimes; Weekends	R3 000.00
Consumables	Tea and Coffee	R1800.00
TOTAL		R735 050.00

What are the effects of the project/programme with regard to the reduction of inequalities between men and women?

The programme is pro-woman empowerment. In the discussed programme 60% of the candidates were women and 60% of the Project Management team on the ground were women. The objective of the programme is to set it up with a ratio of men to women at 1:2 considering that there are more women than men.

#### **OUTPUTS**

• What are the main tangible products (goods, services) of the project?

The youth and women receive certified training to be basic plumbers and accredited installers of the innovation. Post-training, they get work exposure and experience through the installations in the communities. They also acquire entrepreneurship training, financial literacy, communication, sales and marketing skills, including a free bank account tand a clientele.

Depending on the quantity of houses/toilets to be attended; the ratio of installer to toilets ranges between 1:20 and 1:1000. In every house they install the WHC Leak-Less Valve<sup>TM</sup>, they leave their business cards. On the ration of 1:1000 when a beneficiary of our innovation programme gets calls from ~10% of the 1000 houses (100 calls) to fix any of the other water faucets in their house; it suffices for the beneficiary to sustain her/himself beyond our programme intervention.

Our innovation programme meets 9 of the UN Development Goals (Goal 6, 8, 9, 10, 11, 12, 13, 14, 15 and 17).

• What is the outreach of the project (e.g. population groups covered, area covered, institutional levels covered)?

In the programme conducted, 20 people were trained and 20jobs created. The ratio of installer to toilets ranges between 1:20 considering the limited toilets (1000) the team were given access to for this programme, by the City of Tshwane municipality. *Total population in the households attended to was approximately 3321 people.* 

#### LESSONS LEARNED

Description of relevant aspects that have contributed to success/failure of the project

Many lessons were learnt from the pilot project, which would be of benefit for the scaling up of the implementation of smart home management. Among the main lessons were: i) labour should be remunerated based on performance not attendance, and should be paid by the project manager on the ground, ii) all required PPE and material should be availed before the project commences iii) there needs to be a more stringent agreement with the households and an incentive for cooperating to the very end, while low level skills entry was demonstrated skills development should include: basic plumbing, financial literacy, communication skills, entrepreneurial skills, and work readiness training.

- Description of main difficulties faced during the phase and efforts made to overcome them.
  - Brewing community/political conflicts and plots to sabotage the project.
    - Mitigation: More stakeholder engagements especially in the communities
  - General complains from the team members
    - Mitigation: made reference to the contract and tried to reallocate/accommodate them to the benefit of the programme.
  - Execution activities delayed, due to the high unavailability of confirmed available households
    - Mitigation: the team returned to the houses several times on different days and times before declaring it inaccessible.
  - Unprofessional tendencies of the team members on 'Pay Day' and a few days after.
    - Mitigation: Started giving recognition and celebrating the cooperating members, while identifying and disciplining the individual instigators

#### REPLICABILITY AND SCALING UP

• Where is the project with regard to replicability and scaling up?

The programme is formulated and executed in urban and indigent communities, where youth and women of those communities are recruited, to grant them certified training to be basic plumbers and accredited installers of our innovation. Through the collaboration with the local municipalities, houses are allocated within the community for the trained youth and women beneficiaries to install our innovation. Depending on the quantity of houses/toilets to be attended; the ratio of installer to toilets ranges between 1:20 and 1:1000. There are approximately 150 million toilets in Africa alone. At a ratio of 1:20, approximately 300 000 jobscan create be created. This will lead to a minimum of 15 million Olympic Swimming pools worth (375 000 mega litres) of water every year.

Thus, the project is eligible and ready to scale in all nations that are suitable and in need of such an intervention that will not only create jobs, but also reduce the non-revenue accounts of the cities and communities in which it is executed.

## New National Water and Sanitation Policy - Peru



Country/Region:	Perú / South America
Project Title:	New National Water and Sanitation Policy
Implementation	Government of Peru/Ministry of Housing and Sanitation
organisation:	
Contact:	Gustavo Saltiel, World Bank, Lima
	Government of Peru/Ministry of Housing and Sanitation
Objective:	The objective is to achieve universal access to improved water supply and sanitation (WSS) services by 2030 by developing policies to improve the allocation and efficiency of public investments in the sector and to prepare the WSS service providers to ensure availability and sustainable management of WSS services.
Main Partners:	MVCS, OTASS, SUNASS
Budget/Sponsors:	Name of sponsor/Amount sponsored
Beneficiaries	The Peruvian population (urban and rural communities); services providers and
Identification:	EPSs; Peruvian Government.
Period of	The comprehensive WSS Public Policy was passed in March 2017
implementation	

#### BACKGROUND

Peru has a population of 31 million people, of whom 76 percent live in urban areas and 24 percent live in rural areas. The national water supply and sanitation coverage in 2014 was 88 percent and 68 percent, respectively. The WSS sector in Peru suffers from misaligned incentives that have favoured investments in highly visible infrastructure projects while reducing resources for O&M and improvements in the quality of service provision. In turn, poor service quality has resulted in unsatisfied customers, thereby jeopardizing the ability of the EPSs to raise revenues necessary to cover costs. The Government of Peru has set targets to provide efficient and sustainable WSS services to the entire urban population by 2021 and to the rural population by 2030. In order to achieve these ambitious targets, the Government of Peru through the MVCS, has implemented a new national water and sanitation policy focusing on (i) policies and procedures to improve resource allocation and targeting of water supply and sanitation investments; (ii) the preparation of a national wastewater treatment policy, and (iii) measures to improve rural WSS services.

#### **OUTCOMES**

• What are the direct and indirect, positive and negative effects of the project at population level?

The new policy in Peru emphasizes the promotion of sustainable management of water resources and the environment. The policy also focuses heavily on prioritizing access to improved WSS services to those populations who are most deprived, such as those communities in remote rural areas of the country. As such, the new policy allows for a greater percentage of the population, particularly poorer rural communities, to receive access to improved WSS services. Wastewater treatment is also a focus of the new policy, which could result in improved public health and sanitation at the population level.

What are the direct and indirect, positive and negative effects of the project at institutional/organizational level?

The new policy has resulted in the transformation of the governance of the EPSs (Water and Sanitation Utilities) into corporate entities as the driver to achieve universal access. Consequently, the EPSs are expected to expand their coverage, first tackling the urban areas not yet under their administration, and subsequently gradually attending rural areas within their geographical jurisdiction. The policy focuses on EPSs as sustainable and autonomous share corporations, with the gradual generation of cash from EPS operations as the main source of sector financing.

