

Abstract

The study aimed at improving the communication continuum within the water and sanitation industry for developing countries. This was conducted by modelling various aspects of the water and sanitation industry measured against the introduction of the Internet technology in the sector.

Literature on the Internet and its deployment in other sectors of the economy was reviewed with a view to determining as to whether the use of the Internet in water and sanitation is desirable. A survey was conducted to determine the type of information the water and sanitation industry would like availed on the Internet. A survey was then conducted to determine the extent to which the information desired by the industry was available on the Internet.

Having established the need to introduce an Internet based information dissemination and retrieval regime, a multi-criterion optimisation model was developed to compare the performance of traditional methods of information dissemination and retrieval against Internet based methods. The model thus developed was then applied to select pilot projects used in the research to determine the disposition of actors in water and sanitation towards Internet based information system. Further, the pilot projects were monitored in order to document best practices in so far as their operations were concerned.

The study then focused on the diffusion of the Internet technology into the water and sanitation. The diffusion was modelled using models developed in the classical theories of technology diffusion. The models were then tailored for use in water and sanitation and modelled the diffusion of Internet technology into the sector. The model then optimised on the rate of diffusion of the technology.

The study concludes that whereas a firm basis for widespread use of the Internet in water and sanitation has been laid, effective use of the technology has not taken off. The study suggests ways in which this can be improved.

The research produces 3 products. These are an algorithm for gauging water and sanitation information flow over the Internet, a documentation of best practices in the use of the Internet in the water and sanitation information continuum, and a model for technology diffusion in the water and sanitation sector.