**International Journal of Environmental Planning and Management**
Vol. 6, No. 2, 2020, pp. 24-29
http://www.aiscience.org/journal/ijepm
ISSN: 2381-7240 (Print); ISSN: 2381-7259 (Online)

# Tourists' Water Consumption Attitude in Cox's Bazaar Hotels – A Perception Assessment

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## Abstract

Fresh water is a non-renewable resource and is at the verge of extreme scarcity. Cox's bazar is one of the most popular tourist places in Bangladesh. Number of tourists travel and stay in the hotels and one of the most important resources in tourism constitutes fresh water. Especially hotels consume tremendous amounts of it to maintain landscape and facilities, supply kitchen and ensure water rich activities outside as well as inside. The aim of the study is to find out the attitudes of tourist toward water consumption. The study includes the survey to understand the importance of the water consumption to the tourists. The purpose was also to identify the awareness among the tourist about water consumption. Often however, accommodations, which are located in water scarce regions, claim more water than actually available for both hotel and local population. While so far ensuring water responsibility has been mostly a task by the hotel itself, it is of increasing importance to encourage hotel guests in the water saving process; especially in the bathroom where they have direct control over water flow and laundry frequency. Until now, a moderate amount of research has been conducted studying the gap between tourists' awareness of general environmental issues and their willingness to act more responsibly. However, limited research exists regarding tourists' water consumption behavior. However, as most respondents perceive water saving signs as a helpful reminder and encouraging, the foundation for tackling the next step, action-taking is understood in this study.

## Keywords

Hotel, Tourism, Consumption, Water Consumption, Perception Assessment

Received: February 4, 2020 / Accepted: March 12, 2020 / Published online: April 29, 2020



## 1. Introduction

Dropping water tables, depletion of underground aquifers, shrinking water bodies and desiccation of wetlands are serious global consequences of both natural as well as man-made events [1]. The number of people living in water-stressed or even scarce regions is rising continuously [2]. By 2025 up to 1.8 billion people are expected to live in countries suffering from absolute water scarcity [3]. Even though tourism has enormous effect on the economy, it also carries noteworthy negative impacts on natural resources and the global environment [4-6]. Besides remarkable waste production, the ongoing process of burning fossil fuels and its consequence of greenhouse gas emissions also water sources across the world are increasingly strained and constitute a scarce source near depletion in vulnerable regions [3, 4, 6]. Consequently, tourism embodies a phenomenon containing a very dynamic nature. While it has the ability to adapt to external changes, it simultaneously can change its environment (social, environmental and social factors) significantly [7]. Due to globalization, technology innovations as well as mind set changes, the tourism sector has undergone a tremendous increase in travelers within the last decades. Speaking of numbers, there were 25 million international tourists in 1950 compared to 1.1 billion international tourists in 2013, accompanied by 5 to 6 billion

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domestic tourists [8]. Furthermore, the tourist influx is expected to increase to reach 1.8 billion tourists. Hence, (water scarce) destinations across the world are expected to experience an increased demand on water during the upcoming decades. Therefore, to sustain tourism businesses as well as economies, which rely solely on tourism, it is of exceptional urgency to consume water in a more responsible and saving way to allow future generations access to fresh water. In spite of water regulations and policies, eco-certification programmes and the adoption of water-management departments in larger hotels, without active participation and the will of cooperation among tourists, none of these intervention strategies will yield long term success [9]. Hence, a certain degree of knowledge and understanding regarding water but also region-related issues is required to enhance the discernment of visible water saving applications among hotel guests. Those applications have to evoke feelings of implicitness and global benefit instead of functional restrictions in terms of comfort. Even though more people become aware of environmental issues and resource exploitation, the willingness to change their consumer behaviour remains still low [10] In a climate-related context Highham, Reis and Cohen (2015) explain the tourists' attitude-behaviour gap based on the distinct views of modernism and post-modernism. Here, the former views tourism as external to everyday life and is "associated with freedom, escape, abandon, and attenuation for daily practices" [11]. The post-modernist view claims that tourism is already entangled in everyday life [12] and becomes less extraordinary. Since the contemporary life consists of fluid and continuously changing elements [13], the personal and individual identity and thus, behaviour, is also viewed as dynamic and complex. According to Higham et al. (2015) tourism is an "arena where different identities may be practiced, performed, played out, and discarded" (p. 5), claiming that due to the fragmented nature of behaviour one should not expect consistency across situations, backgrounds and contexts [14]. In short, while modernism views tourism as escape and post-modernism describes tourists' identities as dynamic and situational [15], there is no definite reason to transfer responsible behaviour performed at home (partly or completely) into tourism contexts [14]. These suggested explanations provide a solid foundation for further investigation of the attitude behavior gap among tourists in a water context. However, the concepts of modernism and postmodernism will not find major attention throughout this report as they solely served as background information. This paper will investigate the extent to which tourists are aware of water shortages and their actual willingness to act more responsibly, since several factors prevent them from actively changing their consumption behaviour on holidays. The gap between awareness and willingness to save water will be the focus of this paper and is examined by means of an extensive literature review on water scarcity, its link to tourism and potential reasons for not taking action in a more general context. Furthermore, a quantitative study, which is partly designed according to the literature findings on behaviour issues, investigates tourists' awareness, attitude as well as behaviour regarding (their) water consumption in hotel bathrooms. The obtained results will contribute to a better understanding of such risen gap in a water context and deliver information regarding differences amongst sex, education level and age as well as the effectiveness and perception of water saving signs in hotel bathrooms. The following research questions form the study.

