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1The College of Tourism, Bulevar Zorana Đinđića 152a, Belgrade, marija.najdic@gmail.com  
2University of Belgrade Faculty of Law, Bulevar kralja Aleksandra 67, Belgrade, stefanmunitic@gmail.com  
3The College of Tourism, Bulevar Zorana Đinđića 152a, Belgrade, jelisaveta@visokaturisticka.edu.rs

Analysis of the activities of white pollution prevention for green tourism

Abstract: Even the most recyclable plastic can only be recycled at a rate of 20-30%, the rest of goes to rivers, oceans, and landfills, where the carbon-rich materials take centuries to decompose. World organizations and stakeholders in tourism are putting an effort to the initiatives which could raise public awareness on White pollution (plastic pollution). This paper summarizes the business practice in tourism concerning future sustainable development specifically in eco tourism and hotel sector. As part of a circular economy, policy “reuse, reduce, and recycle” has been adopted for most hotels and resorts in the world. Complexity of pollution prevention had motivated and motivated and led the researchers to find methods that would redefine the life cycle of plastic waste from linear to circular.

Key words: white pollution, circular economy, sustainable development, ecotourism, green tourism.

1. Introduction

Tourism, especially during the peak of the tourist season sees an increased number of people highly concentrated in an often small area (for example mountain resorts, small seaside villages or hotel resorts). During that time, the human impact on the area and its surrounding is increased and may cause negative effects on nature and biodiversity. Due to high demand for good service and hospitality, hotels and tourist providers may cause irreversible damage with the overcrowding their respectful premises which may also affect the culture and the identity of the region. Tourists also, bring with them increased pollution and waste, which might further cause environmental damage to the destination (closing down beaches, permanent damage to the life in sea).

Overabundance of tourists during the tourist season evokes serious pressure, if the possible capacity of the region is overexert. In that context, the basic factors are: the loss of biodiversity, the usage of available land for the lodging of tourists, local transportation caused by the tourist traffic, the increased usage of water, the increased usage of electrical energy, water pollution caused by the waste which is difficult or impossible to dissolve or break down (plastic, metal, etc.). Especially strong pressure might, also, be occurred by mega-tourist objects and manifestations or tourist activities that include the intensive usage of nature and its surroundings (example golf courses or skiing) or by motorized
activities of any kind (which also may increase the pollution caused by the emission of greenhouse gases like CO2 from the engines).

According to the portal Booking.com sustainability travel report from 2019, over half (55%) of global travellers report being more determined to make sustainable travel choices than they were a year ago, but barriers include a lack of knowledge and available or appealing options when trying to put this into practice. These sustainable decisions include accommodation (TrekSoft, 2019). Therefore, the initiatives for sustainable development are on the rise (for example in hotels, sustainability practices of ‘reuse, reduce, and recycle’ policy involve educating all hotel staff on the importance of conservation, using environmentally friendly products, and employing sustainable practices in hotel operations).

Within destination offers in the UK, France, Spain, and the rest of Europe, we can find new forms of accommodation called “glamping” (luxury camping with amenities), with tree houses, pods, bell tents, yurts, and shepherd’s huts.

2. White Pollution and Sustainable Development

Since plastics contain various additives, like dyes, fillers, or flame retardants, very few plastics can be recycled without loss in performance or aesthetics. Even the most recyclable plastic, PET -- or poly(ethylene terephthalate) -- is only recycled at a rate of 20-30%, with the rest typically going to incinerators or landfills, where the carbon-rich material takes centuries to decompose (Christensen, Scheuermann, Loeffler, Helms, 2019) as it can be seen at Picture 1.

BBC series 'Blue Planet II' highlighting the scale of plastic debris (so-called "white pollution") in the oceans, developing processes to breakdown, recycle or re-use waste plastics is of critical importance (Sciencedaily, 2018).

For a better understanding of how plastic makes its way into the oceans, the researchers analyzed dozens of research articles on plastic pollution in waterways. The studies involved 79 sampling sites along 57 rivers around the world. The researchers' calculations indicated that the amount of plastic in
rivers was related to the mismanagement of plastic waste in their watersheds. Additionally, the top 10 rivers carrying the highest amounts accounted for 88 to 95 percent of the total global load of plastics in the oceans, according to the researcher's calculations. The researchers say halving plastic pollution in these 10 waterways -- eight of which are in Asia -- could potentially reduce the total contribution by all rivers by 45 percent (Sciencedaily, 2018).

The key and turning event in the more serious engagement of the entire world community on the problem and the overall development is the United Nations Conference on Environmental Protection and Development, the World Summit, held in Rio de Janeiro in the year 1992 which gathered members of the Governments of 182 countries. During this Conference, the Agenda 21 was adopted, document which held the framework concept of sustainable development and defined action related to the questions of environmental protection and development, respectively presented plan of securing sustainable development for the future of the planet (Popesku, 2002).

