

#### **Subject Guide**

## Water, Sanitation and Hygiene (WASH)

"WASH that stands for water, sanitation and hygiene. WASH was initially understood to include water, sanitation, and health, and was used by development agencies to frame the linkages between access to water and sanitation. However, by the early 2000s, WASH acquired its current usage as an acronym for water, sanitation and hygiene." (Kremere et al., 2019, p. 9; The Open University, 2016)

## **Background Sources**

Tamil Nadu Urban Sanitation Support Programme (TNUSSP) led by the Indian Institute for Human Settlements (IIHS) offers data on various aspects of urban sanitation, waste management practices, hygiene behaviours, and the effectiveness of sanitation interventions.

Water and Sanitation Glossary by IIHS covers 178 key terms, providing clear definitions and insights into various aspects of water and sanitation.

World Health Organization (WHO)'s <u>Water</u>, <u>Sanitation and Hygiene</u> website provides an overview of WASH, its impact, WHO's response, as well as tools, databases, and technical resources.

Water, Sanitation and Hygiene: Terminology Guide from UNICEF comprehensively lists more than 100 words in the WASH practice and their definitions.

<u>United Nations Sustainable Development Goal (SDG) 6</u> focuses on water and sanitation, tracking progress toward universal access to clean water and sanitation for all.

The <u>Global Framework for Urban Water</u>, <u>Sanitation and Hygiene</u> offers worldwide expertise to inform urban WASH strategies at global, regional, and country levels.

Water by the World Bank underscores the importance of sustainable water use and integrated management to ensure water security for economic growth and poverty reduction.

Sanitation and Water for All is a global partnership working towards achieving water, sanitation, and hygiene goals within the UN Sustainable Development framework.

<u>Asian Development Bank</u> has comprehensive resources to improve water security and resilience in the Asia and Pacific region.





## **Journals**

- Waterlines
- Journal of Water, Sanitation and Hygiene for Development
- Water Research
- Water
- Groundwater for Sustainable Development
- Water Resources Management
- npj Clean Water
- Exposure and Health
- International Journal of Water Resources Development
- Current Pollution Report
- Water International
- Water Security
- Discover Water
- PLOS Water
- Sustainable Water Resources Management
- <u>Urban Water Journal</u>
- Water Resources Research
- International Journal of Hygiene and Environmental Health
- Water Quality, Exposure and Health
- Water and Environment Journal

For more resources, check <u>Google Scholar</u> for highly cited journals in <u>Water Supply and Treatment</u>. Visit the <u>IIHS</u> <u>library journal database</u> to access subscribed journals. Also,

explore open-access journals in the <u>Directory of Open</u> <u>Access Journals</u> and <u>IWA Publishing</u>.

#### Theses and Dissertations

<u>Shodhganga</u> is a digital repository of Indian theses and dissertations submitted to Indian universities.

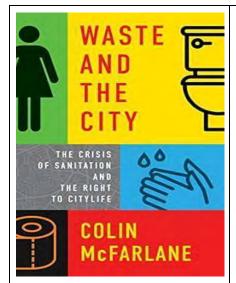
<u>Open Access Theses and Dissertations</u> index of over 3.5 million electronic theses and dissertations (ETDs).

<u>EBSCO Open Dissertations</u> provides free access to a wide range of dissertations and theses from universities worldwide.

Networked Digital Library of Theses and Dissertations (NDLTD) hosts a vast collection of ETDs from around the world.



#### **Books**

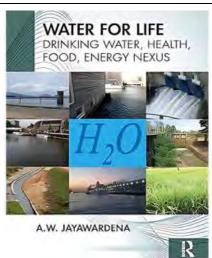


Waste and the City: The Crisis of Sanitation and the Right to Citylife by Colin McFarlane

#### **Call Number:**

363.72091732 MCF 021319 **ISBN**: 9781839760549

**Publication Date**: 2023

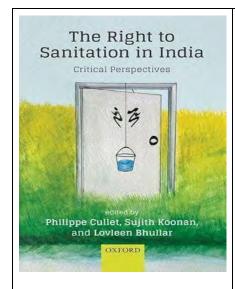


Water for Life: Drinking Water, Health, Food, Energy Nexus by A. W. Jayawardena

Call Number: 363.61 JAY

022333

ISBN: 9781032358888 Publication Date: 2023

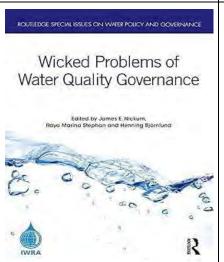


The Right to Sanitation in India: Critical Perspectives edited by Philippe Cullet, Sujith Koonan and Lovleen Bhullar