# 2. Methodology

## 2.1. Location and Sample Size of Survey

Cox's Bazaar was selected as the location for the survey. The following beaches in Cox's Bazaar were selected; Kolatoli, Inani, Laboni. In these beaches, a wide variety of tourists can be found. And they live from small scale hotels to large scale hotels. So this served a good purpose for the target thesis topic.

## 2.2. Sampling Method

Tourists were chosen at random from each location, no specific system were followed. There were no preferences of samples; the only requirement for qualifying for the survey was that the respondents were tourists coming in to the locations.

## 2.3. Data Entry and Analysis

Two databases were established, in Microsoft excel and SPSS, for different purposes. Most of the statistical analyses and figures generated were done using SPSS due to its user friendliness.

## 2.4. Content of the Questionnaire

The questionnaire consists of five sections, examining different fields of interests. In case of Likert-scales, the following evaluation has been used: 1= disagree, 2= slightly disagree, 3= neutral, 4= slightly agree, 5= agree.

The details of how the four parts play a role in extracting necessary information are below:

*PART A – Water and general issues*

The first part of the questionnaire was designed to establish how much aware the respondents were regarding environmental and water related issues. Besides this, the statements of the questionnaire was designed to extract how much concerned the respondents are. The respondents were

also asked if they are aware on how to use resources that were limited and in scarce condition.

*PART B – Behavior*

This section of the questionnaire contained questions regarding the extent the participants makes effort to save water at home and when staying in a hotel. Another additional part of the this section is that the respondents were shown a picture of a towel reuse sign implemented by a hotel, and they were asked to cover on how the picture made them feel and if there were any room for improvements.

*PART C – Willingness to change behavior*

This section confronts the respondent with rather provoking statements to investigate why tourists might not be willing to change their consumption behaviour in a hotel. Hence, the respondent needed to decide whether an individual can enforce change, whether changing behaviour is irrelevant since it affects the far future and whether he is even aware of potential water saving methods. It furthermore stresses the assumptions listed in the literature review, which state that people feel stressed due to an information overload and/or lack of knowledge. Besides, it has been examined whether tourists would make a difference in saving water based on the type of accommodation (inexpensive low-scale hotels vs. 4-star or higher hotels) and whether a high price per night has an influence on their water consumption behavior.

# 3. Results and Discussions

The following chapter contains the results that have been obtained from conducting the survey. Since the survey constituted several questions, to extract as much unbiased information from the tourists regarding their general behavior and attitude towards water consumption whilst staying in hotels, only the key outcomes have been highlighted in the following sub chapters. Interpretations and some discussions are also given with the help of graphical representation.

## 3.1. Source of awareness building information for tourists

66.00% of the sample responded that the internet contributed most to their knowledge regarding water resource conservation. As there is a growing consensus towards environmental conservation, information relevant to water conservation is readily available. These small reminders about current issues of water shortages serve to be a powerful tool to spread awareness. The second source of information seems to be word of mouth, family or from friends, consisting of 29.20% of the sample. This figure indicates that peer influence is a compelling component when it comes to long term behavior. Education, newspaper or hotel sign information did not manifest itself to be a large portion of the response as they collectively share 4.8% of the response. This is because this information is generally not recalled instantly during moments when they need to be applied and thus are rendered useless.