Policy reform in Peru has also focused on (i) the updating of corporate governance, autonomy, accountability, citizen engagement, and market orientation in the management of the EPSs according to best practice; (ii) the introduction of incentives to ensure financial, operational, and commercial efficiency and sustainability of the EPSs; (iii) and enhancement of economic regulation for WSS service provision.

• Provide an approximate analysis of costs/benefits of achieved outcomes

WSS services have been prioritized in the government's budget allocation process. In 2014, Peru's investment in WSS services was 80% of the GDP, much higher than other Latin American and Organization for Economic Cooperation and Development (OECD) countries. Investment in the policy would ideally result in the transformation of EPSs into sustainable and autonomous share corporations, and the gradual generation of cash from EPSs operations would be the main source of sector financing. Investing in the policy would also ideally result in increased WSS service coverage.

• What are the effects of the project/programme with regard to the reduction of inequalities between men and women?

The new national water and sanitation policy would improve WSS service coverage in both urban and rural areas, thereby increasing access to improved WSS services, promoting health, and creating a more equitable community.

#### **OUTPUTS**

What are the main tangible products (goods, services) of the project?

The new national water and sanitation policy would result in (i) The preparation of a Five-Year National WSS Policy and WSS National Plan for approval by the Council of Ministers to ensure annual reporting and accountability (ii) the transformation of EPSs into sustainable and autonomous share corporations (iii) The widening of the SUNASS's mandate of economic regulation to include both urban and rural areas; (iv) the sharpening if the respective roles of the three main national actors: MVCS, OTASS, and SUNASS, and the transformation of the EPS; (v) shift from tariff regulation to economic regulation; (vi) the introduction of PPPs in utility management and for WWT in different situations; and (vii) a new WSS fund.

What is the outreach of the project (e.g. population groups covered, area covered, institutional levels covered)?

The policy focuses on WSS service coverage in Peru at the national level, with a particular emphasis on those populations who are most deprived, such as those communities in remote rural areas of the country. Multiple levels of the Peruvian government are in support of the policy. Institutional reform centers on the transformation of the governance of the EPSs into corporate entities as the driver to achieve universal access. As such, EPSs are expected to expand their urban and rural coverage.

#### LESSONS LEARNED

• Description of relevant aspects that have contributed to success/failure of the project.

Some of the major factors that contributed to the success of the new policy were the prioritization of WSS services in the budget allocation process and full support of WSS services by multiple levels of the Peruvian Government, including the President of Peru. The annual sector budget allocation experienced a 40 percent increase in 2017. Additionally, during its first five months in office, the commitment of the new administration was further demonstrated through (i) approval of the new WSS Legal Framework; (ii) establishment of a WSS Investment Fund by law; and (iii) updating of the Water Resources Law.

Description of main difficulties faced during the phase and efforts made to overcome them.

Some of the main challenges faced in Peru's WSS sector include, (i) uneven improvement in WSS service coverage; (ii) failure of EPSs to meet quality targets of the National Sanitation Plan; (iii) the inability of utilities to cover their operating and maintenance costs out of their revenue; and (iv) high levels of non-revenue water (approximately 40%, excluding SEDAPAL) contributing to the lack of financial sustainability of the service providers.

In order to overcome the sanitation target challenges, the new policy has focused more heavily on expanding and improving existing wastewater treatment services, particularly in urban areas through the Wastewater Treatment Policy. The new policy also focuses on the transformation of the governance of EPSs into corporate entities to improve service coverage and achieve economic autonomy and sustainability.

#### REPLICABILITY AND SCALING UP

Where is the project with regard to replicability and scaling up?

The reforms under the new water and sanitation policy in Peru can be applied to and replicated by other countries with a similar country profile and WSS sector structure as Peru. All countries are unique and therefore would require that institutional, policy and regulatory reforms are adapted as necessary.

## Social Participation in the Elaboration of A Rural Sanitary Service Law Framework



G /D :	
Country/Region:	Chile/ South America
Project Title:	Social Participation in the elaboration of a rural sanitary service law framework
Implementation	FENAPRU CHILE
organisation:	
Contact:	Gloria Alvarado Jorquera /President gloria63aj@gmal.co www.fenapruchile.cl
Objective:	What is the aim of this project?
	The Project sought to influence public policy through constant work to participate in the process of drafting the Law on Rural Sanitary Services, with the aim of generating a regulatory framework for the sector and protect this form of administration and management from privatization.
Main Partners:	Leaders of Provincial and Regional Associations of Chile, State of Chile, National Legislators, NGOs
Budget/Sponsors:	<ul> <li>Name of sponsor/Amount sponsored</li> <li>With resources from the provincial or regional Associations, approximately USD 140,000,000, for 14 years</li> <li>With own resources of national leaders USD 30,000,000 approximately, for 14 years</li> <li>With AVINA Foundation resources USD 8,301,200</li> <li>With resources of COSUDE AVINA USD 11,217,409</li> </ul>
Beneficiaries	Community / City / Country
Identification:	The 1,700 OCSAS (APRs) throughout Chile, which supply approximately 2 million people throughout the country Community/City/Country
Period of implementation	The process of incidence began formally in 2005, the year in which FENAPRU Chile is created. However, the greatest intensity of this process occurred in the last 5 years, when it re-enters the congress for its legislative procedure and then with the drafting of the corresponding Regulation (2014-2017)

#### **BACKGROUND**

The Rural Drinking Water Services (APR) are community organizations of water and sanitation services that were born in Chile in 1964 as part of the Rural Potable Water Program, promoted by the State and financed by the IDB. Since 1994, the Ministry of Public Works is in charge of managing the Rural Drinking Water Program through the Directorate of Hydraulic Works.

The program has been successful, mainly due to two factors: 1. For the investment in Infrastructure made by the State and 2. The second and most important, for the contribution in administration, operation and maintenance by the community leaders who carry out their ad honorem work. However, despite being a successful model, a reference for several countries in the region, the Rural Drinking Water sector did not have its own legislation for its operation that recognized its characteristics and the strength of those who day by day work to provide quality services. This caused existing systems to be vulnerable to potential privatization processes by health companies that saw, through these organizations, a way to expand a client market that in some cases was limited and without the possibility of continuing to grow in the urban sectors.

This vulnerability was increased by factors such as the low level of associativity that existed in the sector at the national level, the lack of information and adequate technical training for leaders, as well as the low levels of schooling and geographic isolation of the rural sector, among others. All this, added to the insufficient technical advice that many APRs had, became a chain of limiting factors for the growth and sustainability of said systems.

