

# Resources

*A review of resources and published papers on water, sanitation and hygiene in developing countries*



**T**his is the fourth edition of our review on water, sanitation and hygiene services. In this new edition, you'll find a focus on water and sanitation services in the context of climate change. Enjoy the reading!

The pS-Eau team

## HYGIENE

// evaluation of handwashing practices / handwashing devices / childhood cognitive skills / awareness campaigns / ...

## SANITATION

// shared toilets / urban sanitation / desludging / Accra public toilets / CLTS / Sanitation services in slums / ...

## DRINKING WATER

// technical guidelines / devolution in Kenya / rainwater harvesting / self-supply / small network costs / household water practices / ...

## MONITORING AND EVALUATION

// domestic water service delivery indicators / improved sanitation and its impact on children / ...

## WASH SERVICES AND CLIMATE CHANGE

// climate change / resilience / sustainability / adaptation / impacts on services / ...

# HYGIENE

- **Household water treatment and storage**

*pS-Eau, 2013 - in French only*



This practical guide provides an overview of different technical solutions to tackle the challenges of water treatment and storage at household level. Promoters in charge of implementing such solutions will also find ten key questions before choosing a suitable solution and a summary of references for the implementation of a supply chain and for the distribution of non food items.

- **Sustainability and scale-up of household water treatment and safe storage practices: enablers and barriers to effective implementation**

*IJHEH, 2015 (Ojomo et al.)*



Despite years of promotion of household water treatment and safe storage (HWTS), boiling is currently the only method to achieve scale for water safety at home. Using interviews of 79 practitioners in 25 countries, this study identifies six domains of enablers and barriers that HWTS programs need to consider all six domains to achieve scale-up and sustainability.

- **Neighbour-shared versus communal latrines in urban slums: a cross-sectional study in Orissa, India exploring household demographics, accessibility, privacy, use and cleanliness**

*TRSTMH, 2015 (Heijnen et al.)*

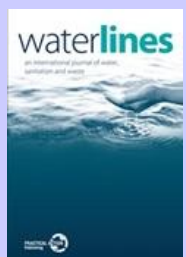


This research explored differences between neighbour-shared and communal latrines. Findings give significant differences between neighbour-shared and communal facilities in terms of user demographics, access, facilities and cleanliness that could potentially explain differences in health.

# SANITATION

- **Microfinance for sanitation: what is needed to move to scale?**

*Waterlines, 2015 (Trémolet et al.)*



Today, the effectiveness of approaches such as CLTS is limited by inadequate access to finance, when the rise of mobile banking and digital finance has lifted many poor people out of financial exclusion. The SHARE consortium led a research-action in Tanzania generating lessons for scaling up sanitation microfinance. This article presents the findings in the context of broader developments in the microfinance markets.

- **Financing sanitation for cities and towns. Learning paper**

*Institute for Sustainable Future, 2014*



The aim of this document is to provide a wide audience a user-friendly resource on financing for urban sanitation. The paper describes and clarifies current financing principles and approaches, provides multiple global case examples of innovative financing for urban sanitation, and discusses some emerging and new financing concepts and approaches.

- **Developing Business Models for Fecal Sludge Management in Maputo**

*WSP, 2015 (Hawkins et al.)*



An analysis of fecal waste flows in Maputo shows that only 3 percent of the total fecal waste produced actually passes through the treatment plant, while more than 50 percent contaminates backyards, the drainage system, and Maputo Bay.

● **Developing sanitation services, 16 questions for action**

pS-Eau, 2015 - in French only



Similarly to the the pS-Eau Drinking Water Guide, this document provides guidance to the stakeholders of international solidarity who support the development of sanitation services, in order to ensure the appropriateness of their project and the quality of their actions.

● **Towards systemic change in urban sanitation**

IRC, 2014 (Galli et al.)



This working paper offers a step-by-step approach to unravel and tackle the very complex circumstances surrounding the need to provide

sanitation in urban areas, particularly in densely populated areas and to the less affluent sectors of society. It outlines a “whole-system approach” to urban sanitation by shifting the focus from building infrastructure or a project-driven implementation approach to providing and maintaining equitable and environmentally friendly services, championed and supported by the government and with sufficient resources allocated to ensure sustainability.

● **Embedding Access to Finance into Sanitation Programmes: a Step-by-Step Approach**

SHARE/WaterAid, 2014 (Mansour et al.)



This report, initially commissioned by Water-Aid East Africa, proposes a step-by-step approach which NGOs or other public actors could take in

order to identify what role(s) they can play in increasing access to finance for sanitation. The step-by-step approach involves an analysis of the sanitation microfinance market: is there a demand? Who are the main providers of microfinance services? What activities are needed to get financial institutions involved in sanitation? What are the potential roles of public actors for developing this market?

