Importance of the formation of environmental consciousness of the personnel for the development of eco-technologies in the hotel enterprise

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Abstract. The study focuses on the consideration of the formation methods of ecological consciousness of employees of the hotel enterprise. It is noted that the formation of environmental awareness among the staff is a priority in the implementation of eco-technologies in the hotel, as they are able to significantly affect the effectiveness of their implementation. The survey shows that a significant part of the staff is not ready to sacrifice their comfort and change the time-fixed sequence of duties for the sake of the implementation of environmental policy. In this regard, a number of recommendations on possible formation methods of ecological consciousness in the management and line staff of hotels. The results of the study may be useful for practical application in hotels planning to implement or introduce eco-technologies.

The environment is very sensitive to the production activities of people, as it often loses its environmental properties. Defining the essence of recreational and tourist nature management in the sphere of hospitality as the interaction of business and society, economy and nature, it is necessary to understand the existing relationship and interdependence of economic development of the quantity and quality of natural resources and take into account changes in environmental potential due to the development of the economy of hospitality enterprises. If we talk about the hospitality industry, the hotel, like any other anthropogenic structure, produces a certain impact on the environment and human health, and therefore, it is necessary to take measures to reduce its negative consequences.

Each enterprise should be based on environmental technologies. The concept of «environmental technology» includes two main aspects: the technologies used should not have a negative impact on the environment; environmental technologies should be built according to the type of processes characteristic of nature (table. 1).

Table 1. The definition of environmental technology.

| Definition | Resources |
|------------|-----------|
| Environmental technology is a technology that does not adversely affect the environment, ensuring the preservation of natural ecosystems and does not have a negative impact on humans. | http://agricultural_terms.academic.ru/2260 |
Environmental technology is a technology built on the type of processes characteristic of nature, sometimes as a direct continuation of them.

During the construction of the hotel, parking and entrances to it outside the city, in the forest and coastal zone, in most cases, there is an invasion of the ecosystem, flora and fauna — deforestation, land cover violation, land alienation. This creates construction (before opening) and household (during the operation of the hotel) garbage, which usually has a long period of natural decomposition and toxicity indicators of the products of this decomposition, which leads to contamination of soil, upper and groundwater heavy metals and toxic substances. As a result, there is a depletion of natural resources — for example, if water is taken from the sources for Spa treatments, drinking and cooking, water supply for the hotel. Also, the soil cover during the construction and operation of the hotel is violated and polluted, and this leads to the erosion of the fertile soil layer (erosion), an increase in the concentration of harmful substances in its composition and the possibility of their penetration into the ground water. Household waste, solid and liquid construction waste together cause the formation of pathogenic microorganisms in the soil. Natural water bodies are polluted with waste water, which are not pre-treated to the level of standard (safe) indicators of the content of pollutants in them. There is an irreversible change in the ecosystem of the natural area, formed over a long period of time (sometimes calculated over centuries), often as a result of the representatives of the animal world are forced to change habitats and habits.

At the present time, the natural resources — water and energy (for lighting and heating of premises, cooking) are widely used uneconomically, which leads to their depletion, an increase in the volume of sewage and subsequent additional energy costs for cleaning. Household garbage (plastic, paper, organic residues, waste oil for deep-frying, glass, outdated furniture, broken equipment) is taken to special waste processing plants or landfills and worsens the already unfavorable environment of large cities. It is negatively influence on human health (the location of hotels in the city center or near highways, for example, requires the use of special measures to reduce the harmful effects of noise, polluted air, and vibration on the human body). Often hotels have a negative impact on a person if the room where he is for a long time, poorly ventilated. A guest or an employee may feel worse because of the high concentration of carbon dioxide in the air that is released during breathing. Symptoms of high levels of dioxide are manifested in the fact that the person is quickly tired, cannot concentrate, headaches and redness, and irritation of eyes. It is especially important to ventilate small rooms with a large number of workplaces equipped with computers. There is noise pollution in hotels located in the city center, where traffic stops only in the period from three to five in the morning and the noise isolation of the rooms from each other and from the corridors is insufficient, which is especially important at night. The increased content of harmful substances in the air of room or office can cause air pollution. This is sometimes due to the use of unsafe cleaning products, furniture and window frames made of synthetic materials, which in the process of operation emit toxic substances that have a negative impact on the human body. This is facilitated by ventilation systems without cleaning function, which take the air outside and supply it to the rooms and public areas of the hotels located near roads. All of the above is only a schematic description of the potential negative impact of the hotel on the guests and employees health and the environment. It is important to understand the importance and competitive advantages of environmental care for the owner, guests and hotel staff.