#### **OUTCOMES**

What are the direct and indirect, positive and negative effects of the project at population level?

#### Positive Effects:

The participatory generation of a regulation to regulate matters of our sector that essentially seeks to protect the model of community water management and operational territories of the OCSAS.

The Law of Rural Sanitary Services allows defining the roles of the State: in terms of investment, support and strengthening of organizations, also their regulatory action, through the following elements:

- Strengthen the management capacity of community leaders and workers
- Protect the community, declaring essential goods everything necessary to produce and distribute water and creating reserve funds for eventualities
- Establish rights and duties of the Operators and of the Partners
- The creation of a national Consultative Council and regional councils to give an opinion on the assistance and promotion policy for the same OCSAS
- Incorporate the scattered rural sector
- Incorporate rural sanitation (sewerage), among others
- What are the direct and indirect, positive and negative effects of the project at institutional/organizational level?

At an organizational level, the process allowed:

- Strengthen the association between OCSAS through the creation of regional associations and the National Federation (FENAPRU). The latter was key to generating an interlocutor and validated before the state and legislators, throughout the process of generating the Law.
- Make visible the work of the leaders at a national and international level
- It allowed the leaders to generate and strengthen ties of collaboration with different actors at the national level, including the state, legislative sector, NGOs, academia, etc.

Regarding the negative aspects:

- The work required tremendous work on the part of the leaders, often with the need to provide resources (money and time) for their own development.
- Many elements that were sought to be reflected in the law were not possible because of what the leaders had to negotiate. For example: school for leaders, one Direction and not Sub direction.
- Lack of participation of more leaders in the process, so that the work was concentrated only in some, with the consequent recharge that this implied

• Provide an approximate analysis of costs/benefits of achieved outcomes

The management of the OCSAS (APRs) means for the State an approximate savings of more than one billion pesos per year, so the power to regulate and support the work of the sector was key to guaranteeing its sustainability in the sector.

The work meant for the leaders a level of commitment and no less sacrifice, for the generation of proposals, parliamentary discussions, attendance at work meetings, etc. For all of them, this process of incidence was an additional work to the management of their own OCSAS.

The external amounts invested for the development of this process were quite low compared to the result obtained: to be one of the laws built with the highest level of participation of the bases in the history of the country. In this sense, the efficiency of the project was very high.

What are the effects of the project/programme with regard to the reduction of inequalities between men and women?

Although the process did not have a specific focus on gender, the fact of generating regulations that regulate the provision of water in rural areas improved and ensured the living conditions of many families. The regional or provincial Associations and in the same FENAPRU CHILE participates a large number of women, as Directors, is also in the OCSAS at the national level.

#### **OUTPUTS**

♦ What are the main tangible products (goods, services) of the project?

Today and after all these joint efforts, this document has been transformed into the Rural Sanitation Services Law of Chile (SSR Law), a law that regulates the operation of the APR, promotes its sustainability over time and allows capacity building management of community organizations, preserving their participatory nature and supporting the approach to the main challenges they face today. This law is constituted as one of the most important regulations in Chile built with citizen participation.

This regulation, which was built by FENAPRU Chile, MOP professionals, the Superintendent of Rural Health Services (SISS) and the Ministry of Economy represented by its Cooperative Department, is the result of a process of conscious and respectful dialogue, as well as of discussions and disagreements with the Executive and Legislative Power. Dialogue that also allowed the construction of the Regulation that will make it possible to start the implementation of the law. It should be noted that the ministries related to the drinking water and sanitation sector in the country were also linked to this process, such as the Ministry of Social Development, the Ministry of Health, the Ministry of Housing, and the Sub Secretariat of Regional Development of the Ministry of the Interior.

• What is the outreach of the project (e.g. population groups covered, area covered, institutional levels covered)?

More than 1700 rural drinking water services in Chile, almost 2,000,000 people nationwide, more than 7,000 community leaders and approximately 5,000 workers.

#### LESSONS LEARNED

• Description of relevant aspects that have contributed to success/failure of the project.

The fundamental axes of the work strategy implemented by FENAPRU during the process of processing the Law of SSR, were the following:

- Maintain the unit in a context of broad representation at the national level, through associativity.
- The generation of a constructive, permanent and horizontal dialogue with executive and legislative powers, at a formal and informal level
- Political transversality, that is, inclusive of all political currents
- The high level of perseverance, persistence and commitment, especially by the Leaders, who voluntarily invested time and resources, often at the cost of important family and personal sacrifices
- Respect for diverse opinions
- The willingness to negotiate
- The creation of networks of work with other organizations, who contributed from Advice and support to economic resources

The associativity in Latin America, through CLOCSAS

In the process, the leaders managed to be heard, empowered and learned about how a law is built and processed. It is important to point out that FENAPRU did not have any financial resources from the State for the development of this work. The contributions for the transfer, feeding and accommodation of the leaders came largely from the provincial or regional associations and, even, from themselves.

• Description of main difficulties faced during the phase and efforts made to overcome them.

The main difficulties encountered in the process were, initially, the lack of representation at the national level, for which the leaders decided to create the National Federation of Rural Drinking Water, FENAPRU. This associativity also implied great challenges, first for its formalization and later for the sustainability of relations between the leaders. Certain power disputes within the organization were inevitable, compounded by fatigue, great demands on time and lack of resources to carry out the work. The leaders had to travel great distances from their communities to reach Santiago and Valparaíso, cities where the technical tables were developed. At times, the lack of economic resources of the associations to finance the transfers of the leaders implied that they should be covered by themselves.

Despite these difficulties, the commitment and participation of the FENAPRU board was key to continue the process and to allow the presence of the Federation in other parallel spaces to which it was invited, thanks to the growing recognition of its work and sectorial representativeness.

#### REPLICABILITY AND SCALING UP

• Where is the project with regard to replicability and scaling up?

In FENAPRU we believe that with collective work, perseverance, spirit of service and associativity, collective goals can be achieved. This lived process is the proof, because after many years of work we have achieved our own regulations for our sector and it is the first time in Chile that we are working on a bill with citizen participation. This model of work, carried out during this process, can be replicated and replicated, both in Chile and in other countries of the region.

With this huge work, it is evident that it is possible to build public policy from the grassroots level and that citizens have a powerful voice that can generate interesting proposals; Proposals that, together with the authority, can be strengthened in pursuit of the welfare of the communities. We believe that it is possible to influence public policy, that it is possible to dialogue with the executive and develop solutions for the communities together. It is always good to appeal to dialogue and although there are many opinions, there will always be a consensus at some point.

