## Desalination and Water Treatment www.deswater.com doi:10.5004/dwt.2017.20631

Water – energy nexus: case study of Rwanda

## Clarisse Nishimwe Nibagwire<sup>a,\*</sup>, Nadjib Drouiche<sup>b</sup>

<sup>a</sup>Pan African University Institute of Water and Energy Sciences – PAUWES, C/o Université de Tlemcen, BP 119 Tlemcen 13000, Algeria, Tel. +213 21 279880 Ext. 192, Fax +213 21 433511, email: ninisi04@gmail.com

<sup>b</sup>Centre de Recherche en Technologie des Semi-conducteurs de l 'Energetique (crtse), email: nadjibdrouiche@yahoo.fr

Received 4 December 2016; Accepted 26 February 2017

## ABSTRACT

The water – energy (WE) nexus approach seeks to assess relevant and consistent strategies to address challenges to the development of both water and energy sectors, to meet the demand and achieve a sustainable development. Water and energy are the most indispensable elements for life and development respectively. Besides that, the production and cost of one depends highly on the performance of each other. Not any country could attain a sustainable development without first developing the two sectors and satisfy the demand. Most of developing countries face the challenges in handling the management of water and energy resources due to different reasons. Among those reasons the most predominant are high population growth, lack of skills in water, low use efficiency and energy resources management and impact of climate change. This research seeks to find out the best ways to handle barriers to both energy and water development with the target to satisfy the need in a sustainable way.

Keywords: Water - energy nexus; Nexus strategy; Sustainable development

\*Corresponding author.