

## **Tourism and Sustainable Development**

### **Measures Concerning Sustainable Consumption in Hotels**

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**Abstract:** The present work analyses the measures adopted in hotel industry with the purpose to obtain a sustainable consumption through a comparative approach of Romanian and Italian hotels, by highlighting the similarities and the differences between them. Consequently, we used the questionnaire as a research instrument, in order to gather the primary data, which were processed by the help of SPSS program. The results obtained emphasised the measures applied most often in the tourist units investigated for sustainable consumption. Therefore, we noticed that the measures concerning the reduction of water consumption are most often adopted by the management systems of the tourist units analysed, both in Romania and in Italy. The measures concerning the efficient administration of waste are less applied in the Romanian hotels. As for the Italian hotels, among the measures for sustainable consumption, the least adopted are the ones referring to the reduction of pollution emissions.

**Keywords:** sustainable consumption; efficient administration; reduction of consumption.

**JEL Classification:** Q53; L83; M10

#### **1. Introduction**

In the whole world, the hotels, no matter their location, comfort or customers, consume important quantities of resources in order to satisfy the consumers' demand of services-tourists, and to maintain the operation standards.

The resources consumed are extremely diverse (IHRA&UNEP, 1995):

- building materials used for the realisation of these (new or restored) objectives;
- water, which can be potable or not;

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- equipment and installations contained in the buildings, in order to give them the destination of service providers for hotels, food, entertainment etc.;
- materials and equipment necessary for current operation: furniture, bed sheets, crockery, cutlery, detergents, cleaning materials, advertising materials, etc.;
- food, drinks, ingredients, semi-canned products, etc.

From this point of view, hotels are units with high efficiency for sustainable consumption, because, as we mentioned above, there are high concentrations of production and consumption in hotels, and, at the same time, they are among the main factors responsible for the damaging effects on the environment.

Consequently, the responsible approach should be an essential preoccupation even from the moment of the initial design, or when capital modernizations/repairs are necessary.

The hotels are huge generators of waste coming from the daily operation, from the building materials used for modernization, repairs, painting, from the technological processes of the kitchens, laundries, technical and maintenance department; from the daily cleaning processes of the production areas, of the common ones, and of the customers' rooms, and also from the areas where the personnel work (Nistoreanu, 2003).

The success of sustainable consumption depends on the way this waste is administered. The personnel have an important role, but need to be trained, motivated, and supervised in the realisation of their daily work tasks. Tourists have also an important role, participating actively in the realisation of this objective.

In what concerns the reduction of carbon emissions for sustainable consumption in hotels, the key element is the existence of ecological policies concerning the purchasing process (Walmsley, 2011). For example, hotels from the Scandinavian area always had an activity with an ecological objective, extending this practise also to the service providers, by making them sign "service providers' declarations" by which they agree to observe the sustainability policies (Draper and Murray, 2008).

Water is one of the most used resources in hotel industry: in customers' rooms – for washing; in toilets – for cleaning; in restaurants – for cooking, washing the food, the dishes, etc.; circulating cooling agent in air conditioner installations; in swimming pools, for watering green areas and sport fields, for fire extinguishing. However, by adopting certain measures, sustainable consumption can be obtained.

In conclusion, sustainable consumption does not necessarily involve giving up the quantity, rather to change the consumer's behaviour, even if, in some cases, the absolute volume of consumption is the most important (Stoian, 2005).

## 2. Research Methodology

The purpose of the research is to highlight the main measures concerning sustainable consumption, adopted in Romanian and Italian hotels. The objectives of the research aim to identify the measures undertaken by hotel managers for efficient waste administration, reduction of pollution emissions and reduction of water consumption.

In order to realise our purpose, we chose the *research through enquiry*, because it assures a great flexibility, and the data and information are obtained quicker than by other methods. In the elaboration of the research instrument - the questionnaire - we established the types of questions, which are closed questions (both dichotomous – with two predetermined answering variants, and multichotomous – with several predetermined answering variants), and questions with scale answers. The data obtained from the questionnaire were processed with the help of SPSS.13 program.

The sampling implied the set-up of the research unit, that is Romanian hotels (the North-East region comprising the counties: Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui) and Italian ones (Veneto in North-East Italy – the provinces Belluno, Padova, Rovigo, Treviso, Venice, Verona, Vicenza). As far as the selection process is concerned, we opted for a non-aleatory method based on accessibility. The sample size is of 92 touristic units, 49 Romanian ones (NE region) and 43 Italian ones (Veneto region), respectively. According to the comfort category, most hotels are 3\*\*\* and 4\*\*\*\* ones and employ from 10 to 249 people. We gathered the data personally at the touristic units from the research area chosen and we interviewed the managers of those units.

