

Chapter 13

Impact of Water Availability on Rural Development in Nigeria

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ABSTRACT

Water is essential to life and is at the center of any sustainable development initiative. It is crucial for the economic development of a nation and for the alleviation of poverty and it is important for the livelihood of rural communities. Limited access to water and sanitation services adversely affects an individual's health, limits their access to educational and economic opportunities, and affects their ability to be productive and live full and secure lives. These impacts are more visible in rural poor communities and there is linkage between water availability and issues relating to health, poverty, and food security. This chapter reviews and assesses the current state of the water and sanitation sector in rural areas of Nigeria and analyses the impact of water availability on rural community health and agricultural productivity. The research will be conducted as a desk-top study utilizing information from literature, national and international data sources.

INTRODUCTION

Studies have revealed that at least 4 billion people (66% of global population) around the world will experience water scarcity at some point during the year. Water scarcity has been ranked as one of the top global risks by the World Economic Forum and it has been predicted that there will be a 40% gap in the demand and availability of freshwater by 2030 (Boccaletti, 2009).

Water is essential to all life and is at the centre of any sustainable development initiative or policy. It is used by households for drinking and sanitation purposes and it is an important resource for various industrial sectors for the production of goods and services, such as food, energy, transportation and manufactured products. It is crucial for the economic development of a nation and for the alleviation of poverty and it is important for the livelihood of rural communities. However, water is a finite and irreplaceable resource that can also be a threat to sustainable development, if it is not managed efficiently. If it is well managed, it can play a key role in strengthening the resilience of rural communities around the world and help to reduce the risk they face from various social, economic and environmental changes.

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Goal 6 of the Sustainable Development Goals aspires to attain universal access to water and sanitation and seeks to *Ensure availability and sustainable management of water and sanitation*. There are 2.1 billion people who lack access to a safe source of drinking water, while 2.3 billion people do not have access to proper sanitation (JMP, 2017). Limited access to water and sanitation services adversely affects an individual's health, limits their access to educational and economic opportunities and affects their ability to be productive and live full and secure lives. These impacts are more visible in rural poor communities and there is linkage between water availability and issues relating to health, poverty and food security. Households experiencing water shortages are more likely to be poor, than households not experiencing such shortages. Health and agriculture productivity are also influenced by a lack of water availability. Each year, millions of people in developing countries are affected and die from preventable diseases caused from ingesting contaminated water from and from poor sanitation services. For example, the World Health Organisation (WHO) estimates that in 2015 about 1.4 million people died from diarrhoea, of this 525, 600 were children under-5 and more than 50% of them were from Africa. Diarrhoea is mostly caused by exposure to an unsafe water supply and by poor sanitation and hygiene practices. In addition, the lack of access to water contributes to the difficulty in generating acceptable agricultural yields. It is important that water resources management strategies are designed and implemented with a focus to reduce poverty, increase food security and thus economic growth.

With 1600 m³/capita/year of renewable water resources, Nigeria is not considered to be a water poor country. However, based on the Falkenmark indicator, it has been described as a country experiencing economic water scarcity (UNESCO, 2012), which means that as a result of poor water resources management and a lack of investment, the water needs of the population are not being met. Government policy on water resources management has focused on the need to provide safe drinking water for all its citizens, irrigation schemes to boost agricultural development and provision of dams to generate electricity. However, despite numerous efforts by the Nigerian Government and various donor agencies to improve the water and sanitation sector, the levels of service are still very poor. 69% of the population have access to an improved water source, while 33% of the population have access to improved sanitation facilities. This means that 31% of the population (52.7 million people) and 67% of the population (114 million people) lack access to an improved water source and improved sanitation facilities respectively. A significant number of these people live in the rural parts of the country. Evidence shows that 34% of the rural population in Nigeria travels at least two hours on a round-trip to fetch water. This drives households to seek informal and often polluted water sources leading to various health hazards. Inadequate water and sanitation facilities increases the risk of contracting tropical diseases such as schistosomiasis and trachoma. Undernutrition is also affected by inadequate water and sanitation services. Limited access to a safe source of water leads to diarrhoea which can result in a lack of absorption of nutrients by the body.

Agriculture is the main profession of people in rural parts of Nigeria and about 90% of Nigeria's food is produced by small scale farmers. However, lack of water access as a result of rainfall variability and lack of access to irrigation schemes often makes it difficult to obtain acceptable yield which reduces their productivity.

Historically, in Nigeria, public spending and project delivery in the water and sanitation sector has been limited and it has been reported that 15% of completed works are unsatisfactory. Most of the funding for the sector has been directed towards improving service delivery in the urban areas, while investment in rural areas has been limited and projects have been left uncompleted. The challenge of development of the sector has been the inability to implement the integrated, demand driven approach and effective

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