



#12

# Resources

*A review of resources and publications on WASH in developing countries*



**T**his edition of Resources contains a selection of reports, knowledge management documents, scientific journal articles, etc. that pS-Eau has collated over the last few months. This 12th issue focuses on water resource management and protection, WASH services and climate change and wastewater treatment and reuse. We hope you find it informative and useful.

The pS-Eau team

## **WATER SUPPLY**

water quality / water pricing / drinking water production - PAGES 2 & 3

## **SANITATION**

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## **WATER AND SANITATION**

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February 2023

# WATER SUPPLY

## Eau, assainissement, conditions de vie au Congo

AFD, Mingiedi Boaz et al., September 2020 (French)



The aim of the PILAEP 2 project (2017-2020) is to improve sanitation and water supply for 400,000 inhabitants in 26 outlying districts of Kinshasa. The project's impacts on the population are rigorously and scientifically assessed. This paper presents the findings of a study on living conditions in the project's target areas.

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## Evaluation d'impact d'un projet d'adduction en eau potable à Kinshasa

DIAL, Flore Gubert et al., October 2022 (French)

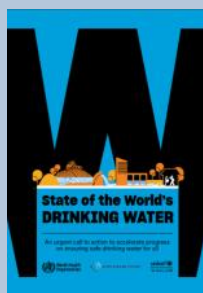


This report presents the findings of an impact assessment on the extension of a water supply project to outlying districts of Kinshasa (the PILAEP 2 project). The study looks at how water supply services and household demand are changing as a result of densification in these districts and greater household mobility.

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## State of the world's drinking water: An urgent call to action to accelerate progress on ensuring safe drinking water for all

WHO, October 2022 (English)



This report is a comprehensive survey of the links between water, health and development and the status of drinking water. It contains recommendations for accelerating access to drinking water structured around governance, financing, capacity development, data and information and innovation—the five accelerators of the SDG 6 Global Acceleration Framework.

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## Technological Innovations for Rural Water Supply in Low-Resource Settings

USAID, September 2022 (English)



This report provides an overview of water supply technologies that are innovative in either design or application, and that are promising for rural areas (small villages, dispersed settlements). It highlights the following categories of technological innovation: solar pumps; community-scale disinfection; membrane filtration; reverse osmosis; smart water meters; digital payments; decentralized water quality testing; sensors; and digital management applications.

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## Perceptions of drinking water service of the "off-grid" community in Cimahi, Indonesia

MDPI, Rizky Prayoga et al., May 2021 (English)



This paper presents original research on the perceptions of users in Cimahi, Indonesia, surrounding their access to water and willingness to use and maintain 'off-grid' infrastructure. The findings are useful for those designing strategies to introduce novel water delivery systems aimed at improving water access for diverse and disadvantaged socioeconomic groups in urban areas in the Global South.

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## Les mini-réseaux : des solutions à explorer pour améliorer durablement l'accès à l'eau potable dans l'Androy

GRET, February 2022 (French)

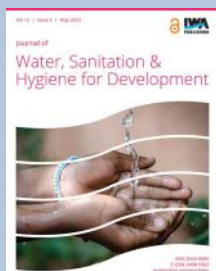


GRET sets out the findings of a study conducted in 2021 in the Androy region of southern Madagascar that explored drinking water solutions that are adapted to the region's constraints and households' needs and which are based on sustainable management systems.

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Household water treatment practice and associated factors among households dependent on unimproved water sources in Ameya district, Oromia, Ethiopia

IWA, Mesfin Eticha et al., May 2022 (English)

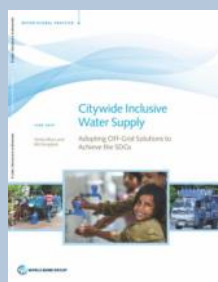


This community-based study was conducted to determine household water treatment practices and related factors.

The study population consisted of households that are dependent on unimproved water sources in the Ameya district of Oromia, south-west Ethiopia. Fewer than one-third of these households practiced household water treatment. Providing training on how to treat household water is essential for improving water treatment practices.

Citywide inclusive water supply: adopting off-grid solutions to achieve the SDGs

World Bank, Smita Misra & Bill Kingdom, May 2019 (English)



This report focuses on off-grid customers. These customers are not only increasing in number but they are also concentrated in

the poorer segments of society. This report argues that off-grid solutions could be "reimagined" as a complementary solution to traditional (piped) solutions in order to achieve SDG 6.1 by 2030 by providing safely managed water that is accessible at the household level and is affordable to customers.