## 3. Research Results

In the tables and figures below, realised for a clearer presentation, **item** (Q) – represents the encoding of the measure adopted, and corresponds to the number of the question from the questionnaire, and % - represents the hotels in which that measure is applied. Consequently, the measures adopted by tourist units for sustainable consumption refer to:

### 3.1. Efficient Administration of Waste

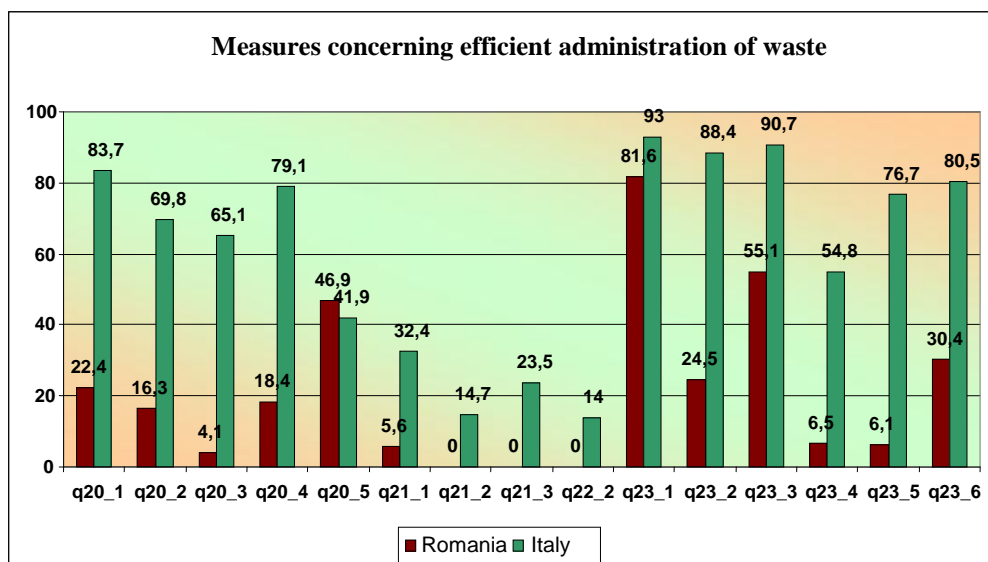
Efficient administration of waste is realised in the tourist units investigated in several ways (table 1).

Table 1. Measures concerning efficient administration of waste

Efficient administration of waste	Item	Measures	Romania (%)	Italy (%)
<b>Reduction of waste</b>	Q20_1	Monitoring the types and quantity of waste	22.4	83.7
	Q20_2	Identification of possibilities of waste reduction	16.3	69.8
	Q20_3	Existence of systems for waste reduction, reuse and recycling	4.1	65.1
	Q20_4	Training the employees and the guests for the selective collection of waste	18.4	79.1
	Q20_5	Use of reusable toiletry and receptacles	46.9	41.9
<b>Reduction of organic waste</b>	Q21_1	Maceration and transformation of waste into compost	5.6	32.4
	Q21_2	Donation of waste to local farms	0	14.7
	Q21_3	Sale to interested companies.	0	23.5
<b>Waste water treatment</b>	Q22_2	Existence of an individual water treatment plant	0	14.0
<b>Recycling</b>	Q23_1	Paper, cardboard	81.6	93.0
	Q23_2	Plastic	24.5	88.4
	Q23_3	Glass	55.1	90.7
	Q23_4	Polyethylene packaging	6.5	54.8
	Q23_5	Aluminium	6.1	76.7
	Q23_6	Cooking oil, fats from the kitchen	30.4	80.5

Source: Data obtained in SPSS

The measures concerning efficient administration of waste are presented graphically in the figure below (figure 1).



**Figure 1. Measures concerning efficient administration of waste**

*Source: Data obtained in SPSS; Table 1*

Italians pay much more attention to the efficient administration of waste than Romanians. In what concerns waste reduction, in 83.7% of the hotels there is a careful monitoring of the types and quantity of waste, in 69.8% of the hotels the possibilities to reduce them were identified, and in 65.1% of the hotels there are systems of waste reuse or recycling, while in Romania there is a waste monitoring on types and quantity in just 22.4% of the hotels. In some of the tourist units, the organic waste is macerated and transformed into compost (32.4% in Italy, and 5.6% in Romania), donated to some local farms, or sold to the interested ones (just in Italy). Also, in 14% of the Italian hotels there are waste water treatment plants.

