Serious water shortage in the Yaounde City of Cameroon from 1970-2015 with some socio-economic implications and community responses

EWANG AHONE Brenda Agnes, **Emeritus Pr. DANIEL N. LANTUM (**daniel-lantum@hotmail.com)**, Dr. EBENG Romuald (**drebengcameroon@gmail.com), **Mr. BONGLAISIN Julius (**juliusfrida@yahoo.com)
Corresponding Author: Phone (+237)675140309/691665387, Email:brendaewang@gmail.com
Department of Public Health and Community Medicine, Higher Institute of Health Technology/Institut Superieur de Technologie Medical (ISTM), Messasi, Yaounde Cameroun, PO Box 188.

ABSTRACT

Background: Water is central to plant, animal and human life. Sustainable development depends on having adequate sanitation and a safe, accessible and reliable water supply. Yaounde has known a population growth mainly due to high fertility rate which is as a result of limited family planning programmes and government centralization policy leading to population migration to Yaounde. Water being life, measures had to be taken to increase its quality and quantity.

Objective: To evaluate the deficiencies of the potable water supply system and the community responses during the period 1970-2015.

Methods: The study was a retrospective and descriptive one. We did a stratified and simple random sampling. We visited the Mefou Water Production Plant, the Akomnyada Water Plant, the Damas locality and elsewhere. We analysed some water samples for the presence of heavy metals and coliform bacteria. Our results were analysed using Microsoft Excel 2010 and Stat Graphic 5.0.

Results: It was revealed that the Mefou Water Plant (1970-1982) which was shut down in the eighties was re-opened in 2014 so as to reinforce the Akomnyada Station which proved insufficient due to demographic growth promoted by the socio-political policy of centralization and increase fertility rate. The production capacity so far stands at 150.000m^3/day for both Plants (100.000m^3/day for Akomnyada and 50.000m^3/day for Mefou). Clearly, some policy errors were committed which are further being corrected by earmarked plans to construct a giant Water Plant from the River Sanaga (300.000m^3/day). Additional 55.000m^3/day shall also be made available by the Americans and 50.000m^3/day by the Indians.

For the microbiological analysis, we used the multiple tube technique or most probable number of ISO 9308-2, first edition 01/10/1990. Reagents like MacConkey broth (Mb), brilliant green lactose (BGL), Kligler Iron Agar, S.I.M Medium, Kovac's reagent and Eosin Methylene Blue Lactose Sucrose Agar (EMB) were used. 10 water samples were analysed, coliform bacteria were present in 70% of the samples with E.coli and klebsiella isolated in 2 of the samples.

As for heavy metal analysis, traces of Lead and Cadmium were found in 63.2% and 52.6% of the 19 samples analysed respectively.

Conclusion: The current decentralization development policy which could influence rural-urban migration is gradually being implemented as well as the creation of more Water Treatment Plants. At the end of these projects, Yaounde and its environs shall experience autonomy of potable water that will last at least 30 years.

Key words: Water, shortage, responses, coliform bacteria, Cameroon.