The high level of competition in the hotel business forces companies to look for new ways to improve competitive strategy. However, not all enterprises in this sector pay due attention to environmentally conscious management. Reducing the negative impact of the hotel industry on the environment in the future will save natural resources (electricity and water) and thus reduce costs, creating a favorable working environment for employees and guests (well-ventilated areas, clean water, optimal humidity and temperature). This can be achieved by taking the necessary measures to protect the environment in each specific area of the hotel—kitchen, sales, Banquet service, conference room, etc. At present, if the hotel managers are interested in solving environmental issues, their enterprises are implementing
environmental technologies, environmental training of employees is carried out, environmental information is distributed and, of course, the interests of guests are taken into account.

The excessive anthropological pressure on the environment has led people to become more attentive to the use of resources and to pay close attention to the environmental side of the purchased goods and services. The hospitality industry, responsive to the mood and interests of the guests, could not stay away from this trend, especially since environmentally conscious tourists are willing to overpay for a stop at the «green» hotel [1].

The specificity of the hotel enterprises is that their activities have a significant impact on the environment. First of all, we are talking about the irrational consumption of huge amounts of electricity and water. The wastewater coming from the hotels contains strong chemicals used for cleaning. Many tons of organic and inorganic waste, including those containing hazardous compounds, are sent to landfills. At the same time, hotels rely on the unspoiled nature and environment as the core values of the hospitality industry. It is a guarantee of high quality of services [1, 2].

It should be noted that such an irrational approach to the use of resources and waste management suffers the hotel business. Thus, bills for electricity, water consumption and heating can be up to 40% of all operating costs of the hotel [10]. Additional burden on the shoulders of the owners are the costs of the purchase of detergents, which are spent on washing almost clean towels, the maintenance of additional garbage containers and other tangible costs.

Hotels, first foreign, and recently in Russian, realizing the potential economic and environmental effect, began to actively implement in their activities environmental technologies in various aspects of their activities. Pecheritsa E. V. notes that environmental innovations are mainly manifested in hotels in the form of energy and water savings, the purchase of environmentally friendly raw materials and materials (including environmentally friendly detergents), reducing the amount of waste and sorting them, the transition to local food and, we note especially, the training of personnel [3].

Many authors, speaking about the introduction of environmental technologies in hotels, note the staff training is a critical factor in the success of the whole process [2,4,8]. You can write dozens job descriptions for the use of eco-technologies, however, if the staff does not understand the importance of following them in the empty rooms will continue to light up, from the uncovered tap will drip water, and the contents of the containers for separate waste collection, in the end, will be in one bag. Therefore, it is advisable to begin ecological changes in the hotel with theoretical and practical training of staff. In favor of this approach, the figures are: staff training and development of its environmental consciousness can reduce the cost of paying for the resource consumption from 2 to 10% in addition to other measures taken at the hotel to save resources [1].

Many studies confirm the positive relationship between staff and environmental technologies. Thus, the growth of moral qualities and job satisfaction of employees caused by the implementation of environmental programs was revealed [5, 7, 13]. As a result, employee loyalty increases, which is especially important for the hospitality industry, where the level of staff turnover is quite high [5, 7, 13]. In addition, an informed and environmentally conscious staff is one of the most important factors in the formation of a positive perception of the guests of the environmental activity of the hotel (and, as a consequence, its image), and indirectly affects the environmental behavior of hotel guests and helps them to form the right patterns of environmental behavior [8].

On the other hand, it is noted that staff can consciously or unconsciously abandon environmental behavior and become a barrier to success in environmental initiatives. Some studies show that failures in the process of introducing environmental culture are often the result of imperfection of the corporate culture, lack of support and indifferent behavior on the part of management, managers and colleagues [14]. An important factor is that employees generally have no direct financial interest in saving resources in the workplace to the same extent as they would do or would do at home [6,8]. In addition, the employee is not alone in the room and uses the resources of the enterprise as part of the team, which includes people with different levels of environmental consciousness. Realizing that, no
matter how much he turned off the light in an empty room, the next time it will still be on, the employee loses any motivation to follow the environmental line of behavior.

On the way to progress can stand the resistance of workers caused by fear of the unknown and the reluctance to change the established patterns of performance of work duties [5, 7]. New technologies can be a source of stress when the employee is assigned additional functions when it is necessary to maintain the proper quality of performance of current duties [4, 8].

It should be noted that international standards (for example, ISO 14001, containing instructions for building an effective environmental management system at the enterprise [13]) and environmental certification programs assign a special role to the preparation and involvement of human resources in the implementation of the environmental policy of the hotel. In particular, the necessary requirement for the acquisition of Green Key certification is to meet such requirements as: holding regular meetings to educate line staff on current and future environmental initiatives; the existence of such positions as «environmental manager» (environmental Manager), whose responsibilities include the presentation of the company’s achievements in the field of ecology; conducting training for staff and its education in environmental issues; impeccable knowledge and performance of hotel services procedures provided by the environmental policy of the hotel [9].