We hope that this process will serve as a reference for the work of the thousands of OCSAS that today supply nearly seventy million people throughout Latin America; especially for those that are developing similar processes in their countries or that are in the search of promoting the participatory creation of legislations.

We believe that it is possible to influence public policy from the ground up, when there is willingness, capacity for delivery and perseverance, but above all when there is a strong associativity that allows for grouping the voices and giving greater representation.



### National Program for Rainwater Harvesting and Ecotechnics in Rural Areas -PROCAPTAR



Country/Region:	México / North America
Project Title:	National Program for Rainwater Harvesting And Ecotechnics in Rural Areas - PROCAPTAR
Implementation organisation:	NATIONAL WATER COMMISSION (CONAGUA) www.gob.mx/conagua
Contact:	FRANCISCO JOSÉ MUÑIZ PEREYRA  DEPUTY DIRECTOR GENERAL FOR WATER, DRAINAGE AND SANI- TATION francisco.muñiz@conagua.gob.mx
Objective:	TO PROMOTE SOCIAL DEVELOPMENT, WATER AND SANITATION ACCESS OF MOST MARGINALIZED HOUSES IN RURAL AREAS THROUGH RAINWATER HARVESTING AND STORAGE AND WASTEWATER TREATMENT TECHNOLOGIES AT THE HOUSEHOLD LEVEL.
Main Partners:	NONE
Budget/Sponsors:	ACCORDING TO THE FEDERAL EXPENDITURES BUDGET, IN 2015 AND 2016 782 MILLION PESOS FROM THE FEDERAL (99.7%) AND STATE (0.3%) RESOURCES WERE INVESTED.
Beneficiaries Identification:	DIVERSE LOCALITIES OF THE MEXICAN STATES OF CAMPECHE, CHIAPAS, GUERRERO, HIDALGO, OAXACA, PUEBLA, SAN LUIS POTOSÍ, TABASCO, MORELOS AND VERACRUZ.
Period of implementation	2015-2016

#### **BACKGROUND**

At present, the drinking water and sanitation coverage at the national level is 92.5% and 91.4% respectively. However, the coverages are unequal in urban and rural areas, since in the latter one the drinking water coverage is 81.6% that represents an estimated population of 4.5 million Mexicans which lack this service.

Reducing the coverage gap in rural areas represents a major challenge, due to the high dispersion of houses, which makes it unfeasible to provide services to the most remote communities, moreover due to the conditions of the inhabitants of such areas, the conventional drinking water and sanitation service is often unsustainable because of the impossibility of covering the systems' operation costs.

The PROCAPTAR program represents an option that will allow to supply water to people that today do not have water services and have to travel long distances for having access to the vital liquid, as well as to improve their living and health conditions by giving them access to a sanitation system.

#### **OUTCOMES**

• What are the direct and indirect, positive and negative effects of the project at population level?

The positive direct effect on the population is to count with 50 litres per inhabitant each day throughout the year and with enough quality for human use and consumption. Moreover, living conditions and productivity of the beneficiaries are improved as they do not have to walk for hours carrying water to their homes. Low cost and operations system and easy maintenance is carried out by the inhabitants themselves.

One of the positive indirect effects is to promote a culture for the responsible use of water and to diminish the rate of gastrointestinal illnesses in the population by implementing an adequate excreta disposal, while reducing aquifers pollution.

Among the negative effects is the possibility of g less precipitation than estimated and being unable to count on the resource at certain times during the year.

What are the direct and indirect, positive and negative effects of the project at institutional/organizational level?

This project boost, in a direct manner, social development, drinking water and sanitation access of localities in high marginalized rural areas, in compliance with the 2013-2018 National Development Plan, according to the strategy "Implementing a sustainable water management, making it possible for all Mexicans to have access to this resource". Furthermore, this contributes to the achievement of the objective "To strengthen water supply and drinking water, drainage and sanitation services access", which was raised at the 2014-2018 National Hydraulic Program through the strategy of "Increasing drinking water and sanitation coverages" on its line of action "Increasing drinking water and sanitation coverages in urban and rural areas, giving priority to the vulnerable population."

• Provide an approximate analysis of costs/benefits of achieved outcomes

In 2016, the average cost per benefited inhabitant is \$13,831 in drinking water and \$9,220 in sanitation. (Mexican pesos)

• What are the effects of the project/programme with regard to the reduction of inequalities between men and women?

Women's workloads in rural areas increase for getting drinking water for families' consumption. Consequently, the program improves this situation by providing them a better quality of life with safe access to quality water and better hygiene conditions, which will reduce the rate of gastrointestinal illnesses of the families living in these localities.

By releasing the time spent by women on water hauling, they can increase their productivity and work benefit, whether they work on their own or they work for a third party.

#### **OUTPUTS**

• What are the main tangible products (goods, services) of the project?

The Program contemplates the installation of a rainwater harvesting system, which consists of gutters and pipelines for storing water in a tank with sufficient capacity for covering the water demand of the house 365 days a year, providing them 50 litres per inhabitant each day. The harvesting system includes leaf filter, first rainfalls separating filter, colloidal silver spheres disinfection device and an ultrafiltration device for guaranteeing water quality for human use and consumption in the home.

With regard to the basic sanitation system, the installation of a cabin with sink, WC, and a bio-digester with enough capacity according to the inhabitants of the house and absorption well.

• What is the outreach of the project (e.g. population groups covered, area covered, institutional levels covered)?

The objective of the project are populations based in rural localities with less than 2,500 inhabitants, in a vulnerable situation and considered as highly and very highly marginalized, included in the National Crusade against Hunger (Without Hunger), with drinking water coverage under 20% and a total annual precipitation equal to or more than

1,500 mm. At the same time, benefited homes must count with enough space and adequate material for rainwater catchment.

#### LESSONS LEARNED

• Description of relevant aspects that have contributed to success/failure of the project.

The social attention component is a very important part to consider and develop during all the stages of the process. This implies getting involved with each community and to establish links that permit the dialogue so that the rainwater harvesting systems can be accepted by the community as its main source of drinking water supply.

It is important to build the community's and families' ownership of the systems due to the fact that the systems are installed inside their properties and the users are responsible for their appropriate use and maintenance. To support this, each community is trained in its own language (if they speak an indigenous language) and receive a detailed explanation on the operation and maintenance required by the systems. Furthermore, they receive a manual with text and illustrations for a better understanding of the information.

• Description of main difficulties faced during the phase and efforts made to overcome them.