The United Nations General Assembly declared World Environment Day through a resolution adopted on 15 December 1972. Since 1973, it has been celebrated every June 5, the same date as the opening of the 1972 Stockholm Conference, whose central theme was the environment. In parallel with its sports activities, the EcoRun also features activities for charitable causes, such as the collection and recycling of plastic bottle caps to help underprivileged children who need treatments or orthopaedic devices, in collaboration with the SEUR Foundation (UNWTO, 2017).

As a continuation in the area of tourism, the World Tourist Organization, the World Travel and Tourism Council adopted in the year 1996 the Document – Agenda 21, for tourist economy which offers guidelines to the Governments competent for tourism, national tourist organizations, business associations and companies which operate in tourism to fulfill their potentials in order to achieve sustainable development on local, regional, national and international scale. The United Nations, in the year 1999 committed to a special session of the Commission for sustainable development on the subject of “Tourism and Sustainable Development”, in order to enact the appropriate initiatives for all those involved in the process of sustainable development of tourism.

In July 2018, UNWTO submitted to the 73rd UNGA, the report on the "Promotion of sustainable tourism, including ecotourism, for poverty eradication and environment protection". The report features the advances in sustainable tourism policies made since 2016 and includes recommendations on ways and means to promote sustainable tourism, including ecotourism, as a tool for fighting poverty and promoting sustainable development in its three dimensions - economic, social and environmental - in a balanced and integrated manner. The UN General Assembly adopted, on 20 December 2018, by consensus the resolution, entitled, "Promotion of sustainable tourism, including ecotourism, for poverty eradication and environment protection". The resolution was sponsored by an impressive total of 94 delegations.

International organizations such as ECEAT and EuroGites, play a special role in this process. Representing non-governmental sector, these organizations, as the associations of national organizations, contribute greatly to the development of different forms of sustainable tourism and also to the local initiatives. CenORT, as a member of ECEAT and EuroGites, from its side will strive to expand this process on Serbia as well (Cenort, 2019).

As many texts have confirmed, rural areas have become increasingly significant in the (re)production of tourism over recent years. It is equally clear, however, that tourism has become increasingly significant in the (re)production of rurality, particularly in view of a clearly changing set of relationships between space and society in relation to the countryside (Richards, Wilson, 2007).

3. Ecotourism as Pollution Prevention

For the World Tourism Organization, green tourism consists of “tourism activities that can be maintained, or sustained, indefinitely in their social, economic, cultural and environmental contexts” (UNWTO, 2012). Also, the term green tourism is often used to try to brand a hotel as environmentally friendly without practicing many sustainability efforts, such as basic recycling or water-conservation programs. Initiatives can include having recycling programs in place, using environmentally friendly
cleaning supplies, making room keys out of sustainable materials instead of plastic or having a water-conservation program (Culture Trip, 2019).

Industry consensus agrees ecotourism is more focused on ecological conservation and educating travelers on local environments and natural surroundings, whereas sustainable tourism focuses on travel that has minimal impact on the environment and local communities (Integra, 2012).

Illustrating and interesting example is so called Ten golden rules for sustainable tourist (CENORT, 2019):
1. Looks for the accommodation which is dedicated to lower the impact on environment.
2. Choosing the tour operator which possesses awareness on environmental impact of tourism.
3. Redirection of his funds towards to the less polluting transportation options in order to reach his tourist destination.
4. During his visit he is using public transportation as well as environmentally friendly ones such as a bicycle.
5. Create less waste and contribute to its differentiated collection.
6. Reduce the water consumption.
7. Reduce the electrical power consumption.
8. Give the advantage to locally manufactured handmade works and local gastronomical specialties.
9. Do everything possible to respect and preserve environment in the places you visit.
10. Offer advices and suggestions in order to improve the quality of environment in the place of your visit.

The International Ecotourism Society (TIES), formed in 1991 has given one of the first definitions on ecotourism as (Epler Wood, 2002) “...a responsible journey in the nature area, wich protects the environment, supports the well-being of the local populace”. Eco-tourism is defined through its results in sustainable development: environmental protection, education of visitors on sustainability, and the creation of benefits for the local populace. World Conservation Union (WCU) has defined in 1996 eco-tourism as "environmentally responsible journey and the visit of relatively untouched areas of nature, in order to enjoy nature and for the nature to be appreciated (also all the accompanying objects of culture from the past and from the present), which promotes preservation, has a low number of visitors and allows useful active socially-economical involvement of the local populace” (Epler Wood, 2002).