**Call Number**: 342.54085

THE 021943

ISBN: 9780199489855 Publication Date: 2019



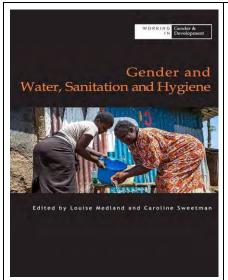
Wicked Problems of Water Quality Governance edited by James E. Nickum, Raya Marina Stephan, and Henning Bjornlund

Call Number: 363.612 WIC

022342

**ISBN**: 9781032363349 **Publication Date**: 2023



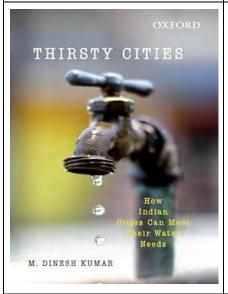


Gender and Water,
Sanitation and Hygiene
edited by Caroline
Sweetman and Louise
Medland

**Call Number**: 363.72082

GEN 021423

**ISBN**: 9781788530835 **Publication Date**: 2019

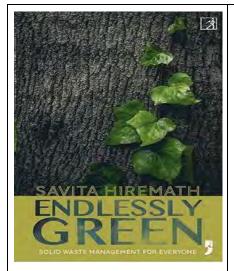


Thirsty Cities: How Indian
Cities Can Meet Their
Water Needs by M. Dinesh
Kumar

Call Number:

333.91150954 KUM 021342

ISBN: 9780198099550 Publication Date: 2014

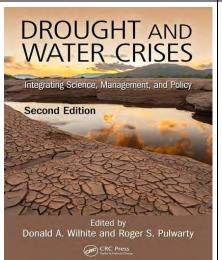


Endlessly Green: Solid
Waste Management for
Everyone by Savita
Hiremath

Call Number: 363.728 HIR

016698

**ISBN:** 9788195131723 **Publication Date**: 2021



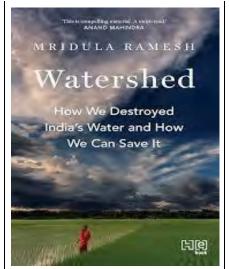
Drought and Water Crises: Integrating Science, Management, and Policy edited by Donald A. Wilhite and Roger S. Pulwarty

**Call Number**: 363.349297

WIL 020982

**ISBN**: 9781138035645 **Publication Date**: 2018



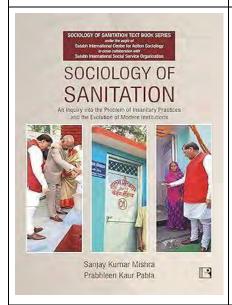


Watershed: How We
Destroyed India's Water
and How We Can Save It by
Mridula Ramesh

**Call Number**: 333.7316

RAM 018648

ISBN:9789391028688 Publication Date: 2021

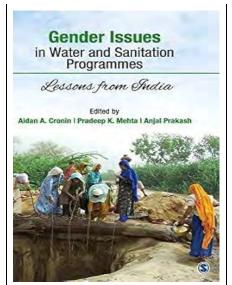


Sociology of Sanitation: An Inquiry Into the Problem of Insanitary Practices and the Evolution of Modern Institutions by Sanjay Kumar Mishra and Prabhleen Kaur Pabla

**Call Number**: 363.720954

MIS 022239

ISBN:9788131612866 Publication Date: 2023



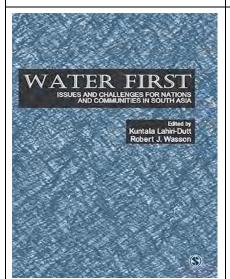
Gender Issues in Water and Sanitation Programmes: Lessons from India edited by Aidan A. Cronin, Pradeep K. Mehta and Anjal Prakash

Call Number:

363.610820954 GEN

006284

**ISBN**: 9789351500650 **Publication Date**: 2015



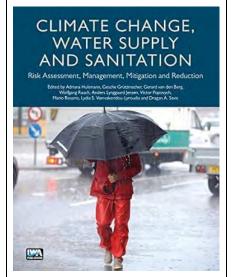
Water First: Issues and Challenges for Nations and Communities in South Asia edited by Kuntala Lahiri-Dutt and Robert J. Wasson

Call Number:

333.9100954 WAT 007071

ISBN: 9780761936251 Publication Date: 2008



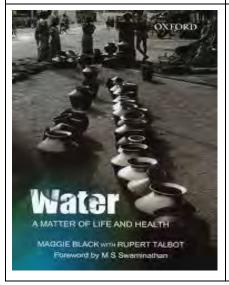


Climate Change Water Supply and Sanitation: Risk Assessment, Management, Mitigation and Reduction edited by Adriana Hulsman et al.