Les stratégies de financement liées à l'eau dans la région du Liptako-Gourma

Geneva Water Hub, May 2022 (French)



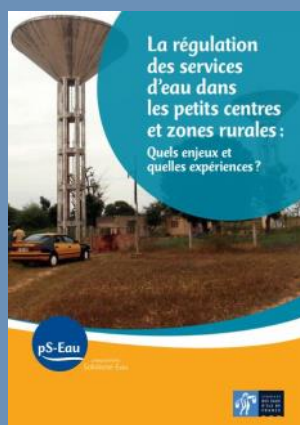
This study on water-related budgetary commitments in the border areas of the Liptako-Gourma region (that crosses Burkina Faso,

Mali and Niger) provides an overview of financing for water and its productive uses with a view to proposing new forms of water sector cooperation for sustainably resolving crises in the Sahel.

## OUR PUBLICATIONS

### La régulation des services d'eau dans les petits centres et zones rurales : quels enjeux et quelles expériences?

pS-Eau, Perrine Bouteloup, 2022



This paper presents the findings of a seminar held in Saly, Senegal, in March 2022 to share the experiences of stakeholders from a number of West African countries (Togo, Mauritania, Burkina Faso, Senegal, Niger and Mali) involved in managing water supply services in small settlements. This paper covers 4 main topics: water supply service monitoring indicators; relationships between service operators and contracting authorities; financial management of the service; and accountability.



# SANITATION & HYGIENE

## WaterAid Faecal Sludge Management Guide

WaterAid, Rémi Kaupp & Dr Mbaye Mbéguéré, May 2022 (French, English, Spanish, Portuguese)



This guide has been developed by WaterAid as a reference document to help create more effective sanitation programmes. It provides a subjective selection of faecal sludge management approaches, principles, tools, technologies and projects.

## Overcoming Institutional and Organisational Barriers to Sanitation: What's New?

AFD, Pierre Bauby et al., March 2022 (French, English)



This technical report focuses on how to overcome institutional and organisational barriers to developing sanitation. It contains a compilation of reports from researchers and practitioners on work that sheds new light on this issue. There is general recognition that the range of sanitation service options available, such as conventional, onsite and unconventional, increases the complexity of sanitation service management.

## Faecal Sludge Management: Highlights and Exercises

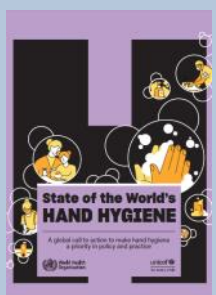
EAWAG, January 2019 (English)



This publication is intended to be used as a companion to existing publications, such as the book "Faecal Sludge Management: Systems Approach for Implementation and Operation" (published in 2014 in English and in 2018 in French). This is a more flexible publication that will be regularly updated and provides highlights of selected topics together with learning examples.

## State of the World's Hand Hygiene

UNICEF & WHO, October 2021 (French, English)



This report outlines the current status of hand hygiene around the world, and describes how governments, communities, individuals and other stakeholders can accelerate progress to achieve hand hygiene for all. It offers numerous and interesting examples of change.

## Accelerating Action for Rural Sanitation - Challenges and Recommendations

SIF, November 2021 (French, English)



The aim of this study is to promote sanitation in rural areas to ensure no one is left behind. It includes recommendations for improving sanitation in developing countries, particularly in rural areas, and for ensuring that the most vulnerable communities are not left behind.

## Wastewater Treatment and Reuse: A Guide to Help Small Towns Select Appropriate Options

World Bank, Jean-Martin Brault et al., January 2022 (English)



Addressing the specific context of small towns, this guide begins with an introduction of key concepts for a decision maker to understand and then applies a suggested five-step approach to exploring appropriate wastewater treatment technologies, culminating with case studies from three regions applying this approach.

## Guide d'assainissement durable en milieu rural marocain - Catalogue des techniques et outils d'aide à la décision

GIZ, Ministère de l'Équipement et de l'Eau, February 2020 (French)



This guide was jointly developed by the Directorate of Research and Water Planning (DRPE) and GIZ under the Integrated Water Resources

Management Support (AGIRE) programme. It is a guide for engineers and technicians working on participatory planning with local populations. It is also intended for experts who have a detailed knowledge of conventional sanitation techniques and who are seeking information on different system configurations and infrastructure.