Ecotourism is a subcomponent within the area of sustainable tourism and represents primarily the sustainable version of nature based tourism, but also includes rural and cultural elements of tourism. Therefore, basic principles of eco-tourism can be distinguished (Epler Wood, 2002) as:

- Minimization of negative impacts on nature and culture which may degrade the destination; education of tourists and visitors on environmental protection;
- Emphasizing the importance of responsible business, which works in cooperation with local authorities, government and with the population in order to meet local needs and create the benefits of environmental protection;
- Directing the profits towards protection and management of natural and protected areas;
- Emphasizing the importance and the need for creating regional tourist plans and for the plans on managing the visits to regions and areas of nature which are determined to be eco-destinations;
- Emphasizing the use of basic environmental and social studies as well as long-term monitoring program to assess and minimize impacts;
- The tendency to maximize economic benefits for the host country, local entrepreneurship and communities, especially for the population living in and around natural and protected areas;
- Supporting the economic training of communities through training and employment of local workforce, providing appropriate wages and benefits, buying from local suppliers and the support to local ownership or joint ventures with external partners or non-governmental organizations - partners of tourist facilities, as well as support for concessions;
- The tendency to ensure that the development of tourism does not go beyond the social and environmental limits of acceptable changes identified by the researchers in cooperation with the local population;
- Reliance on an environmentally-friendly infrastructure;
In the year 2000, special Initiative has been adopted (Tour Operations’ Initiative for Sustainable Tourism) by large international tour operators, with the help of leading international organizations (UN, UNESCO, WTO). The most important goals of this Initiative are closely connected to the exchange of positive experiences in the field of resolving environmental issues, the more efficient usage of energy and other resources, the creation of the arrangements which will have less impact on both social and natural surroundings (Spasić, 2005). Besides the joint activities, standing out are other numerous individual initiatives by worlds leading tourism stakeholders.

Plastic Waste Initiatives in Tourism – Cases

At the hotels and resorts YTL group of resorts, Malaysia (UNWTO, 2017), in keeping with the Group’s sustainability practices, along with a wide range of energy saving practices, a ‘reuse, reduce, and recycle’ policy has been adopted for all its hotels and resorts:

- Plastic bags and laundry bags are re-used where possible, waste material and rubbish is managed properly, and all maintenance and building material is recycled and/or donated for other use (For example, waste wood and building material is not burned but instead reused, donated, or resold where possible to locals or recycling facilities);
- Guests are given the option to reduce water wastage and detergent release by having their towels and bed linens replaced every other day instead of every day;
- Shower gels from guest rooms are recycled for staff use at the canteen for washing hands;
- Plastic laundry bags have been replaced with a reusable version at most of our resorts;
- Non-harmful, biodgradable chemicals and detergents from an environmentally-friendly company are used;
- Eco solutions are employed wherever possible (For example, dried coconut husks are used to help prevent hillside soil erosion due to heavy downpour);
- As a spin-off from hosting the 2009 Asia 21 Summit, JW Marriott Kuala Lumpur has begun to offer guests a choice of holding sustainable meetings and events - through not serving bottled water, straws, or coasters, and serving a menu comprised of locally-sourced cuisine;
- Pangkor Laut Resort and Tanjong Jara Resort have stopped serving bottled water at all food and beverage outlets - in instances where bottled water is used, the bottles are sold to recycling plants.

There are different types of waste produced in a hotel, as shown in (Figure 1), which classifies various waste in hotels and percentage of their proportions.

Figure 1. Classification of waste in hotels

Sources: (Ecotrans, 2006; SFT, 1998; Sol Media, 2011; Envirowise, 2008; Miljøstyrelsen, 2000)
Figure 2. shows an example of recycling point (or 'Ilha ecológica') in the Portuguese resort of Alvor, highlighting some important features of good practice. Plastic and metal (easily separable), glass and paper and card fractions are collected separately (Styles, Schönberger, Galvez Martos, 2013).

The Rafayel Hotel in London provides electronic newspapers for guest viewing on large TV screens in rooms, and has a 'no plastics' policy. Guests are provided with water filtered in-house and served in reusable glass bottles using Vivreau bottling technology. The Ascos Beach Hotel in Paphos, Cyprus, invested EUR 867 to purchase 3,000 reusable plastic cups to replace disposable plastic cups, and stopped using plastic bin liners in guest rooms. In the first year of operation, the disposal of 100,000 plastic cups was avoided, saving almost €2,000, and 50% fewer bin liners were disposed of, saving a further €300. Guest satisfaction has not been affected (Travel Foundation, 2011). Other initiatives concerning plastic waste included in 2014 a group of Huizhou tourism volunteers at the West Lake in Huicheng district of Huizhou City that celebrated World Tourism Day by picking up plastic bottles to keep Huizhou scenery clean and beautiful (UNWTO, 2019). In order to minimize impact of inflight services, Thomson Travel avoids plastic packaging for blankets, has reduced the weight of magazines, and recycles all soda cans on inbound flights (recycling of one million cans per year and avoiding using 900,000 plastic bags per year) (Styles, Schönberger, Galvez Martos, 2013).

