

Compendium

Drinking water systems and technologies from source to consumer

available online: Dec.2019



World Water Week 2019

Tuesday 27.08, 15:00-16:30, B12

refreshments will be served



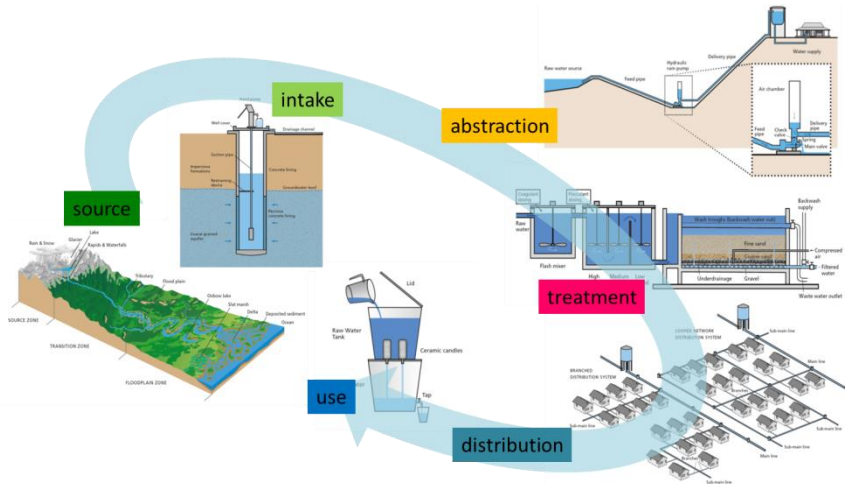
Compendium

Drinking Water Systems and Technologies from Source to Consumer

combines and discusses the entire range of drinking water technologies, approaches and concepts relevant for rural, peri-urban and urban contexts in a single concise and well-structured document. It is a comprehensive and user-friendly manual that supports decision making for developing drinking water supply and treatment systems in the context of the global south.

Technologies from six functional groups build drinking water systems applicable for different water sources, scales and contexts.

The two-page information sheets developed for each technology provide major design, O&M considerations and key decision criteria. They link the choice of the technologies to key aspects of the enabling environment and cross-cutting issues.



Source	Intake	Abstraction	Treatment	Distribution & Transport	User safety
Rain water	Roof water collection	<u>Energy sources</u>	<u>Turbidity</u>	Jerry cans	Safe water storage
Groundwater:general	Rain water catchment	<ul style="list-style-type: none"> Gravity Human powered Wind Solar Diesel Electric 	<ul style="list-style-type: none"> Roughing filtration Rapid sand filtration Membrane filtration Coagulation/ sedimentation Coagulation/ filtration 	Water vendors (carts & trucks)	<ul style="list-style-type: none"> 10– 50 L 50–1000 L > 1000 L
Groundwater:springs	Sand/subsurface storage dam	<u>Impulse pumps</u>	<u>microbial</u>	Water kiosk	<u>Turbidity /microbial</u>
Rivers and streams	Protected spring intake	Hydr. ram pump	<ul style="list-style-type: none"> Chlorination UV Electro-chlorination Slow sand filtration Ultrafiltration Pasteurization 	Community distribution system	<ul style="list-style-type: none"> Ceramic filtration Membrane filtration
Ponds, lakes & dams	Protected dug well	<u>Positive displacement pumps</u>	<u>geogenic</u>	Large scale distribution	<u>microbial</u>
Brackish water	Protected borehole	<ul style="list-style-type: none"> Piston /plunger suction Direct action pump Deep well pumps Progressive cavity Diaphragm pumps Rope pumps 	<ul style="list-style-type: none"> F removal As removal 	Storage tanks	<ul style="list-style-type: none"> Chlorination Boiling Biosand filtration UV Sodis Pasterization
Seawater	River and lake intake	<u>Velocity pumps</u>	<u>anthropogenic</u>		<u>chemical</u>
	Seawater intake	<ul style="list-style-type: none"> Radial flow pumps Axial flow pumps 	<ul style="list-style-type: none"> GAC Nanofiltration and reverse osmosis 		<ul style="list-style-type: none"> F removal filters As removal filters
			<u>Desalination</u>		
			<ul style="list-style-type: none"> Membrane distillation Reverse osmosis 		

We will present a draft of the Compendium and describe how to navigate it, who should use it and why. We will also discuss the potential, advantages, and limitations of the book. Refreshments will be served.

The Compendium will be published in December 2019.

It will be available for free on FHNW's and Sandec's websites: www.sandec.ch

<https://www.fhnw.ch/en/research-and-services/lifesciences/environment-and-resources/>

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