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Pollution Prevention Case Studies

Water Saving Measures in a Greek Hotel

Company	Daphne's Club Hotel Apartments
Industrial sector	Short term accommodation activities ISIC Rev. 4 no. 5510 (International Standard Industrial Classification of All Economic Activities)
Environmental considerations	Holiday accommodation and activities should be able to bring guests into contact with what they miss most in big cities, namely natural surroundings. Our awareness of the surrounding natural environment led us to contemplate measures for protecting and enhancing it.
Background	Daphne's Club opened in 1996 as a small, family-owned hotel and apartment complex. In 2006, after 10 years in the accommodation sector, the family decided to venture further into the hospitality business, by opening up its horizons to other related services, such as the hosting of business meetings and private and corporate events and the organisation of customised cultural excursions and thematic workshops. At the same time, the family committed itself to an environmental policy, aiming to alleviate the negative effects of human activity on its small corner of the planet.
Summary of actions	To reduce the use of water, the following measures have been taken: <ol style="list-style-type: none"> 1) The staff has been instructed to check for leaks, and management gives priority to resolving them. Guests are also instructed to inform reception if they spot a leak. 2) Through the <i>Guest Information Booklet</i>, which they receive upon arrival, guests are made aware of the need to protect natural resources, especially water, which is scarce in Greece. The staff is also trained to avoid the unnecessary use of water. 3) An automatic watering system has been installed in our garden and the large flower pots in the roof garden to ensure that water for watering is used efficiently. 4) Sheets and towels are changed twice per week in order to avoid the unnecessary use of water and detergents, which are also potentially harmful to water systems as they may cause pollution. 5) A majority of environmentally friendly detergents are used within the hotel (eco-certified) to avoid polluting the water system. Wherever possible, completely natural products, such as vinegar, are preferred.

Process	Old process	New process
Management of leaks	Staff and management spot and resolve leaks.	Guest are also asked to report leaks immediately.
Water consumption	Guests are informed of water shortages in Greece.	Guests and staff are informed of the need to preserve natural resources, as well as of the seriousness of the problem in Greece.
Watering of the garden and flower pots on the roof garden	Manually	Automatic watering system before dawn.
Changing of sheets and towels	Changing of sheets 2 times per week and changing of towels three times per week	Changing of sheets and towels two times per week.
Use of detergents	Use of professional detergents	Use of a majority of eco-friendly or completely natural detergents.

Balances

As a result of the previously stated measures, from 2006 to 2009, the annual electricity consumption of Daphne's Club in terms of kWh per guest per night has decreased as follows:

Year	2007	2008	2009	2010
Water consumption (m ³)	732	810	707	608

However, the net energy consumption of Daphne's Club has increased from 2006 to 2009:

Year	2007	2008	2009	2010
Number of stays	2,865	3,181	3,319	3,319

This can be explained due to the growing number of visitors per year, as shown in the table below. Without the measures undertaken, the net energy consumption would have been around 20% higher (over 31,000 kWh).

Year	2007	2008	2009	2010
Water consumption (m ³)	0.26	0.25	0.21	0.18

INVESTMENT	
Watering system	€2,000
Other measures	€0
Total	€2,000

SAVINGS	
Average since 2008:	≈150 m ³ /year * €1,15/m ³ = €172/year

RETURN ON INVESTMENT	
At this current reduction rate	≈11 years

Conclusions

The amount of water used by the hotel has declined slightly, despite the increase in the number of guests per night, thanks to a modest investment and awareness-raising activities among customers.

NOTE: This case study seeks only to illustrate a pollution prevention example and should not be taken as a general recommendation.



Regional Activity Centre
for Cleaner Production

Dr. Roux, 80
08017 Barcelona (Spain)
Tel. (+34) 93 553 87 90
Fax. (+34) 93 553 87 95
e-mail: cleanpro@cprac.org
http://www.cprac.org