Based on criteria contained in the Travelife Sustainability System (Travelife, 2011), some key points, in reducing environmental impacts associated with material consumption and waste, are (Travelife, 2011):

- Single-use disposable items are avoided where possible (e.g. plastic bin liners are avoided, toner/ink cartridges are refilled and rechargeable batteries are selected),
- The company has implemented packaging material reduction measurements and is not using non-recyclable or non-biodegradable package materials,
- Filtered tap water and reusable glasses are provided for drinking, to avoid the use of non-recyclable plastic bottles, unnecessary water transport, and disposable drinks cups,
- All recyclable materials (including glass, paper, organic waste and plastics) are separated for collection by recycling services. Where recycling collection services are not provided by local authorities, the enterprise contracts appropriate service providers,
- Cleaning materials are non-hazardous, non-eutrophic and bio biodegradable (ecolabelled where possible).

One of the best examples of reducing environmental impacts associated with material consumption and waste has been a pop-up restaurant Zero Waste Bistro, an event which lasted for four days to coincide with the NYCxDesign festival and had been set up at the WantedDesign Manhattan fair, commissioned
by the Finnish Cultural Institute in New York, USA. Its installation has provided circular-economy model that has been built from recycled food packaging and has composted all of its leftovers (Figure 3) (Dezeen, 2018).

Figure 3. Zero Waste Bistro, New York, USA

Source: (Healthy Materials Lab, 2019)

Research statistics show that 73% of global travellers intending to stay at least once in an eco-friendly or green accommodation when looking at the year ahead. Additionally, 70% of global travellers say they would be more likely to book an accommodation knowing it was eco-friendly, whether they were looking for a sustainable stay or not” (Trekksoft, 2019).

Glamping accommodation is a relatively new form of spending time in nature across in England, France and the rest of Europe. From safari and bell tents (most classic glamping structure), yurts (with different sizes and levels of luxury), shepherd's huts, gypsy caravans, and all-weather pods to treehouses in all shapes, re-configured train carriages, transformed horse-boxes, etc., create unique experience of living in nature. In Cotna Eco Retreat in Cornwall eco-accommodation, one of tree yurt (Picture 4) is located within a 10-acre organic farm where visitors can enjoy organic food or participate in one of courses, learning about wild food foraging & cooking. The ammenities auch are: showers, compost loos, recycling, BBQs, and washing machine can be provided on request. Yurts include rugs, double bed (and bedding), wood-burner, solar LED lights, kitchen equipment and basic provisions. Solar and wind energy provides the power and water is all sourced from a natural spring on the farm (Coolcamping, 2019).

Picture 4. Gilliflower Yurt At Cotna Eco Retreat Cotna Barton, Gorran, UK

Source: (Coolcamping, 2019)
Further statistics show that this nature based speciality travel makes up 7% of international travel, which proves it is increasingly popular to a large portion of the population. Depending on the type of glamping business, it can help consumers avoid pre-packaged and processed food products cutting down on the waste they generate (Inspiredcamping, 2019). It stands to reason that if a camping or glamping business is able to meet the needs and key principles of ecotourism, then they will be able to benefit from this strong segment of the tourism industry, which is set to continue to grow.

**Conclusion**

The need for consumers to make a responsible choice of travel is becoming more and more a key determinant for the goals of eco-tourism, making increasingly important that they understand what is necessary and good for a well eco-touristic experience. According to booking trends, sustainability is driving accommodation decisions (Globalnews, 2019).

To achieve this goal, numerous initiatives have been introduced to the tourism business and made visitors and guests acknowledged by the set of rules which would not in any way minimize their vacation or holiday experience. The same comfortabilities could be provided to them by using products or services which comply with environment safeguard and the corporate social responsibility of stakeholders in tourism sector.

Education of consumers and providing guidelines for future choosing eco-touristic experience will benefit greatly to the official eco-touristic market and reduce the efficiency of false claims about the environmentally and social responsibility (“greenwashing” example).

Therefore, the introduction of international standards and initiatives, given by international and tourism organizations (UN, UNESCO, WTO, etc.) is crucial for implementing the concept of sustainable development in tourism (a policy “reuse, reduce, and recycle” example).

Along with compliance with sustainable procedures given in international legal acts, stakeholders in tourism should keep up with latest science achievements concerning reuse of plastics and apply them to their long term business strategy.

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