Another important aspect for an efficient administration of waste, which occurred in 79.1% of the Italian hotels and in 18.4 % of the Romanian hotels under the present analysis, is the special attention paid to train the employees regarding the selective collection of waste, and even the guests are invited to do the same. In what concerns recycling, both in Romania and in Italy, paper, cardboard and glass are the first to be recycled – of course in much higher proportion in the Italian hotels, where plastic, aluminium or kitchen oil/fat resulted from technological processes are also recycled; the polyethylene packaging are recycled in over 50% of the Italian tourist units investigated.

**3.2. Reduction of Pollution Emissions**

Another important aspect for sustainable consumption is the reduction of pollution emissions. Usually, the levels of recommendable emissions and solutions are

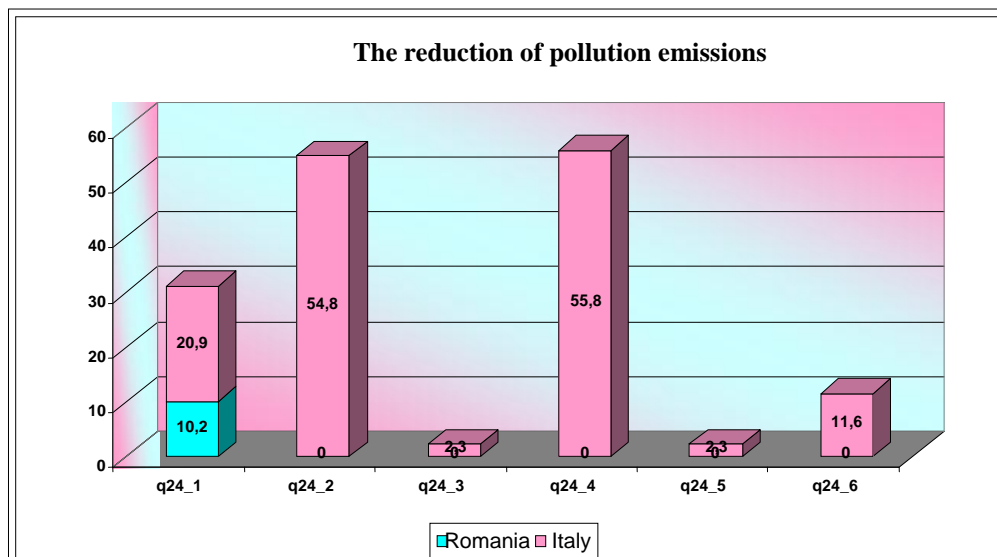
established after the study of impact over the environment. A few measures are presented in the following table (table 2).

**Table 2. Measures concerning the reduction of pollution emissions**

Reduction of pollution emissions	Item	Measures	Romania (%)	Italy (%)
	Q24_1	Encouraging the employees and the guests to use bicycles	10.2	20.9
	Q24_2	Paying a tax to compensate for pollution emissions	0	54.8
	Q24_3	Existence of devices measuring emissions of carbon dioxide	0	2.0
	Q24_4	Promotion of local public transportation	0	55.8
	Q24_5	Offering discounts to the persons travelling by train	0	2.0
	Q24_6	The guests could compensate CO2 emissions by donations for ecological projects	0	11.6

Source: Data obtained in SPSS

The results synthetized in the table above are highlighted by the following figure (figure 2):



**Figure 2. Measures concerning the reduction of pollution emissions**

In what concerns the reduction of pollution emissions, in the Romanian hotels such measures are almost inexistent; the only measure, even if hard to believe, refers to the encouragement of the employees to use bicycles.

Unlike Romanian managers, Italian managers are more interested to reduce pollution emissions. Consequently, they promote local public transportation (in 55.8% of the hotels investigated), offering free tickets to the guests, 54.8% are willing to pay a tax to compensate pollution emissions, and in 11.6% of the hotels, even the guests could compensate CO2 emissions by donations for ecological projects, and by the use of bicycles for employees and guests.

