An Industrial Water Quality Management System that Enhances Water Quality Monitory for Developing Countries

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According to an article by Standard Media, Kenya; water pollution levels across three continents, namely, Africa, Asia and Latin America have risen exponentially over the last ten years. (Obura, 2016). This project focuses on using sensors to detect pollutants in water and then transmitting the compiled information to environmental agencies so that they can take appropriate action such as taxing the industries that pollute the water bodies in order to reduce current global pollution. We obtained the sensors and the microcontrollers from online suppliers while the other required equipment such as beakers were obtained from our school laboratory. We calibrated the sensors by performing chemical tests and atomic absorption spectrometry tests, which are the conventional comparison tests performed to check whether sensors are working efficiently and accurately. These tests were performed to compare and conclude whether the sensors are accurate and functional or not. We also performed temperature tests and PH tests to see whether the sensors are resistant and whether the reading change. Then, the water samples were obtained from entry points over the course of Nairobi river where several industrial activities such as mining, agriculture and construction took place. The sensors were subjected to various tests to determine the sensors' efficiency when different affecting factors are varied.

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