During the planning phase, the main difficulty concentrates in selecting the localities that fulfil all the requirements and to prioritize them in order to make an efficient use of the available resources.

In the design and construction phase the challenge lies in the accommodation of the infrastructure inside the properties, due to the spaces and topographic conditions.

In order to reduce uncertainties and deal with the difficulties encountered, in 2016 studies for determining the technical, economic and social feasibility in the states of Chiapas, Oaxaca and Veracruz were elaborated. The results of this studies provided data that will allow better decision making regarding localities selection as well as to ensure the availability of adequate and sufficient places for building the systems.

#### REPLICABILITY AND SCALING UP

• Where is the project with regard to replicability and scaling up?

The project has been replicated in the states of Campeche, Hidalgo, Puebla, San Luis Potosí, Tabasco, Morelos, Guerrero and Veracruz (Mexico). It is promoted with greater intensity in the most vulnerable states with less services coverage: Chiapas, Oaxaca and Veracruz.

The systems can be replicated in all the identified communities and it is necessary only to make the required adjustments in each house.

# SABA Water & Sanitation & Hygiene (WASH) Experience



Country/Region:	Peru, Colombia / Latin America
Project Title:	SABA Water & Sanitation & Hygiene (WASH) Experience – Boosting Impact in Peru and Colombia: Accelerating the transition towards universal and equitable access to safe and affordable drinking water as well as adequate and equitable sanitation and hygiene in rural and post conflict areas
Implementation organisation:	Swiss Agency for Development and Cooperation SDC
Contact:	Cesarina Quintana Garcia/ Regional Water Advisor and Senior National Program Officer / <a href="mailto:cesarina.quintana@eda.admin.ch">cesarina.quintana@eda.admin.ch</a>
Objective:	To contribute to universal and equitable access to safe and affordable drinking water, and adequate and equitable sanitation and hygiene in rural and post conflict areas of the Andean Region. To enrich the international debate with regard to the SDG implementation process.
Main Partners:	The Peruvian Ministry of Housing, Building and Sanitation; Ministry of Development and Social Inclusion, Ministry of Health, 14 Regional Governments, Local Governments and Communities.  The Colombian Ministry, of Housing, City and Territory; The Cauca and Valle del Cauca Governments, Local Governments and Communities.
Budget/Sponsors:	Swiss Agency for Development and Cooperation SDC / 12'700'000 CHF Peruvian Public Funds: More than 4'300'000'000 USD
Beneficiaries Identification:	More than 5'300 communities/14 regions /Peru  Expanded to 4 post-conflict municipalities in Colombia  Number of beneficiaries: More than 2'000,000 people
Period of implementation	During the past 20 years. Current phases: 2012-2017

#### **BACKGROUND**

The SABA project is a rural WASH approach that was launched some 20 years ago in Peru as a pilot to validate rural technological WASH solutions. It expanded later on towards country wide coverage, focusing on capacity building and institutional strengthening on local, regional and national level.

This approach became a proven model for managing water and sanitation in rural areas and the key components of SABA were completely integrated into national policy. Since 2014, the Swiss Agency for Development and Cooperation SDC has supported the expansion of this model also to four post-conflict municipalities in Colombia, and aims to continue promoting the project in Latin America and, if possible, into other continents.

The success of the model is based on a long-term interaction between the expansion of rural WASH infrastructure development and WASH governance enhancement through the support to local (community and municipal) service management in combination with WASH advocacy towards sub-national and national leadership, integrating all stakeholders.

The main success of the project was the Peruvian government's decisions to support and finance the nationwide replication of the model developed by Swiss funded local projects.

#### **OUTCOMES**

- What are the direct and indirect, positive and negative effects of the project at population level?
  - During the past 20 years, the SABA project through its comprehensive approach has reached out to more than two million people, providing them with quality rural WASH services.
  - SABA has contributed, in alliance with its local and regional partners, to the creation and the empowerment of more than 5,300 rural WASH Steering Committees (JASS Juntas de agua y saneamiento rural) in 14 departments of the country. According to the Peruvian Ministry of Housing, Building and Sanitation there are around 30,000 JASS at national level.
  - Two main challenges at community level remain in term of long term sustainability: (1) The voluntary, non-formalized character of the work of the members of the rural WASH Steering Committees. (2) A political commitment to visibilize and recognize all the cost involved for the operation and maintenance of the rural WASH systems as basis for further support to the JASS.
- What are the direct and indirect, positive and negative effects of the project at institutional/organizational level?
  - SABA's main institutional innovation is the creation of over 500 "ATM" (Technical WASH offices at
    municipal level) which became part of the Peruvian rural WASH policy. ATMs were also introduced by
    the project in Colombia. There is an interest to exchange the experience of ATMs with Bolivia, Brazil and
    Mexico.
  - Institutional strengthening was combined with local social capital building: Over 4,000 rural WASH professionals were trained.
  - Community-based WASH networks in Peru and Latin America (CLOCSAS) were strengthened, the coordination of different WASH stakeholders (government actors at all levels, private sector, universities, civil society) prioritized and intersectoral coordination in Peru as well as experiences at regional (LATINOSAN: Latin American governments of Peru, Colombia, Brazil, Bolivia, Panamá and Chile) and multilateral (IFC/WB based Water Resources Group 2030) exchanged.
  - Main challenges: Permanent allocation of public budget (with performance indicators) to municipal ATMs and WASH Institutions at regional level.
- Provide an approximate analysis of costs/benefits of achieved outcomes
  - In terms of leveraging the access of rural communities to WASH delivery services, Swiss Cooperation has invested in the past 20 years around 50 million USD in rural WASH. Since 2012, Switzerland invested USD 12.7 million in the project and managed to leverage public funds (national, regional and local governments) of about 4300 million USD to new rural WASH systems and SABA has contributed to reach more than 2 million people in 532 municipalities. The Swiss investment per capita was therefore about 25 USD and for every USD funded by Switzerland, 338 USD have been invested by public Peruvian sources.
  - The most important outcome is the creation of rural social capital composed by the 4'000 technical rural WASH professionals, members of the Juntas de Agua y Saneamiento Rural (rural WASH Operators), subnational and national authorities committed to implement a comprehensive, intersectoral and sustainable approach.
- What are the effects of the project/programme with regard to the reduction of inequalities between men and women?
  - SABA has contributed since 1996 to reduce the gaps in rural WASH (from 15% rural water coverage in 1996 to 69% in 2017 and from less than 10% to 21% of rural sanitation coverage).