Call Number: 363.7284 CLI

008126

**ISBN**: 9781780404998 **Publication Date**: 2015

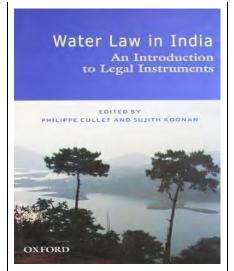


Water, a Matter of Life and Health: Water Supply and Sanitation in Village India by Maggie Black and Rupert Talbot

**Call Number**: 363.610954

BLA 011553

**ISBN**: 9780195669312 **Publication Date**: 2005

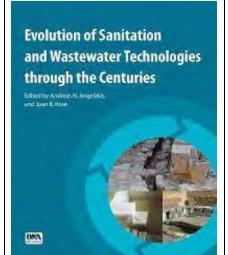


Water Law in India: An Introduction to Legal Instruments edited by Philippe Cullet and Sujith Koonan

**Call Number**: 346.046

WAT 010376

**ISBN**: 9780198070818 **Publication Date**: 2012



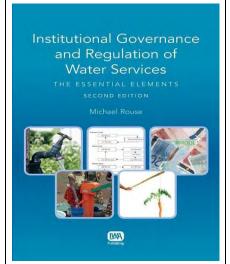
Evolution of Sanitation and Wastewater Technologies
Through the Centuries
edited by A.N. Angelakis
and J.B. Rose

Call Number: 628.309 EVO

005157

**ISBN**: 9781780404844 **Publication Date**: 2014



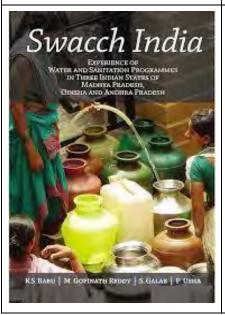


Institutional Governance and Regulation of Water Resources: The Essential Elements by Michael Rouse

Call Number: 363.61 ROU

004567

**ISBN**: 9781780404509 **Publication Date**: 2013

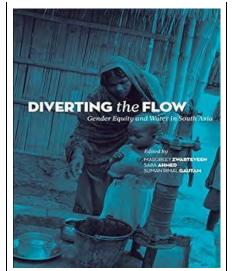


Swacch India: Experience of Water and Sanitation Programmes in Three Indian States of Madhya Pradesh, Odisha and Andhra Pradesh by K.S. Babu, M. Gopinath Reddy, S. Galab and P. Usha

Call Number: 363.61 BAB

009618

ISBN: 9789332704206 Publication Date: 2017

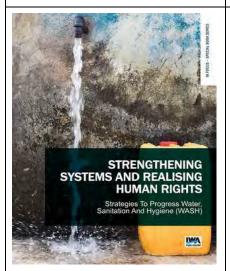


Diverting the Flow: Gender Equity and Water in South Asia edited by Margreet Zwarteveen, Sara Ahmed and Suman Rimal Gautam

**Call Numbe**r: 363.610954

DIV 015497

**ISBN**: 9789381017203 **Publication Date**: 2014



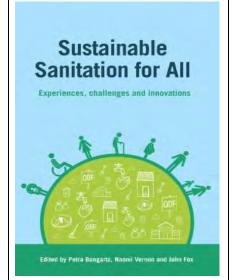
Strengthening Systems and Realising Human Rights: Strategies to Progress Water, Sanitation and Hygiene (WASH) edited by Juliet Willetts

Call Number: 363.61 WIL

020472

**ISBN:** 9781789063691 **Publication Date**: 2022



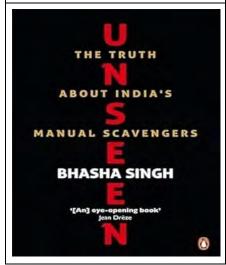


Sustainable Sanitation for All: Experiences, Challenges, and Innovations edited by Petra Bongartz, Naomi Vernon, John Fox