## How to Assess the Size of a Sanitation Market and Segment It

PSI, December 2021 (English, French)



Based on experiences in Niger, this paper explains how to group potential customers into sub-markets, or 'segments',

with similar characteristics, such as behaviours, socio-economic status, needs and desires. It argues that any market-based intervention must be based on a good understanding of the size and characteristics of the potential market for different products and services in the target areas.

## A participatory SWOT analysis on water, sanitation, and hygiene management of disabled females in Dhaka slums of Bangladesh

IWA, Sara Nowreen et al., July 2022 (English)



This analysis contains low-income community case studies from the megapolis of Dhaka, Bangladesh, that capture

the multi-faceted links between disabled-females' agony and hygiene issues. An overall assessment was further extended to identify SWOT for water and sanitation access, hygiene and MHM practices from the gender perspective that applied mixed-method participatory approaches.



# WATER & SANITATION

## Progress on WASH in health care facilities 2000–2021

UNICEF & WHO, August 2022 (English)



WHO and UNICEF have produced regular updates on water, sanitation and hygiene since 1990. This 2022 update presents national, regional and global estimates for WASH in health care facilities up to the year 2021, with a special focus on WASH and infection prevention and control.

## Progress on drinking water, sanitation and hygiene in schools

UNICEF & WHO, July 2022 (English, French, Spanish)



The WHO and UNICEF Joint Monitoring Programme for Water

Supply, Sanitation and Hygiene (JMP) produces internationally comparable estimates of progress on drinking water, sanitation and hygiene and is responsible for monitoring the WASH-related Sustainable Development Goal targets.

## Strong systems and sound investments: Evidence on and key insights into accelerating progress on sanitation, drinking-water and hygiene

WHO, December 2022 (English)



The GLAAS 2022 report compiles new data on drinking water, sanitation and hygiene from more than 120 countries, the largest number of countries involved to date.

## Engaging Men and Boys for Gender-Transformative WASH

IDS, Sue Cavill et al., July 2022 (English)



This paper explores the extent to which engaging men and boys in WASH processes is leading to transformative change in gender roles, attitudes, and sustainable change in reducing gender inequalities across households, communities, organisations, and policy.

## OUR PUBLICATIONS

### Capitalisation de la première phase du projet d'amélioration de la gestion et l'accès à l'eau du bassin versant amont du fleuve de Maylanco, en Bolivie

pS-Eau, Mélodie Boissel, July 2022



This report examines the lessons learned from the first phase of a decentralised cooperation programme involving the Métropole of Brest, the municipality of Sabaca and CENDA. The analysis focuses on: community participation; the linkages between water and sanitation services management at the upstream sub-basin community level and resource management at the Rocha basin level; and the cooperation process that enables skills transfer and sharing between partners.



## Working with local governments to increase access to WASH services: a case of WaterAid's participatory approaches in Nigeria

IWA, Tariya Sarauta Yusuf et al., July 2022 (English)



This study employed a qualitative case study approach to evaluate the participatory processes employed in two WASH projects implemented by WaterAid Nigeria attempting to work with Local Government Areas.

## Advancements in and Integration of Water, Sanitation, and Solid Waste for Low-and Middle-Income Countries

Annual Reviews, Abishek Sankara Narayan et al., June 2021 (English)



The water, sanitation, and solid waste sectors are closely related and there are many interactions between their respective service chains in low- and middle-income countries. This review presents the key advancements within each of these three development sectors in the past two decades. The review identifies numerous similarities such as decentralization, resource recovery, community involved planning, and digitalization.

## WASH and older people

IDS, Sue Cavill et al., September 2022 (French, English, Portuguese)



This paper explores the WASH needs of older people in both development and humanitarian situations. It also examines the fundamental role older people play in facilitating other people's access to WASH services, health, and wellbeing.

## Water and sanitation services in India and Ghana: an assessment of implications for rural health and related SDGs

CME, Martin Kofi Kanyagui & P. K. Viswanathan, May 2022 (English)



This review focuses on the trends in water and sanitation services and reforms in India and Ghana over the last two decades.



# WATER AND SANITATION SERVICES AND CLIMATE CHANGE

## Urban sanitation and climate change: A public service at risk

ISF, Juliet Willetts et al., August 2022 (English)



This report presents the outcomes of a Landscape study on the current state of thinking and action on urban sanitation and climate change. The study engaged more than 60 organisations from across different countries working on varied aspects of urban sanitation. The study was based on a climate resilient sanitation system framework adapted from Willetts et al. (2022) focusing on four key components important for citywide sanitation: i. institutions, policy and planning; ii. financing; iii. infrastructure and service provision; and iv. user engagement.

