

STRATEGIES FOR IMPROVING HOUSEHOLDS' RESIDENTS' CONSUMPTION OF WATER AND ENERGY

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ABSTRACT

Gaza Strip in Palestine is severely affected by water and energy crises. The study objective is to assess the attitudes of professionals regarding strategies that can be used for improving the consumption of water and energy. Fifteen strategies were derived from previous literature and refined based on a pilot study. A questionnaire survey was conducted targeting professionals who had managed residential buildings projects. The results revealed that overall RII = 77.8% and Mean = 3.89 of the strategies that guide the household residents' use of water and related energy consumption to conservation and sustainability, endorsing that the respondents have an agreement on the stated strategies. The value of sign Test-value = 4.47 with positive sign of the test and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. So the mean of the strategies is significantly different and greater than the hypothesized value 3. The study concluded strategies that guide the household residents' use of water and related energy consumption to conservation and sustainability are statistically significant and the tested strategies are significantly guiding the household residents' use of water and related energy conservation and sustainability. The results revealed that the periodic maintenance for water and energy devices and systems, leakage control, information, educational and training programs, and demand side management strategies were the important strategies guiding water and energy conservation and sustainability. It is recommended that water and energy utilities should maintain precisely and adequately the water and energy network, follow up the leakage and monitor and control dispensable use of an inefficient devices as residential water pumps. It is also suggested to detect continuously any illegal connections to reduce the losses in the network and consequently decrease the cost of the water and energy supply service.

Keywords: water, energy, consumption, strategies, housing, Gaza Strip

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