● **Financing urban sanitation: public finance at national level**

IRC, 2015 (Fonseca et al.)



This 4-page brief focuses on public finance for urban sanitation at national level: how does it look like now and how does it offer an opportunity to close

the funding gap for urban sanitation?

# DRINKING WATER

● **Water and Sanitation Service Delivery, Pricing and the Poor: And Empirical Estimate of Subsidy Incidence in Nairobi, Kenya.**

EfD, 2015 (Fuente et al.)



Increasing block tariffs is a widely used practice by water utilities, particularly in developing countries, in part due to the perception that they can effectively target subsidies to low-income households. Combining data on households’ socioeconomic status and metered water use, this study examines how subsidies are distributed as delivered

through the water tariff in Nairobi, Kenya. Findings on subsidy distribution and the effectiveness of substituting reported water expenditures for metered use have implications for design and evaluation of water tariffs in developing countries.

● **Solar pumping: technical options and lessons from experience**

pS-Eau & ARENE IDF, 2015 - in French only

The use of solar energy is regularly questioned, particularly by local and national authorities of the South, as well as the French actors of cooperation. Photovoltaic tech-



nology has improved in terms of performance and cost reduction regarding the initial investment but also regarding operating expenditures.

The lessons learned from these projects are valuable as little literature offers an overview.



# MONITORING AND EVALUATION

- **Unlocking the Potential of Information Communications Technology to Improve Water and Sanitation Services. Summary of Findings and Recommendations**  
WSP, 2015 (Ndaw)



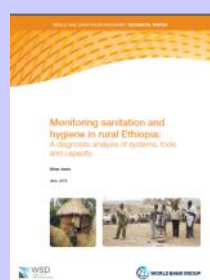
This study was carried out by the Water and Sanitation Program (WSP) to fill a gap in understanding the potential of ICT to improve water and sanitation services globally, with a particular emphasis in Africa. It covers a global desk review and case studies and provides evidence on how ICT can be used to leapfrog the water and sanitation sector towards more sustainable service delivery. This study sought to analyze the different case studies within the framework of enabling factors and barriers in terms of vision, process, customer/user, service delivery, human capacity, governance and finance.

- **Service delivery indicators for strengthening local monitoring of rural water service delivery in Uganda.**  
IRC Uganda, 2014



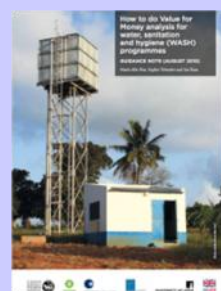
This paper presents a framework of service delivery indicators (SDIs) for monitoring rural water services in Uganda. The SDIs were developed based on sector norms, standards and guidelines set by the Ministry of Water and Environment. This paper describes the process of developing the indicators, and shows how they complement the national golden indicators.

- **Monitoring sanitation and hygiene in rural Ethiopia: a diagnostic analysis of systems, tools and capacity.**  
WSP, 2015 (Jones)



This Technical Paper draws from experience of WSP's Scaling Up Rural Sanitation project in Ethiopia. This global project focused on learning how to combine the promising approaches of Community-Led Total Sanitation and Sanitation Marketing to generate sanitation demand and strengthen the supply of sanitation products and services at scale, leading to improved health for people in rural areas.

- **How to do Value for Money Analysis for water, sanitation and hygiene (WASH) programmes - Guidance note**  
VFM-WASH, 2015 (Prat et al.)



This "how to" note provides practical guidance on how to analyse Value for Money (VFM) in water, sanitation and hygiene (WASH) programmes. It takes readers through a step-by-step approach to produce and analyse VFM indicators for WASH programmes, based on examples. It also provides guidance on how to interpret results of the VFM analysis.

- **Mobile for Development Utilities Programme: the Role of Mobile in Improved Sanitation Access**  
GSMA, 2015 (Nique et al.)



Today more people have access to mobile phones than to toilets. This report aims to outline how mobile channels can support sanitation service delivery while building new engagement models with customers in underserved settings.



# WASH SERVICES AND CLIMATE CHANGE

- **Water and sanitation services facing climate change. Working paper**

pS-Eau, 2015 - in French only

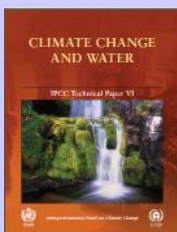


At the request of its network members, pS-Eau convened a working group on the topic of risks related to climate change in the

field of water. This document is the result of their work. It aims to provide stakeholders in the WaSH sector with elements of understanding on this subject as well as further reflection on the characterisation of mitigation and adaptation measures for water and sanitation programmes in developing countries.