#### **Call Number**:

363.72091724 SUS 010082

**ISBN:** 9781853399282 **Publication Date**: 2016



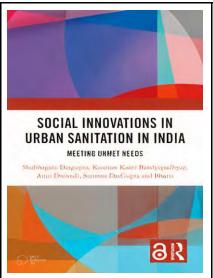
Unseen: The Truth About India's Manual Scavengers by Bhasha Singh; translated from the Hindi by Reenu Talwar

## **Call Number**:

363.7280954 SIN 011201 **ISBN:** 9780143420385

**Publication Date**: 2014

## **Open Access Books**



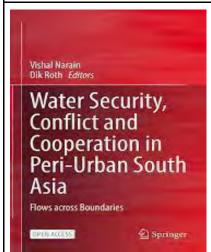
Social Innovations in Urban Sanitation in India by Shubhagato Dasgupta, Kaustuv Kanti Bandyopadhyay, Anju Dwivedi, et al.

**ISBN**: 9780367768355 **Publication Date**: 2023

DOI:

https://doi.org/10.4324/97810

03197102



Water Security, Conflict and Cooperation in Peri-Urban South Asia edited by Vishal Narain and Dik Roth

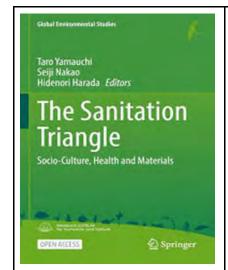
ISBN: 9783030790356 Publication Date: 2022

DOI:

https://doi.org/10.1007/978-

3-030-79035-6





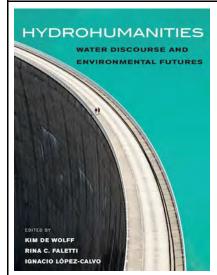
The Sanitation Triangle: Socio-Culture, Health and Materials edited by Taro Yamauchi, Seiji Nakao and Hidenori Harada

**ISBN**: 9789811677113 **Publication Date**: 2022

DOI:

http://doi.org/10.1007/978-

981-16-7711-3



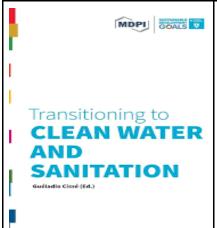
Hydrohumanities: Water
Discourse and Environmental
Futures edited by Kim De
Wolff, Rina C. Faletti and
Ignacio López-Calvo

ISBN: 9780520380455 Publication Date: 2021

DOI:

https://doi.org/10.1525/lumin

os.115



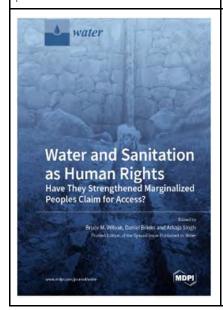
<u>Transitioning to Clean Water</u> <u>and Sanitation</u> edited by Gueladio Cisse

**ISBN**: 9783038977759 **Publication Date**: 2021

DOI:

http://doi.org/10.3390/books

978-3-03897-775-9



Water and Sanitation as Human Rights: Have They Strengthened Marginalised Peoples Claim for Access? edited by Bruce M. Wilson, Daniel Brinks and Arkaja Singh

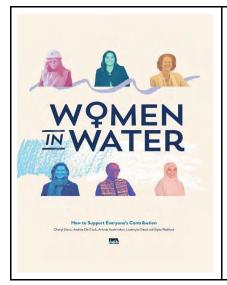
ISBN: 9783036553986 Publication Date: 2022

DOI:

https://doi.org/10.3390/books

978-3-0365-5398-6





Women in Water: How to Support Everyone's Contribution by Cheryl Davis, Andrée De Cock, Arlinda Ibrahimllari, et al.

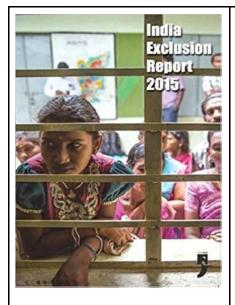
ISBN: 9781789064070 Publication Date: 2024

DOI:

https://doi.org/10.2166/97817

89064070

## **Faculty Publications**

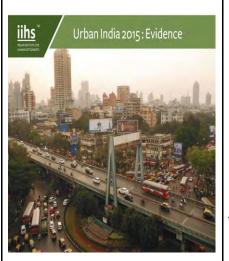


Chapter 2: Tracing
Exclusions in Urban Water
Supply and Sanitation by
Geetika Anand, Kavita
Wankhade and Rajiv K.
Raman, Anushree Deb and
Vishnu M J in *India Exclusion Report 2015* edited by Aditi
Rao, Agrima Bhasin, Kinjal
Sampat, et al.

