Cost analysis of urban water supply and waste water treatment processes to support decisions and policy making: application to a number of Swedish communities

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1. Introduction

In many parts of the world a large percentage of the water and wastewater infrastructure is reaching its end of life, as it was first developed and installed at the beginning of the 20th century. The infrastructural changes in urban areas may be one of the 21st century’s biggest challenges (Clark et al., 2002). Furthermore the supply of water to public and the treatment of wastewater should preferably be performed in an effective and environmentally friendly way (Lekkas et al., 2008). Additionally, new standard requirements affect the supply and treatment plants in multiple ways, i.e. technologically, organisationally and economically. The changes may well mean increased supply and treatment costs, leading to higher service rates to customers.

There are many drivers behind the ongoing developments and changes in water resources, however the economic viability of the water utilities is a prerequisite particularly as private investors have shown their interest in the industry. The extent of investors’ involvement varies from country to country. In England, the water and wastewater facilities are privately owned and are mainly regulated by the The Office of Water Services (OFWAT) authority. In France, the individual communities are responsible for controlling the facilities and many of the communities (75%) have chosen to let private actors run the operations (Thomasson, 2003). Quite the opposite...