SABA has promoted the participation on women in the Rural WASH Community Steering Committees.
Since 1996, SABA has focused on rural WASH home delivery services and now this in public policy which
it means no more hours spent to carry water at home, a task often carried out by women and girls. SABA
did not only promote rural WASH systems, but also the importance of hygiene and healthy, dignified housing.

#### **OUTPUTS**

- What are the main tangible products (goods, services) of the project?
  - Contribution to the creation of more than 1350 new rural WASH systems, more than 1500 schools empowered with education on sanitation, 10 diploma courses in rural WASH in alliance with public universities institutionally anchored, continuous exchange of experiences within 14 departments in Peru and several exchange-missions of high ranking authorities from Brazil, Colombia, Bolivia and Multilateral Organizations organized and detailed project publications publicly accessible.
  - SABA in Peru inspired the expansion towards Colombia, in close cooperation with the Colombian Ministry of Housing, City and Territory. There is interest of the Brazilian Government (Brazilian National Health Foundation FUNASA, the public Rural WASH Sector lead) to replicate SABA.
  - What is the outreach of the project (e.g. population groups covered, area covered, institutional levels covered)?
  - More than 2,000,000 people from rural areas of 14 regions (almost 60% of the regions of the country) in rural areas between 500 to 4,500m above sea level at the coast, Andean highlands and low-land rainforest region covered by the project.
  - SABA project has supported the following three institutional levels: local, regional and national governments:
    - 14 regions: Regional Governments (Intersectoral: Health, Sanitation, Education and Development and Social Inclusion)
    - National Programs: Rural Water and Sanitation Program (PNSR) of the Ministry of Housing, Building and Sanitation; "Agua Mas" Program –FONCODES from the Ministry of Development and Social Inclusion
    - 532 Municipalities and the support for the creation of ATMs
    - Replication in Colombia in post-conflict areas with the ASIR-SABA Project in alliance with the Municipalities of Cauca and Valle del Cauca, Departmental Governments, Colombian Ministry of Housing, City and Sanitation.

#### LESSONS LEARNED

- Description of relevant aspects that have contributed to success/failure of the project.
  - The SABA project was launched twenty years ago in Peru, and established throughout the country, it has
    become a proven model for managing water and sanitation in rural areas and its key components were
    widely integrated into national policy. This long-term, community and people based engagement was crucial
    to create this level of impact and sustainability.
  - SABA learned how to factor in political dialogue, vocational education and training, alliances between various services and innovation in terms of its operation. The sustainability of the model is however dependent on good local and regional, governance, which is the aim of the decentralisation efforts.
  - SABA's success is also based on the wide experience of the SABA professional team supported by SDC;
     rural WASH experts committed with rural areas, which have all contributed to the dissemination of lessons learned and experiences.
- Description of main difficulties faced during the phase and efforts made to overcome them.
  - Long-term sustainability: The implementation of a rural WASH policy which includes the fair payment of the members of local WASH committees which manage the rural WASH systems and are so far working on a voluntary basis.
  - Budget constraints at local and regional level to fulfil the commitments
  - The constant changes of public staff in the different levels of government.
  - Lack of coordination at national level and there is an urgent need to advocate for rural WASH in Finance Ministry.
  - In spite of the efforts of the past governments, there remains a lack of an in-depth reform process in WASH, focusing on rural areas and reduction of inequalities.
  - Trust among different levels of government and the sanitation actors

- Access to isolated communities in difficult geographical areas
- The understanding of inter-cultural aspects.
- Nexus among sanitation and productive and commercial activities in rural areas.

#### REPLICABILITY AND SCALING UP

- Where is the project with regard to replicability and scaling up?
  - Replication is not a question of a copy and pasting procedure. Regions and countries have different contexts and structures. It is very important to identify the similarities but also the differences to have a successful intervention.
  - The integrated approach of the model is one of the conditions of its replicability. Since 2014, SDC has supported the expansion of this model to four municipalities in Colombia, with great potential of further replication.
  - According to the last recommendations by the impact policy evaluation, SDC plans to continue replicating the SABA approach in other Latin-American countries (Panama, Ecuador, Brazil, Bolivia, countries that have shown interest at the level of sector authorities).

## Surface Water (ponds) Efficiency



Country/Region:	Bangladesh/ South Asia
Project Title:	Surface Water (ponds) Efficiency
	Water preservation and safe water supply project through re-excavation/mainte-nance of Ponds/Dighi/Ditches owned by Zilaparishads (District Councils).
Implementation organisation:	Department of Public Health Engineering (DPHE)
Contact:	Name: Md. Shamsul Alam
	Designation: Project Director (Superintending Engineer)
	Contact no :- 01711-276923; 02-55130530
	E-mail: pd.prp@dphe.gov.bd
	md.shamsulalam1963@gmail.com
Objective:	Overall objective of this project is to fostering economic development for improving people's living standard in rural Bangladesh through increasing their access to safe drinking water.
Main Partners:	N/A
Budget/Sponsors:	Budget: BDT 37,45.07 million
	Sponsor: GOB
Beneficiaries Identification:	42 districts of Bangladesh (out of 64)
	Directly beneficiary population: Around 1 million
Period of implementation	January, 2016 to December, 2018

#### **BACKGROUND**

Water supply in Bangladesh is predominately based on groundwater sources. In the context of very high prevalence of diarrhoeal diseases in Bangladesh. Groundwater is free from pathogenic microorganisms and available in adequate quantity in shallow aquifers for development of low cost tube-well based water supply for scattered rural population. During 1997 Bangladesh achieved a remarkable success providing 97% of rural population with bacteriologically safe tube-well water. This was considered as the largest population coverage by safe water supply in the region (South Asia.)

Unfortunately, arsenic contamination of shallow aquifers in many parts of the country has made shallow tube-well water unsafe for drinking. Arsenic in tube-well water was first identified in 1993. After that the safe water supply coverage decreases rapidly. Around 58 out of 64 districts of Bangladesh were affected by Arsenic contamination in ground water in varying concentration. The WHO's (World Health Organization) value for Arsenic concentration in drinking water is 0.01 mg/l and the maximum permissible limit for Bangladesh 0.05 mg/l, where as in some areas the concentration is more than 5.0 mg/l. Here 30-35 million people are feared to be exposed to Arsenic contamination. Besides this, Iron is another chemical dissolved in the ground water of Bangladesh. In the coastal belt salinity is a major problem as most of the water sources are getting saline in the coastal area.

According to *Rupkolpo-2021* (Vision 2021), Bangladesh Government is committed to using arsenic free surface water source by excavating/re-excavating at least one pond in every union of Bangladesh. Being a tropical country every year there is a plenty of rainfall during June–September. In the monsoon period all the surface water sources like rivers, lakes, ponds, bills, haors and so on can be recharged easily.