**Call Number**: 305.560954

IND 008512

**ISBN**: 9789382579397 **Publication Date**: 2016



Chapter 5: Urban Water
Supply and Sanitation by
Geetika Anand, Kavita
Wankhade, Vishnu M J,
Mohan Raju J S, Pooja Rao in
Urban India 2015: Evidence
edited by Aromar Revi,
Arindam Jana, Teja Malladi

**Call Number**: 307.760954

JAN 022543

**ISBN**: 9789387315310 **Publication Date**: 2015



## **Reports**

- OXFAM Policy & Practice Reports
- WaterAid Reports & Research
- UNICEF Reports on WASH
- JICA Reports
- UNESCO Global Reports
- Sanitation and Water for All (SWA)
- Open Knowledge Repository Reports
- Arghyam Reports
- APWF Reports
- Statista Reports

## **Working Papers**

- EconPaper repository
- Open Knowledge Repository
- Resource for the Future (RFF)
- Centre for Policy Research
- CESS- WASHCost
- International Environmental Law Research Centre (IELRC)
- International Water Management Institute (IWMI)
- RSC Working Papers
- National Bureau of Economic Research (NBER)

#### **Audiovisual Resources**

- WASH Talk Podcast
- ASWA Podcast Series
- IRC Podcast
- Conversations From The WASH Room.
- SSIR Podcast
- SuSanA Podcast repository
- SuSanA videos
- Practical Action
- SDG Academy Library
- World Bank: Water and Sanitation

#### **WASH Data**

#### **CWAS-WASH data**

Monitored by the Center for Water and Sanitation (CEPT University), it supplies a comprehensive online module for the collection and analysis of urban water supply, wastewater management and solid waste management.

## Asian Water Development Outlook

This data dashboard by the Asian Development Bank aims to give an up-to-date overview of the region's water security and show progress over time.

Institute for Health Metrics and Evaluation (IHME) Data



The IHME platform supplies high-resolution, locationspecific data on access to clean water, sanitation facilities, and hygiene practices.

#### **WATERS Geospatial Data**

This dataset is developed by the US Environmental Protection Agency (EPA) and integrates various geospatial water-related data sources.

#### PMA (Performance Monitoring for Action)

PMA compiles population data on family planning and WASH in selected low- and middle-income countries, supporting informed public health decisions and policies.

#### Our World in Data

The database collects, organises, and presents data in various formats including interactive visualisations, charts, and articles.

#### Statista

The datasets often include WASH-related statistics, focusing on access to basic water services, sanitation and hygiene.

#### **IWMI Water Data Portal**

The portal provides access to a large amount of data related to water and agriculture.

#### Aqueduct Global Water Indicators (WRI)

Developed by the World Resources Institute (WRI), the dataset includes indicators of water quantity, water variability, water quality, public awareness of water issues, access to water, and ecosystem vulnerability.

#### Aqueduct Water Stress Projections Data (WRI)

Provides indicators of change in water supply, water demand, water stress, and seasonal variability, projected for the coming decades under scenarios of climate and economic growth.

## Joint Monitoring Programme for Water Supply and Sanitation

The programme collects data on access to safe drinking water sources, sanitation facilities, and hygiene practices.

#### **AQUASTAT (FAO)**

Comprises the most reliable national information on water resources.

## **World Bank Water Data**

The World Bank offers various water-related data and definitions to support its mission of reducing poverty and promoting sustainable development.

ATLAS of Sustainable Development Goals 2023



This World Bank website offers detailed insights, data, and visualisations related to the progress and challenges in achieving sustainable development goals.

#### **UNEP Data**

The United Nations Environment Programme (UNEP) offers a comprehensive collection of data resources aimed at addressing pressing environmental and sustainability challenges.

#### **UN-Water SDG 6 Data Portal**

UN-Water provides data and insights to support policymakers, researchers, and practitioners in improving water management and achieving sustainable development goals.

# World Health Statistics data visualisations dashboard (drinking water)

This dashboard provides information on global access to safe drinking water, highlighting the availability and distribution of clean water worldwide.