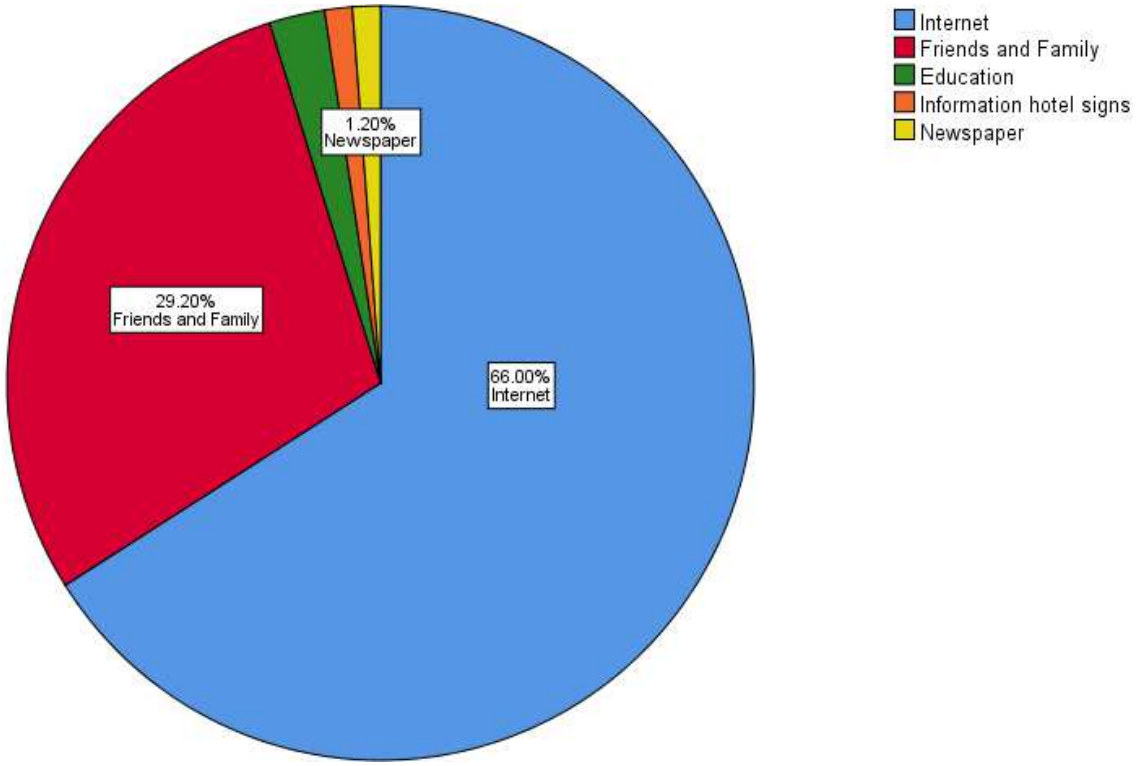


**Figure 1.** Source of information on water conservation.

## 3.2. Tourists' Behavior and Perception

**Table 1.** Behavioral factor and perception from survey.

| Behavior Factors | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Likeliness to reduce shower time | 0 | 7.6 | 70.6 | 21.8 | 0 |
| Towels should be changed once a week | 0 | 1.2 | 47.8 | 51 | 0 |
| Shower should be turned off while lathering | 16.8 | 15.2 | 39.6 | 28.4 | 0 |
| Brushing teeth with water tap running | 0 | 21.2 | 31 | 47.8 | 0 |

*Reducing shower time*

This chart shows how likely people are to reduce the amount of time people spend on taking a shower. While 21.80% of the population agree on reducing shower time, an overwhelming 70.60% remains neutral about it. This suggests that people are not aware of the macroscopic impact shower length has on water consumption and wastage. This remains an area of opportunity as convincing these people will result in reduction in water wastage. This graph also shows that 7.60% of the sample believes that shower duration does not have a significant effect on water wastage. These people also need to be educated about the compounding effect of small scale wastage building up to water scarcity. Furthermore, the high number of neutral respondents indicates that they do not know how long an ideal shower should be, if we want to be environmentally conservative. Suggesting, that there is a special need on educating or reminding people in general that shower lengths can lead to disastrous water crisis at a point in the future.

*Change of towels once a week*

Towels in hotels, or even in households are cleaned frequently, often after just one instance of usage. This contributes to excessive water usage along with more electricity consumption. Being aware of how frequently individual items, such as towels are cleaned could optimize the whole process and increase efficiency, thereby reducing water usage. 51.00% of the respondents agree that changing their towel once a week is good enough provided that it is dried after usage. This is their behavior at home. However, 47.80% remains neutral about it and thus may have a habit of changing or cleaning towels more frequently. Proper awareness must be disseminated among these people.