Under such circumstances, the Government of Bangladesh has greatly emphasized the development of protected pond-based water supply systems. The protected ponds should not receive any surface discharge and should only be replenished by rain and groundwater infiltration. A DPP is prepared at a cost of BDT 37,45.07 million with a target to increase the coverage of water supply of Bangladesh by re-excavating the ponds, dighis, ditches etc and then installing Pond Sand Filter, Solar Pond Sand Filter, and Pond Water Filtration System within the year January 2016 to December 2018. This new project will help to increase the present coverage of safe water supply, which will enhance one step more to achieve the SDG targets.

#### **OUTCOMES**

- The project will contribute to fulfil government's commitment to provide arsenic safe and salinity free water for all in the project areas through:
  - A model for the whole country's rural areas
  - Training to develop skill of service providers for proper O&M and for beneficiaries to enable them to handle the constructed facilities efficiently
  - Development of sustainable, green and climate resilient environment through re-excavation and maintenance of ponds/water bodies owned by zilaparishads
  - Preservation of rainwater in rural areas
  - Increasing use of surface water through reducing the trend of ground water use.
  - Increasing ground water table through protecting its depletion.
  - Increasing the rural watercoverage

#### **OUTPUTS**

- A total of 809 ponds owned by Zila Parishad re-excavated with proper maintenance for water & safe water supply.
- The water supply coverage increased to a significant amount and people getting safe water.
- DPHE, LGIs, CBO, community trained on the O&M of PSF, Solar PSF etc.

#### LESSONS LEARNED

Description of relevant aspects that have contributed to success/failure of the project.

The project is ongoing and there are scopes to review and scale up the programs and activities. The following are a few learning points from the previous one year:

- Increased surface water uses. Thus reduced ground water consumption and depletion of water table.
- Rain water collection in the pond providing sufficient water in dry season.
- In the coastal/saline prone areas, the citizens use pond water for drinking purpose.
- Help increase the rural safe water coverage and reduce water borne disease.
- Chemical treatment is not required in the Pond Sand Filter System but the maintenance of Pond Sand Filter (PSF) should be enhanced.
- Protect salt water intrusion into the surface water (Pond Water).
- In cyclone prone areas, cyclone may disrupt the power/electricity. In the project areas, safe drinking water will be available after cyclone.

• Description of main difficulties faced during the phase and efforts made to overcome them.

Many ponds are grabbed by vested interest groups. In addition, many ponds are used as the domestic garbage and sewerage discharge points. To get rid of the problem, there is no alternative to citizen-ownership and public awareness. Public awareness campaign and community management is one of the major components of this project.

#### REPLICABILITY AND SCALING UP

Access to safe drinking water has been an important national goal in Bangladesh. According to the *National Policy for Water Supply and Sanitation 1998 and Sector Development Plan on Water Supply and Sanitation* (FY 2011-25), there should have one safe water point for 50 persons. Up to January 2017, the coverage of safe water supply option in rural areas of Bangladesh is 87 persons per water point. To achieve the target of the National Water Supply and Sanitation Policy 1998 and Sector Development Plan on Water Supply and Sanitation (SDP), around 4557 ponds will be re-excavated for safe surface water sources with minimum treatment.

After implementation of this project the provision of safe water in the rural (unserved, under-served, and hard-to-reach) areas will increase and also the Ponds/Dighi/Ditches are preserved as natural water bodies, which will go another step to achieve the SFYP targets and the SDG goals/targets in the safe water supply sector.

This project will help preserve and supply safe drinking water [and help sanitation] in arsenic affected plain lands and saline affected coastal areas. This model may be replicated by countries with similar features.

### WASH in Schools



Country/Region:	Bangladesh / South Asia
Project Title:	WASH in Schools  Third Primary Education Development Program (PEDP-3), Need Based Infrastructure Development of Government Primary Schools Project & Need Based Infrastructure Development of Newly Nationalized Government Primary Schools Project.
Implementation organisation:	Directorate of Primary Education (DPE) www.dpe.gob.bd
Contact:	Dr. Md. Abu Hena Mostofa Kamal  Director General  e-mail:dgprimarybd@gmail.com
Objetive:	To ensure safe water, better sanitation and clean environment at every government primary schools in Bangladesh
Main Partners:	Department of Public Health Engineering (DPHE)
Budget/Sponsors:	Total BDT 100537.00 million in 4 phases  Government of Bangladesh (GoB) & Development Partner's (DPs)-[ADB, WB, JICA, UNICEF, EU, DFID, CIDA, SIDA, Aus-AID, GPE]  Percentage of amount sponsored: GoB:87% & P.A.:13%
Beneficiaries Identification:	All the students and teachers of the 65000 government primary schools.  Number of beneficiaries: 20.92 million
Period of implementation	July'2011-December'2022

#### **BACKGROUND**

Education plays a key role in government strategies targeted to poverty reduction, economic growth, social development and good governance. Most of the primary schools sanitation suffers from insufficient infrastructure and poor maintenance. Although most of the schools have latrines, only a small percentage of school latrines are improved; and for most schools the latrine maintenance is poor. A large number of schools do not have separate toilets for girls. To address the issue, the Government of Bangladesh (GoB) has set a standard: National Standards for WASH

for Schools in Bangladesh.Primary Education Development (PED) program is one of the milestone programs taken by the Directorate of Primary Education (DPE). Through a dedicated component called Wash Block, separate toilet facilities with running water supply, has been introduced for boys and girls. DPE is implementing this project and the Department of Public Health Engineering (DPHE), the lead agency in water supply and sanitation, is working as the co-implementer.

#### **OUTCOMES**

• What are the direct and indirect, positive and negative effects of the project at population level?

After construction of WASH Blocks in the government primary school the students are:

- Living more healthy
- Performing better in school
- Positively influencing the hygiene practices in their homes among their family members and the wider community
- Practising better waste management
- Changing their hygiene behaviour now and have better hygiene practices in the future when they likely will be parents, teachers etc.
- Practicing equal division of hygiene related task (cleaning of WASH Blocks, solid waste) etc
- Learning about menstrual hygiene

The direct and positive effect of the project is that the WASH blocks ensure an enabling and conducive environment in schools. This initiative ensures separate hygiene toilets for the boys and girls. The Directorate of Primary Education also promotes the self-awareness for cleaning and maintenance of the WASH blocks by involving the students through Cub Scouting, *Khude Doctor* (little doctors) and School Brigades etc. The system is healthy and minimizes the risk of disease, abuse, and exclusion. It promotes gender equality which will increase the attendance of the girl-students in the schools. Menstrual hygiene management and information facilities are available for girls; therefore, they feel encouraged to attend the school which further ensures education opportunities in the rural areas. This also helps encourage female students continue in schools. For the teachers and school management committees, the only challenge is to effectively involve the young citizens (8 -11 years) in awareness and self-motivated campaign in keeping the Wash blocks clean.