It recognizes the need to involve staff and the national voluntary environmental certification system «Leaf of life». For successful certification, the company is obliged to provide all employees, including seasonal and temporary, with sufficient information to perform their work tasks in accordance with the requirements of the eco-labeling program. In addition, certification implies that at least once a year, various thematic trainings and corporate events should be held to improve the environmental culture of employees, in particular with regard to the issues of the hotel's eco-policy and its practical results, energy and water savings, separate waste collection, rational use of detergents, etc. [11].

In such way, given the decisive role of staff in the implementation of environmental technologies in hotels, this study is relevant and relevant in relation to the current situation in the hotel market. In addition, the study is of practical importance, as it offers approaches to solving possible problems on the way to the introduction of eco-technologies, which can be not just a way to save the environment, but also by reducing operating costs.

This study was carried out within the framework of the project to create an environmental business model of the hotel enterprise.

We will explain that the term «ecological consciousness» will be understood by the authors as the awareness of the consequences of an individual's behavior on the environment, which consists mainly of knowledge about the environment, values, personal attitude and trends to certain patterns of behavior [13]. According to G. I. Trofimova and V. G. Cheremisina figuratively note, ecological consciousness is "small bricks, from which a large building of ecological culture is built" [12], and in our case, the ecological consciousness of employees is based on the ecological culture of the enterprise.

The purpose of the study was to determine the impact of staff consciousness on the formation of eco-technologies in the hotel industry. It was necessary to identify the following aspects to understand the validity of the hypothesis:

− The environmental behavior and habits (e.g., “Do you turn off the lights when you leave the room?”, “Do you leave your computer on when you go home after work?”);
− The knowledge of the current environmental activities of the hotel (“are there energy-saving light bulbs in the hotel?”, “Do you know what measures are taken by the hotel management to reduce the burden on the environment?”);
− The assessment of the prospects for the introduction of environmental technologies in the hotel: “in your opinion, the introduction of environmental technologies in hotels can have a significant positive impact on the environmental situation in the region?”, “Do you think that the introduction of environmental innovations in the hotel would help to improve the rating,
increase revenues and attract customers?”, “Will you make the environmental activities of the hotel proud of the company?”;
- The willingness to participate in environmental change: “Are you ready to personally participate in environmental and environmental actions?”, “Will you make the environmental activities of the hotel proud of the company?”.

The respondents were the employees who hold senior positions in the hotel, that is, those people who will become the conductors of environmental culture for new and current line employees. The questionnaire was compiled in Google Forms and sent to the employees’ e-mail, which contributed to the rapid collection and analysis of information.

The results showed that 100% of respondents try to fulfill the basic requirements for saving resources-turn off the light when leaving the empty room, save water. The data show a fairly high level of knowledge about the environmental activities of the hotel. For example, 100% of the employees are aware that at the moment the hotel rooms and conference rooms are equipped with energy-saving and led lamps. 87% of the respondents are aware of the company's waste paper collection program and dispose of the paper in separate containers.

With regard to the assessment of the prospects for introduction of environmental technologies and willingness to take personal part in these questions, the respondents showed less enthusiasm. Thus, only 56% of respondents are ready to take part in nature protection actions. 77.8% of those who are not ready justify such a decision by lack of time. A quarter of respondents find it difficult to answer whether the introduction of environmental technologies in hotels will have any impact on the environmental situation in the region. Half of the respondents find it difficult to say whether the introduction of environmental innovations in the hotel will increase the rating, increase revenue and attract customers. Nevertheless, the vast majority of staff expressed their approval of the initiative to introduce eco-technologies in hotels, and noted that if the project is successful, it will make them proud of the company. At the same time, 90% of employees would like to be encouraged for their participation in environmental activities of the enterprise.

Based on the results, it can be concluded that employees have to some extent environmental knowledge and demonstrate in some manifestations of conscious environmental behavior. However, from the data obtained it follows that the management team does not fully understand why further efforts are needed in the environmental direction, and not all are ready to personally take on the responsibility and additional responsibilities for the implementation of the environmental policy of the hotel. A schematic portrait of the respondent can be depicted in this way: “I know that there are environmental technologies, and some of them are used in our country. I am generally not against this and understand that this is done for the benefit of the enterprise. However, I do not want to take an active part in what is happening: I am too busy and not ready to take on additional responsibilities or responsibilities”.