World Health Statistics data visualisations dashboard (sanitation)

The dashboard displays global sanitation access in a clear, easy-to-understand format, making the data accessible and useful for tracking progress and challenges.

## Global Analysis and Assessment of Sanitation and Drinkingwater (GLAAS)

GLAAS, led by the World Health Organization (WHO), is a key global initiative presenting in-depth data on water, sanitation, and hygiene systems worldwide.

### **WASH Resource Repositories**

## Water, Engineering, and Development Centre

WEDC by Loughborough University serves as a comprehensive platform for centralising WASH data and resources.

#### The Water Information System for Europe (WISE)

This database compiles comprehensive data and information on the status, management, and protection of Europe's freshwater resources.

The Global Alliance for Water, Sanitation and Hygiene (GAWASH)



GAWASH repository includes policy documents, research reports, training materials, and case studies related to WASH initiatives.

### Rural Water Supply Network (RSWN)

RWSN provides a variety of resources aimed at improving access to safe drinking water in rural areas.

#### **UNESCO's SDG Resources for Educators**

This site offers educational materials and resources focused on SDG 6.

#### Pan American Health Organization (PAHO)

PAHO is an international health agency that publishes resources to ensure standards and guidelines for maintaining WASH standards in healthcare settings.

#### Sustainable Sanitation and Water Management (SSWM)

SSWM serves as a global resource hub that addresses interlinkages between sanitation, water, and resource management.

#### Citywide Inclusive Sanitation (CWIS)

CWIS aims to provide sustainable and equitable sanitation services to all urban residents, including marginalised groups, with a focus on inclusion and sustainability.

#### **Other Information Resources**

- WASH Institute Guidelines
- Water for People India
- CDC Archive
- India Sanitation Coalition
- Global WASH Cluster
- IRC Wash
- Water.org
- UNC Knowledge Hub
- <u>Urban Management Centre</u>
- Water and WASH Futures
- German WASH Network
- Inclusive WASH
- The sanitation learning hub
- Gates Open Research
- Global Water Partnership
- OpenWASH
- The WASH Foundation
- Agenda For Change
- Emergency WASH Knowledge Portal
- World Toilet Organization (WTO) case studies
- WASH in Health Care Facilities
- Program on Water, Health & Development
   Publications
- MIT resources on WASH



#### **Government Resources**

<u>Bhuvan-Bhujal portal</u> contains geospatial data on groundwater availability and quality across India.

<u>Central Ground Water Board</u> provide data on groundwater levels, quality, and resources, as well as publications, reports, and maps related to groundwater.

<u>Department of Water Resources, River Development and Ganga Rejuvenation</u> formulates policy guidelines and programmes for the development, conservation and management of water as a national resource.

<u>India-Water Resources Information System</u> features both spatial and non-spatial data, along with tools for analysis and visualisation, covering various aspects of water resources across India.

<u>Jal Jeevan Mission Dashboard</u> tracks progress in providing tap water connections and improving sanitation in rural areas.

National Hydrology Project (NHP) focuses on developing modern hydrological infrastructure and improving data collection and analysis to address water-related challenges.

National Urban Sanitation Policy guidelines, published by the Ministry of Urban Development, aim to transform urban India into a clean and sanitary environment through community participation.

<u>National Water Mission</u> promotes water conservation, reduced wastage, and equitable distribution across states.

Open Government Data Portal provides open access to a wide range of government data related to the water and sanitation sector, including state-wise information.

<u>Publications of the Department of Drinking Water & Sanitation</u> compile data related to various programmes under the Ministry of Jal Shakti, Government of India.

<u>Swachh Bharat Mission</u> guidelines outline the implementation and operational phases of the mission.

NITI Aayog's Water and Land Resources focus on formulating strategies, policies, and frameworks for the sustainable management of India's water and land resources.

<u>Water Database</u> provides comprehensive and accessible information on various aspects of water resources in India.



## **Additional Readings**

- The Best Water Supply Books of All Time
- World Vision resources
- WSP publications
- WHO IRIS database
- Data for India
- Seecon

#### References

Kremere, E., Morgan, E., & Obani, P. (2019). *SDG6 – clean* water and sanitation: Balancing the water cycle for sustainable life on earth. Emerald Publishing Limited.

https://doi.org/10.1108/9781789731033

The Open University. (2016). *OLCreate: 1.1 What is WASH?* OpenLearn Create.

https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=79846&section=3