

PUBLIC FORUM

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WASTE WATER MANAGEMENT IN SUDAN

CONCEPT NOTE

INTRODUCTION

Water resources are under pressure from continuing population growth and urbanisation, rapid industrialisation, and expanding and intensifying food production, particularly in developing countries and in urban areas.

Urban populations are expected to reach 6.4 billion by 2050. Numbers of people living in unserved peripheral areas to urban centers which is expected to rise even faster in small and medium sized cities with populations of less than 500 000.¹

This represents a global threat to human health and wellbeing, with both immediate and long term consequences for efforts to reduce poverty whilst sustaining the integrity of some of our most productive ecosystems. At least 1.8 million children under five years-old die every year from water-related diseases. Diarrhoeal diseases make up over four per cent of the global disease burden, 90 percent of which is linked to environmental pollution, a lack of access to safe drinking water and sanitation. Over half of the world's hospital beds are occupied by people suffering from water-related diseases.

Wastewater effluents are the largest source of pollution by volume to surface water in general. Wastewater effluents may contain many pollutants and substances of concern including grit, debris, suspended solids, disease-causing pathogens, decaying organic wastes, nutrients and hundreds of chemicals. Wastewater treatment is a process used to convert wastewater - which is water no longer needed or suitable for its most recent use - into an effluent that can be either returned to the water cycle with minimal environmental issues or reused.

World's water resource will not change but the amount of wastewater produced is increasing, and the infrastructure and management systems are not adequate for this increasing volume. Globally, two million tons of sewage, industrial and agricultural waste is discharged into the world's waterways, and that is not counting the unregulated or illegal discharge of contaminated water. This wastewater contaminates freshwater and coastal ecosystems, threatening food security, access to safe drinking and bathing water and being a major health and environmental management challenge.

Sudan covers an area of about 1.5 million km² resulting in an extremely diverse environment

¹ <https://www.greenfacts.org/en/wastewater-management/l-2/index.htm>

ranging from desert in the north to savanna climate in the south and southwest. Annual rainfall ranges from less than 100 mm to about 800 mm. Sudan water resources include: Nile water (18.5 km³ per annum) huge groundwater storages with an annual replenishment about 4 km³, seasonal wadis runoff approximately 7 km³ per annum and rainwater amounting to 1,000 km³ per annum. The cultivable area is estimated at 42% of the total land and forest cover less than 13% of the total country's area. Global/regional economic growth, and food security demand, particularly in the Arab and Gulf countries, is leading to an increased demand for agricultural land and crop production, reflected by increased foreign investments in this sector and tapping of water resources in Sudan.

Sudan's population is about 37.7 million distributed in 18 states with an annual growth rate of 2.4 %. About 30% of the total populations are urban settlers, while pastoralists constitute about 7.1% of the total population.

Responsibility for water supply in the country is vested on the Ministry of Water Resources and Electricity (MoWRE), while overall responsibility for sanitation has recently been shifted to Ministry of Health (MoH). Groundwater and Wadis Directorate (GWWD), Dams Implementation Unit (DIU) and Drinking Water and Sanitation Unit (DWSU) also operate under the auspices of MoWRE.

In 1994, National Water Corporation (NWC) was established by merging National Rural and Urban Corporation. In 2012, it was reformed to DWSU under the MoWRE with a responsibility for planning and implementation of national water supply projects, provision of technical and financial support to national investment projects, up keeping of standards and training of state water corporations and development of the sector polices.

At state level state water corporations (SWC) are responsible for water supply, operation and maintenance of water infrastructure. GWWD, though a federal organ, works closely with SWC and state Ministry of Agriculture and Irrigation (MoAI).

The main challenges underpinning the water sector include: i) inadequate sector funding, ii) limited implementation capacity, iii) lack of approved water and sanitation policies and sector plans, iv) prolonged emergency services, v) low coverage of safe water (in quantity and quality) services; and vi) unclear delineation of mandates and coordination among different sector institutions.²

This is the XX public forum hosted by XXX since XX 20xx. It is aimed to communicate topical national issues to a wide audience ranging from academia to decision makers to the general public.

² WATER SECTOR REFORMS AND INSTITUTIONAL CAPACITY DEVELOPMENT PROGRAM document of the African Development Bank; technical Annex; dated May 2015. unpublished

This forum is aimed to highlight issues relating to waste water. Questions like; what is wastewater, where are the sources of waste water; how and by whom it is handled/treated; infrastructure issues, institutional issues as well as legal and costing issues can be engaged. From the various speakers, the forum will allow for interaction and discussions from the floor. The likelihood of reviewed papers to emerge from this engagement is high depending on the main speakers inputs.

The timing of this Forum is carefully chosen to take place on the day before the big national Integrated Water Resources Management (IWRM) Conference with the title: 'Integrated and Sustainable Management of Non- Nile Water in Sudan'. Although the conference is by invitation but it is aimed to host most of the major role players in water sector in Sudan from highest level political representation to community representatives from States to academics and private sector. The aim of the conference is to highlight the intrinsic role water decisions play in national growth and development, to showcase lessons learnt and IWRM best practice from projects around the country such as the Wadi El Ku project; establish high level political buy in to IWRM, including a ministerial panel and a dedicated discussion around the review of the National Water Resources Policy for Sudan and the need for a National Water planning Strategic Framework and fostering the role of IWRM-Net-SD in sharing data, information, capacity building, joint multisectors research and exchange of experiences among its members.