• What are the direct and indirect, positive and negative effects of the project at institutional/organizational level?

There has been no negative impact identified so far. Only challenge is to motivate the young citizens in hygiene and sanitation practice and make them aware that access to water and basic sanitation is a human right. The awareness and student involvement program is an ongoing activity.

• Provide an approximate analysis of costs/benefits of achieved outcomes

The project has developed a road map for achieving the SDG targets through regular programs and some targeted activities. The WASH Blocks and maintenance modality through the cub-scouting, *khude doctor*/little doctor and school brigades and so on may be considered as a Light House initiative. This initiative can be mainstreamed for achieving success in School WASH practices in Bangladesh. Other countries can also replicate and follow the system to achieve their WASH targets if they can contextualize the cases, practices, and examples from Bangladesh. Other than the project cost, the real cost-benefit (financial and social) analysis is yet to be completed. Considering its transformative features, the future impact of this project will be huge.

• What are the effects of the project/programme with regard to the reduction of inequalities between men and women?

Gender discrimination is still prevalent within the society. In many cases, this discrimination is related to cultural beliefs and social traditions. Girls are vulnerable to forcefully leaving schools, partly when toilet and washing facilities are not separate, not safe or simply not available. The WASH Block has adequate facilities for menstrual hygiene and thus a major obstacle to attendance is removed. It fosters social inclusion and individual self-respect. It empowers all students and creates a sense of dignity and confidence among the girls and female teachers.

#### **OUTPUTS**

• What are the main tangible products (goods, services) of the project?

The major features of WASH Blocks are: (i) Structural features, (ii) Sanitation features, (iii) Water Supply features, (iv) Disposal Features and (v) Special features.

- (i) Structural features: In every School there is two separate WASH Block with separate entry. Male WASH Block for male teacher & Boys and Female WASH Block for Female teacher & Girls. Size of each Wash Block 14'-10" x 15'-5" = 228.68 sft.
- (ii) Sanitation features: Every Male and Female WASH Block has 3 toilets (including 1 for disable students), Foot Washing System, Hand Wash Basin, Waste Bin, Mirror and Shelf in addition there is 2 Urinal in every Male WASH Block.
- (iii) Water Supply features: WASH Block has Running Water Supply with overhead Reservoir and a Tube-well with electric pump.
- (iv) Disposal Features: Septic tank and Soak well is provided in every WASH Block for adequate sewerage disposal.
- (v) Special features: The WASH Block is designed considering the user group. That's why these are child and user Friendly. Moreover, high commode, hand rail and ramp are provided for disable students.
- What is the outreach of the project (e.g. population groups covered, area covered, institutional levels covered)?

As per the DPP of the 3 ongoing projects, total 54500 WASH Blocks will be constructed. To achieve this goal, government of Bangladesh has already constructed 12971 WASH blocks for female teachers & girls and 11538 for male teachers & boys till December 2017. The remaining 29991 WASH blocks will be constructed by 2022. Again in upcoming another Project (PEDP-4) will start from July 2018, Where another 80000 WASH Block will be constructed. The students (both boys & girls) and teachers of all the primary schools in the country will be under improved sanitation, within 2023. The primary schools were selected from a live list as per need based with the help of web-based software named PEPMIS. The project area cover diverse aspects including inaccessible places like Chars, Haors, Hill Tracts, Coastal areas, Tea gardens and other disadvantaged areas. The cost of ongoing three projects is 28537 million BDT and the upcoming Project is 72000 million BDT.

#### LESSONS LEARNED

• Description of relevant aspects that have contributed to success/failure of the project.

The success aspect of the project that it has been covering all the government primary schools emphasising the gender sensitive issues. Moreover, a large number of boys and girls are being trained on safe sanitation from the school.

Due to over population and climate vulnerability, the country faces many challenges on ensuring clean water and safe sanitation, of which the two are severe: (i) Budget and financial flow management to complete the targeted works, (ii) lack of human and financial resources for proper maintenance and monitoring: appointment of one person for each school to clean WASH Blocks involves extended budget.

Description of main difficulties faced during the phase and efforts made to overcome them.

Due to over population, climate vulnerabilities and constrain of assets, the country has to face many challenges to Implement safe sanitation. Following are the major difficulties:

- Non availability of adequate land: Often construction of separate WASH Block for male & female users cannot be done due to non availability of adequate land. To address this issue two storied WASH Blocks, combined WASH Blocks with combined wall were constructed.
- Non availability of electricity: Many primary schools do not have electricity connections. Solar panel /
  Generator were provided and the cost (approx.) of one unit Solar Power System is BDT 2,80,000. However
  within 2019 most of the Primary Schools will be connected with electricity.
- Non availability of maintenance budget: WASH Block constructed became unusable due to lack of human resources (Cleaner) for proper maintenance and monitoring. A proposal of recruiting manpower (Cleaner) and draft operation & maintenance manual is under approval by DPE.
- Usually a huge number of students use WASH Block daily, so regular cleaning and maintenance is required but fund is not available. Fund required for cleaning materials (Harpic, Vim, Brush etc.), hand washing

- materials (Soap, Liquid-soap) and for routine maintenance (purchase of Bib/Pillar cock, Push shower etc.). Proposal for Increase of maintenance fund is under consideration of the Government.
- In some areas, arsenic/chloride/iron contamination is another hazardous issue for the school tube well which needs periodical monitoring

#### REPLICABILITY AND SCALING UP

• Where is the project with regard to replicability and scaling up?

The Bangladesh government has achieved remarkable success in water supply and sanitation in technologies, innovations, and awareness through involving the educational institutes. The *National Hygiene Promotion Strategy for Water Supply and Sanitation Sector in Bangladesh* (2012) also promotes WSS programs in schools (particularly Strategy 2, 4, and 6). The most important learning from Bangladesh is that the WASH Blocks and cleaning-maintenance model [through cub scouting, *khude doctor* (little doctor) and school brigades and through strengthening the WASH Awareness Committee involving SMC, local NGOs, and local Communities] may be replicated by countries with similar features.