## Reducing the greenhouse gas emissions of water and sanitation services: Overview of emissions and their potential reduction illustrated by the know-how of utilities

IWA, Alexandre Alix et al., July 2022 (French, English)



This report aims to provide an overview of the possible levers for reducing greenhouse gas emissions from water and sanitation utilities, and provides an analysis of how adaptation measures can integrate this low-carbon approach.

## Impact of Climate Hazards on Rural Sanitation and Hygiene Practices in Burkina Faso

IDS, Ruhil Iyer & Léa Pare Toe, August 2022 (French, English)



This paper presents the findings of research that sought to:

- Build evidence on the impacts of climate hazards on rural sanitation and hygiene practices.
- Use participatory research methods to understand local realities and experiences.
- Explore the feasibility of integrating climate thinking into rural sanitation and hygiene programming by testing and piloting relevant interventions to increase the climate resilience of sanitation.
- Facilitate learning and sharing with partners to think through evidence-based recommendations for programming.

## Climate variability, water supply, sanitation and diarrhea among children under five in Sub-Saharan Africa: a multilevel analysis

IWA, Donald Njatang Kemajou, April 2022 (English)



This study seeks to determine the individual and joint effects of climate variation, water supply and sanitation on the occurrence of diarrhea among children in sub-Saharan Africa. The results of the multi-level analysis suggest

the adoption at national and household levels of climate change adaption measures in the water sector could reduce the prevalence of diarrhea.

## Ebb and Flow, Volume 1: Water, Migration, and Development

World Bank, Esha Zaveri et al., August 2021 (English)



This study presents new global evidence to better understand how fluctuations in water availability, driven by rainfall shocks, influence internal migration and regional development.

## Ebb and flow, Volume 2: Water in the shadow of conflict in the Middle East and North Africa

World Bank, Edoardo Borgomeo et al., August 2022 (English)



This report examines the links between water-related hazards (harmful outcomes related to water, from droughts and floods to lack of sanitation), conflict and forced displacement. It aims to better explain how to address the vulnerabilities of forcibly displaced people and their host communities, and to identify water policy and investment responses.



## Analyse des impacts du Changement Climatique sur le secteur EAH à Madagascar et identification des politiques, stratégies et mesures d'adaptations

MEAHA, August 2020 (French)



The main objective of this study is to identify climate change-related risks for water and sanitation services in Madagascar, and to define climate change adaptation strategies and measures for inclusion in WASH programmes.

## Revue de littérature sur le changement climatique au Maroc : observations, projections et impacts

AFD, Marie-Noëlle Woillez, July 2019 (French)



This review defines the predicted changes to Morocco's climate by 2050, and outlines the potential impacts of these changes on the agricultural sector, given the expected delicate balance between available water resources and the sector's needs. The review also addresses the impacts on the energy sector, which could potentially be affected by a fall in the production capacity of thermal and hydraulic power plants.

## Rural sanitation and climate change: Putting ideas into practice



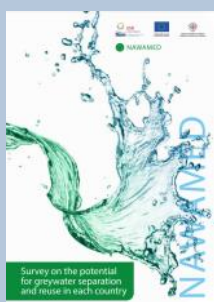
This publication examines the reasons for gaps in rural sanitation and hygiene and explores the effects of climate change on rural sanitation and hygiene practices. It provides actionable ideas for integrating climate change thinking and learning into rural sanitation and hygiene programming at the household and community level.



# WATER TREATMENT AND REUSE

Survey on the potential for greywater separation and reuse in Italy, Tunisia, Jordan, Malta, Lebanon

ENPI, May 2021 (English)



This report provides an overview of the potential for greywater separation and reuse in each country hosting a NAWAMED pilot plant, estimating the quantity of water that could be recovered thanks to the use of nature-based solutions at large scale. The report also addresses the main obstacles for a large scale greywater reuse strategy (technical, economical, legal, cultural) and proposes solutions to overcome them.

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Exposure assessment of treated greywater reused for irrigation

IWA, Siraporn Potivichayanon et al., January 2021 (English)



The aim of this study was to assess the risk of exposure of treated greywater reused to irrigate edible crops in a stabilization pond in a community

in northeast Thailand. The results appear to demonstrate the absence of risk. Therefore, treated greywater reuse could be considered to promote sustainable water management in the community.

