

Assessment of urban water supply in Managua, Nicaragua

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ABSTRACT

This paper describes Managua's water supply system. It outlines key issues such as: the configuration of the system, number of household connections, water production and consumption, Non-revenue Water (NRW), service level, water tariff structure and the financial situation of the state-owned water utility (ENACAL). The analysis of the data collected shows that Nicaragua has reached 99% coverage of safe drinking water in urban areas and has met Target 7C of the MDGs. Nevertheless, it is still a challenge to provide a better level of service in terms of both water quality and continuity of supply. Managua city has a continuous water supply of between 3 and 24 h per day and some areas have long-term water shortages. The study also showed that ENACAL and its main water system (Managua) has a NRW above 50% and a non-cost recovery water tariff. This has created an unsustainable financial situation in the national water utility, which is reflected in the lack of maintenance and lack of replacement of old infrastructure, leading to a "vicious circle" of ineffective service and non-willingness to pay for water supply services. Without UWDM plans, measures or strategies in Managua, there is a low probability that ENACAL's financial situation will improve, making it unlikely that the current water service level will improve in Managua city.

Keywords: Financial deficit; Managua; Urban water demand management; Water supply system; Water tariff structure; Water utility

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