### 3.3. Reduction of Water Consumption

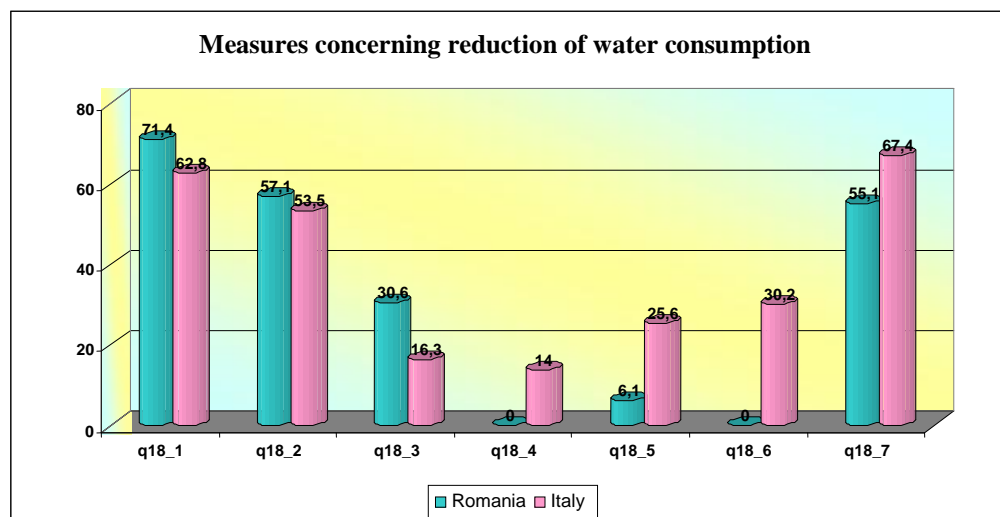
Besides a good monitoring of water consumption, an adequate maintenance of the equipment and a serious training of the personnel, water consumption could be also reduced by other methods, presented below (table 3) and found in the tourist units investigated.

**Table 3. Measures concerning reduction of water consumption**

<b>Reduction of water consumption</b>	<b>Item</b>	<b>Measures</b>	<b>Romania (%)</b>	<b>Italy (%)</b>
<b>Use of different methods of reduction of water consumption</b>	Q18_1	Devices of reducing the water flow	71.4	62.8
	Q18_2	Devices of aeration of water flow	57.1	53.5
	Q18_3	Sensor provided batteries and urinals	30.6	16.3
	Q18_4	Waste water recycling systems	0	14
	Q18_5	Systems of collection of rain water	6.1	25.6
	Q18_6	Sensors of humidity for the irrigation systems	0	30.2
	Q18_7	Announces, posters inviting the guests to save the water	55.1	67.4

*Source: Data obtained in SPSS*

The situation is illustrated in the following figure (figure 3)



**Figure 3. Measures concerning reduction of water consumption**

As we can see from the table and from the figure presented above, in the Romanian hotels certain devices of reduction or aeration of the water flow, as well as sensor provided batteries and urinals in public baths are a little more used than in the Italian hotels. However, Italians installed waste water recycling systems in 14% of the hotels investigated, systems of collection of rain water (25.6% of the hotels), and sensor based irrigation systems (30% of the hotels).

Also, both in the Romanian hotels (55.1%) and in the Italian ones (67.4%), posters and announcements are inviting the guests to save the water.

#### 4. Conclusion

All the hotels, no matter how small they are, are a burden for the environment, because they consume water, energy and raw materials to provide services for the tourists; they use harmful substances like chlorine bleachers; they generate waste and they produce polluting domestic water and gas emissions; many of the purchased products have an impact over the environment, associated with the way they are produced, used and eliminated.

Consequently, any tourist unit, either an internationally famous company or a family business, should be interested in sustainable consumption, applying as many measures as possible, according to the identity, particularities, and other elements characteristic to the area.

The policy of every hotel should be based on the real demand of the consumers of tourist services, on the customers' implication in putting these measures into



practise, as an active and conscious part, together with the personnel of the unit. However, no matter the measures adopted by a hotel for sustainable consumption, they should be treated as seriously as possible, permanently followed with the same concern like the financial indicators or the degree of occupation.

A responsible involvement should be based not only on the maintenance of the operation standards, but also on the reduction of unjustified water, energy or fuel consumption, as well as on the efficient administration of waste. This preoccupation will definitely lead in time to special results. These results can be measured both by comparing the consumption to other periods of time, and by the observation of the customers' reaction towards the friendly attitude of the personnel concerning the environment.

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