*Shower off during lathering time*

A large portion of the overall shower process includes time spent lathering which includes using soap and shampoo. Oftentimes, the shower is kept open while such activity takes place. This could contribute to even half of the water used in once individual instance of shower. An effective solution would be to have manually turn off the shower head while lathering. Within the sample, 28.40% agreed that they turn off the shower during lathering, 39.60% remained neutral while the rest either disagreed or disagreed strongly. Such a large portion of the sample not turning off the shower results in lots of water wastage. This indicates there is an urgency to remind the people taking showers to turn it off while lathering; only then the numbers may go down. The habit of turning off the shower is not down to education or awareness, it is a force of habit and the people may need strict set of instructions or rules to keep reminding them to turn the shower off mid-way.

*Brushing while tap is running*

Similarly, only a small portion of the brushing process requires water but many people keep their taps running for far too long. 47.80% of the sample responded that they do just that which wastes quite a lot of water. 31.00% remained neutral suggesting that they occasionally do run the tap every once in a while. Finally 21.20% of the sample does close their tap when it is running.

**Table 2.** Behavioral factors about tourist willingness to change.

| Behavior Factors | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Willingness to reduce shower time in a hotel | 28.2 | 57.4 | 14.2 | 0 | 0 |
| Willingness to save on up-scale hotels | 7.2 | 54.4 | 33.6 | 4.8 | 0 |
| Willingness to save on small scale hotels | 0 | 10 | 56.6 | 32.4 | 1 |
| Willing to conserve water resource in hotel | 5.8 | 57.72 | 37.2 | 0 | 0 |
| Signage promote conservative attitude | 14 | 28 | 15 | 32 | 11 |

## 3.3. Part B – Tourists' Willingness to Change

This graph looks at the perception that people have over hotels and their motive for conserving water resources. This is important because economic benefits behind environmental conservation sometimes carry a negative connotation as people think that the only motive is to save on costs. In this sample, 56.25% of the population strongly disagreed, 31.25% disagreed and 12.5% remained neutral.

*Willingness to reduce shower time in a hotel*

This graph stays consistent with the general consensus that

people want to enjoy a luxurious stay. As a result 57.40% of the sample disagreed when asked if they are willing to reduce their shower time. 28.20% strongly disagreed while 14.40% remained neutral

This graph talks about the perception that people have about how their actions will scale into the future. This is important because if they believe that their actions will not have any direct impact on the overall course of how things progress then they might not be willing to change their behavior. Disappointedly, almost three quarters of the sample are unable to comprehend that their actions actually have tremendous consequences in the future. In fact, what the tourists express is that the damage is so far in the future, that they are unable to remember or think about it now hence it is difficult to habituate themselves to something that seems intangible to them.

*Willingness to save on a luxurious hotel*

The graph suggests that a large portion of the sample would not be willing to save water on a luxurious hotel. This is because they feel that since they are paying a large sum of money for the experience, they should be able to enjoy themselves without restrictions. Only 4.8% agreed that they would still save.

*Willingness to save on a cheaper hotel*

A large share remains neutral in this regard as they will save only if they are nudged to do so. 32.40% will consider saving water while around 10.00% disagreed that they would. Since they are spending a lower amount on these hotels, they wouldn't mind helping out a cause as luxury isn't their top priority here.

*Attitude change after seeing signage*

Several hotels have eco-friendly awareness building signage all around their hotels. The idea behind this implementation is that this will promote environmentally friendly attitude among the guests and act as a reminder to act more responsibly.

## 4. Conclusion

From this study, it was evident that water saving interventions implemented by hotels has the potential to stimulate guest's willingness to act more responsibly. Reminders or interventions are an effective way to influence people's actions to lean towards water conservative behaviour when applicable. This is solidified in the finding that bathroom signs constitute for the vast majority of the respondents as a good reminder to act more responsibly with water. Also, there were no links between tourists' education level and net income on the extent of action taking regarding water saving.

From this study, it can be hence concluded that hotel bathrooms should have animated signage which serves as daily reminder to use water as much as required only. The signage and visual cues which promote conservative behavior must be installed at every hotels in order to ensure conservative water consumption among tourists. Hotel keycards are also instrumental in having environmentally friendly advises and guidelines printed on them, then it could act as an enforcer for guests to conform to a much eco-friendly attitude. In order to prevent tourists to consume too much water resources, it is recommended to increase the use of modern technology which will remove the dependency on human behavior.

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