- **Climate change and Water. IPCC Technical Paper VI**

GIEC, 2008



It is widely proven by observational records and climate projections that freshwater sources are vulnerable and will suffer severely from climate change, having major impacts on human societies and ecosystems. This technical paper was prepared at the request of the plenary assembly of the IPCC to clarify these issues.

- **Perspectives on water and climate change adaptation. Climate change and WASH services delivery - Is improved WASH governance the key to effective mitigation and adaptation ?**

IRC, World Water Council, CPWC, IUCN, IWA, 2009

This paper attempts to identify and discuss the nature and scope of possible climate change impacts



(negative and positive) on WASH service delivery. Recent literature is summarised and specific attention is given to the

high levels of uncertainty in this knowledge and in recommendations resulting from it.

- **Adaptation to climate change in the field of water: typology & recommendations for action**

PFE & AFD, 2015



In this report, the French Water Partnership (PFE) analyses the risks and potential impacts of climate change on water and gives several recom-

mendations for adaptation. This document also presents some case studies of adaptation projects and a typology of actions for a management of water adapted to climate change.

- **Lessons from IPCC : adapting the water sector to global climate change**

PFE, 2014 - in French only



This report summarises the observations on water and climate change given by the Intergovernmental Panel on Climate Change (IPCC)

in the Fifth Assessment Report released in 2014.

- **Climate change : the solutions suggested by water stakeholders**

Académie de l'Eau & PFE, 2015 (Redaud) - in French only



An opinion column from the President of water-climate change group of the French Water Partnership (PFE), a few months before

the start of the COP21 event in Paris: facing risks related to climate change, adaptation strategies should become a priority as much as mitigation strategies. The different actors in the water sector should take these new risks into account in their planning tools.

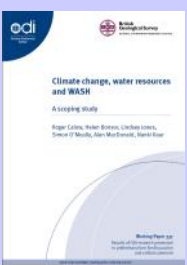
● **WASH Climate Resilient Development. Strategic framework**  
GWP & UNICEF, 2014



The objective of the Framework is to provide WASH service delivery with strategic tools for resilience to climate change, both now and in the future.

Specifically, the Framework focuses on investments to increase the resilience of the WASH sector to current climate variability as well as long term changes in climate. The principles and practices outlined in the Framework also aim to complement and strengthen on-going national and sectoral adaptation planning processes such as those under the National Adaptation Plans (NAPs) process.

● **Climate change, water resources and WASH: a scoping study.**  
ODI, 2011 (Calow et al.)



This report aims to pull together what we know about the links between climate change and water, drawing on both the scientific and non-scientific literature, for an

informed but non-specialist audience. Commissioned by WaterAid in the UK, the report has two broad objectives:

- To summarise current understanding of climate change projections and scenarios, and the impacts climate change may have on water resources, and water supply, sanitation and hygiene (WASH) in Sub-Saharan Africa (SSA) and South Asia.
- To discuss implications of the above for policy and practice at a range of different levels, from funding for climate change adaptation at an international level, to the planning and implementation of WASH interventions at a community level.

● **Vision 2030: the resilience of water supply and sanitation in the face of climate change. Technical report.**  
WHO, 2010



The Vision 2030 study aims to increase our understanding of how anticipated climate change may affect drinking-water and sanitation systems and what can be done to optimize resilience of infrastructure and services.

● **Adaptation to Climate Change in Water, Sanitation and Hygiene. Assessing risks, appraising options in Africa**

ODI, 2014 (Oates et al.)



This report presents the findings of research into the risks to delivery of WASH results posed by climate change in Africa, drawing

on rapid case study reviews of WASH programming in Malawi, Sierra Leone and Tanzania. A separate Case Study Report provides further detail on country background and findings.

● **Adaptation of WASH services delivery to climate change and other sources of risk and uncertainty**

IRC, 2011 (Batchelor et al.)



This Thematic Overview Paper (TOP) is targeted at WASH professionals and practitioners who recognise the need for climate

change adaptation but are not

sure what to do or how to plan for it, and/or who themselves, may already be struggling with major challenges in improving or maintaining current WASH services. This TOP recommends a range of practical and well-proven methods and tools for managing risk and uncertainty linked to climate change and other factors for WASH practitioners to use. These methods and tools are described in the second section of this TOP. The approach recommended is based on three principles, consistent with statements arising from the 2009 UN Climate Change Conference in Copenhagen.





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