Let’s consider possible ways to overcome such environmental passivity and formation of the hotel staff ecological consciousness. A qualitative approach, consisting of a literature review and analysis of relevant publications, as well as an analysis of environmental initiatives and energy efficiency websites, that was used to identify key methodologies and recommendations.

First of all, we will focus our attention on the top and middle managers, who are the conductors of the company's environmental culture and have a decisive influence on the formation of the «green» values of the company among the line staff [7]. Often, the hotel's management does not show much interest in environmental issues, citing limited financial resources and significant operating costs to implement environmental innovations. One of the ways to solve this problem is to invite managers to take a direct part in the development of plans that can help to monitor the process of saving resources and its results, which will help in forming a positive attitude to the hotel's eco-policy [1]. When top management believes that environmental sustainability not only solves the economic problems of a particular enterprise, but also is the key to a healthy future of humanity, and the participation of employees in the “green” behavior is valued and encouraged, creates a favorable “green” organizational climate that contributes to a positive contribution to both the business and society as a
whole [8]. It is important that the environmental initiative emanating from the leadership be sincere, not imposed from the outside.

With the growth of environmental awareness in the management and line staff will be formed awareness of the need to comply with environmental regulations. Additional management tools can help in this process. For example, one of the common management practices for motivating employees to «green» behavior is to create a system of motivation and remuneration [13]. It should be noted that during the survey the vast majority of hotel employees expressed a desire to be encouraged for the promotion of the environmental initiative.

To help in the development of environmental awareness can revise the system of internal norms of the organization in the environmental key. Internal organizational documents can serve as a motivation for «green» behavior of employees, as the norms are a reflection of the perception of employees' policies, processes and activities of the organization [13]. Regulation on the environmental policy of the hotel, focused on the formation of an understanding of the current environmental processes in the current employees and the perception of environmental standards adopted by the company, new employees. During the creation of this document, the authors have tried to move away from the dry, faceless wording and focused on User Experience, i.e. user experience arising from the use and/or the upcoming use of this provision to form a bright, memorable image of the reader and understanding of its role in the protection of the environment.

Sufficient information about the role and expected contribution to the green activities of the hotel can help to eliminate psychological barriers among employees. Corporate environmental policy usually gives a general and abstract instructions about participation and control of the employee, but usually does not specify detailed methods for the implementation and evaluation of this participation [8]. Therefore, it is important to inform employees, for example, about high electricity bills as a result of high electricity consumption [8]. It is important to form an understanding among employees that each of their actions or inaction entails not only economic consequences for the enterprise, but also shows a direct impact on the environment [13].

Some researchers identify a number of factors that have a direct impact on the environmental behavior of employees, it is about environmental knowledge (environmental knowledge), environmental awareness (environmental awareness) and environmental concern (environmental concern) [7]. To provide the necessary knowledge in the field of ecology and help to trace the cause-and-effect relationship between the actions of employees and the consequences for the environment, and thus to form the basis for eco-consciousness, can help targeted training of employees. The calendar of events, reflecting the proposed activities to enhance environmental knowledge of employees includes a number of educational meetings with partner companies engaged in the implementation of environmentally friendly cleaning and hygiene products based on the technology of “effective microorganisms”, the hotel's participation in international environmental events, the exhibition in the hotel lobby, watching documentaries with a discussion. The calendar helps to create a long-term training program for the staff and ensure the stable involvement of employees in environmental activities.

Although changing attitudes are generally important for successful environmental programs, attitudes are very difficult to change. Therefore, it is important that companies that adhere to the environmental policy were selected to staff with the correct environmental settings. HR managers should pay special attention to the readiness of employees to assist in the implementation of the company's environmental policy, their environmental knowledge and the formation of environmental awareness and chose those people who demonstrate a serious and responsible attitude to environmental issues. This tactic will help the organization align employee motivation with its own goals and policies [13].

In such a way, based on the above, we can conclude that the formation of environmental awareness among the staff is a priority for those hotels that plan to translate their activities into “green” rails. Understanding the factors that influence the desire or unwillingness of hotel employees to follow the environmental policy of the company is a necessary condition for the successful implementation of
ecological technologies. The study shows that a significant part of the staff is not ready to sacrifice their comfort and change the time-fixed sequence of duties for the sake of the implementation of environmental policy. That is why it is necessary to influence the consciousness of employees on three “fronts” – environmental knowledge, environmental awareness and environmental concern, which will give an overall understanding of the need for environmental change. Effective methods can involve managers in monitoring resource savings, creating a system of motivation and remuneration, revising the internal norms of the company, providing employees with full information on the results of efforts in the environmental direction, the selecting of appropriate personnel, as well as systematic training of personnel and activities of educational and applied nature that can help in the formation of ecological consciousness.

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