Treated municipal wastewater reuse for eggplant irrigation

LARI, Marie Therese Abi Saab et al., January 2021 (English)

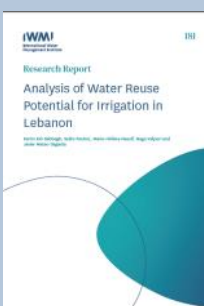


In the Bekaa Valley of Lebanon, the availability of fresh water is limited and therefore farmers need to start using alternative water sources such as

treated wastewater to irrigate crops. This study provides evidence of some on-farm options that farmers can adopt when irrigating with treated effluent in order to minimise the health risks and increase productivity.

Analysis of Water Reuse Potential for Irrigation in Lebanon

IWMI, Karim Eid-Sabbagh et al., September 2022 (English)



This study assesses the potential for water reuse in Lebanon, develops a technical assessment of the quantities of treated water

available for safe reuse in irrigation, and identifies the wastewater treatment plants that have the highest potential for that purpose. The report also examines the governance barriers that need to be overcome for the water reuse potential to be materialised in practice.

Technical assistance mission for treated wastewater reuse operations in Tunisia

IME Ministère de l'Agriculture, des Ressources Hydrauliques et de la Pêche & ONAS, 2022 (French, English, Arabic)



This guide shares the lessons learned from a technical assistance methodology used by the Mediterranean Water Institute in Tunisia. It addresses the following questions:

- What issues need to be considered to initiate or improve the operation of treated wastewater reuse systems?
- How should all the actions required to initiate an operation or complete an optimization project be aggregated?
- How can effective collective operation be ensured when there are multiple stakeholders?

Wastewater reclamation trends in Thailand

IWA, Premrudee Kanchanapiya & Thanapol Tantisattayakul, November 2022 (English)



Thailand constantly faces the problem of water scarcity resulting from an imbalance between available water supply and increasing water demand, as well as climate change. This paper reviews both the nationwide water reclamation plan and integrated water resource management plan.

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# WATER RESOURCE MANAGEMENT AND PROTECTION

## The United Nations World Water Development Report 2022: Groundwater: Making the Invisible Visible

UNESCO, March 2022 (French, English)



The report describes the challenges and opportunities associated with the development, management and governance of groundwater across the world. It aims to establish a clear understanding of the role that groundwater plays in daily life, of its interactions with people, and of the opportunities for optimizing its use in order to ensure the long-term sustainability of this fragile resource.

## Guide de capitalisation du processus de mise en œuvre du Projet d'appui à la synergie locale pour l'eau (PSL Eau) : proposition d'une démarche de mise en œuvre des projets de GIRE locale

SNV, VNG International, Fiacre Adda, June 2022 (French)



The aim of this knowledge-sharing document is to formalize a local IWRM approach developed by a project in Benin and to make it accessible and usable.

## Les modèles voyageurs : une ingénierie sociale du développement

Revue internationale des études et du développement, Catherine Baron et al., 2022 (French)



Referring to the literature on travelling models, this article adopts the concepts of (de) territorialisation / (re) territorialisation and "revenge of the contexts". It examines Integrated Water Resource Management's journey to Burkina Faso, considered a success story due to institutional mimicry. However, while institutional arrangements are in line with the model's principles, there is resistance to local level IWRM implementation, a symbol of revenge of the regions. The documented conflicts reflect communities' lack of buy-in to this institutional IWRM rules, the structuring elements of local water regions.

## La gestion des ressources en eau souterraine : six situations du bassin méditerranéen analysées sous l'angle de l'économie néo-institutionnelle et de la théorie des contrats

AFD, Marielle Montginoul et al., November 2020 (French)



The two complementary analytical frameworks outlined in this paper can be used to identify the factors behind the relative inefficiency of groundwater resource management methods: Elinor Ostrom's institutional approach to the commons; and the less widely used but just as promising contract theory. For sometimes identical and sometimes complementary reasons, these two trends advocate for decentralized management by introducing "intermediary agents" into the management process.

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# Resources

A review of resources and publications on WASH in developing countries



As there is a constant wealth of information being produced on the WASH sector, we regularly compile and publish *Resources*, a short literature review available in both French and English. Although by no means exhaustive, we hope that this selection of resources and articles from recent French and English publications will provide you with some practical and easily accessible references.

Find all previous issues at:  
[www.pseau.org/fr/biblio-ressources](http://www.pseau.org/fr/biblio-ressources)



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