

Documenting green hotel practices at The Apurva Kempinski Bali

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Abstract: This research aimed to find out the documentation of green hotel practices implemented by The Apurva Kempinski Bali, Indonesia, based on the indicators developed by Earth Check known as 10 key performance areas for hotel-accommodation business. Methods of data collection used are by conducting interviews with key and supporting informants, observation techniques using participant observation, literature review, and document study. The data analysis method used is qualitative research through transcript data, data reduction, data displaying, and concluding. The result of this research shows that The Apurva Kempinski Bali has fulfilled the requirements of the certification and has applied the green hotel practices within the hotel area to support sustainable developments including energy efficiency, freshwater resources, waste-water management, solid waste management, ecosystem and conservation, land use planning, air quality protection, management of social and cultures, and harmful substances management. Some improvements need to be taken into account such as the renewable energy generation potential evaluation, shower, and taps low flow installation, and sustainable room amenities materials. It is a critical and important advantage for the hotel as well to attract more guests to stay, since the topic of sustainability nowadays has become famous which affecting the decision of guest to staying in the hotel. This paper is focusing on the documentation of green hotel practices that has been implemented by The Apurva Kempinski Bali in order to support sustainable development goals.

Keywords: earth check certification, green hotels, sustainable development goals.

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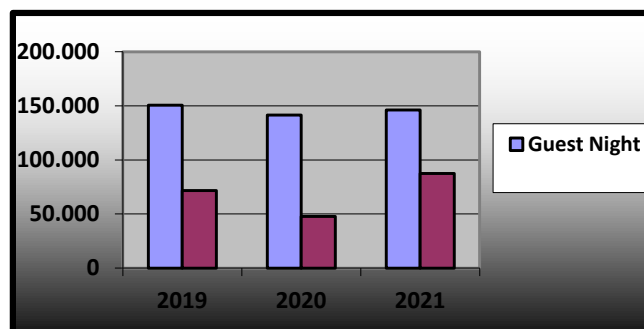
Introduction

One important aspect of climate changes is the increase in average temperature, which will not only have direct physiological effects on all species but also indirectly modifies abundances, interaction strengths, food-web topologies, community stability, and functioning (Brose et al., 2012). Climate change is impacting ecosystems through changes in mean conditions and climate variability, coupled with other associated changes such as increased ocean acidification and atmospheric carbon dioxide concentrations (Malhi et al., 2020). Extreme climate change will disrupt the balance of ecosystems and forests on earth. In order to maintain ecosystems, efforts are needed to reduce global warming through sustainable development.

Sustainability itself is the process of living within the limits of available physical, natural and social resources in ways that allow the living systems in which humans are embedded to thrive in perpetuity (Duncan, 2018). While sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their needs (Abdou et al., 2020). As a way to achieve this sustainability, sustainable development is based on the three main pillars

of sustainability focusing on three scopes which are ecological, social, and economic which is also known as the triple bottom line concept. The ecological scope focuses on the efficient use of resources and energy as well as the environmental, the economic focus on employment, education, development, labor rights, and equality, and the society focuses on quality of health and safety, equality, and human rights, law and public (Low, 2016). Sustainable Development Goals (SDGs) are a global action plan agreed upon by world leaders to end poverty, reduce inequality and protect the environment. The goals and targets are arranged into 17 goal points and 169 targets (Ngoyo, 2015). The United Nations Sustainable Development Goals aim to encourage all countries to mobilize efforts to end all forms of poverty, fight inequalities and tackle climate change while ensuring that no one is left behind (EarthCheck, 2017). To support this effort, in 1992 specifically in the United Nations Rio De Janeiro Earth Summit the Earth Check Certified was built on the agenda of 21 principles for Sustainable Development endorsed by 182 heads of state (EarthCheck, 2018). Earth Check Certified is recognized by the Global Sustainable Tourism Council or GSTC and complies with the Mohonk Agreement which outlines the guidelines and principles for an international sustainable tourism certification program (EarthCheck, 2018). One of the sectors often joining the certification is a hotel. A hotel is a business that is engaged in professionally managed accommodation for profit by providing lodging services, food, beverages, and facilities (Bagus, 2016). This statement is also reinforced by Riyanto & Hatmawan (2020) who stated that a hotel is a business profitable services provide accommodation, meals, and facilities other common.

Earth Check certification would drive the hotel towards a green hotel. A green hotel is a hotel that uses and has goods that are environmentally friendly where hotel managers have programs to save water, save energy, and decompose waste from hotel activities to help protect the earth (*Green Hotel Association*, 2018). One of the hotels currently working on getting the certificate is The Apurva Kempinski Bali.



(Source: The Apurva Kempinski Bali, 2022).

Figure 1. Guest Night and Occupied Room

Figure 1 shows that The Apurva Kempinski Bali with its 14-hectare hotel and resort is one of the companies that have a high level of operational activity, evidenced by the number of guests staying in a year an average of 146 thousand guests. A high operational level will have an impact not only on the social and economic but also on the environmental aspect. However, based on preliminary observations, The Apurva Kempinski Bali has established a team which is called green team. This green team has main responsibility to develop and implemented the green hotel practices with in the hotel area. Started with the policy of environmental and sustainability, programs and target are set. The practices based on 10 indicators from earth check such as food waste reduction, partnership with NGO (Non-Profit Organization) for solid waste management, Reverse Osmosis and Sewage Treatment Plant for wastewater management, smart controls for air conditioner and light system, electrical vehicles for

operational and guest services, local employment, local goods and services priority, and many more. Based on those preliminary document study, it can be stated that The Apurva Kempinski Bali has implemented sustainable development efforts. However, this needs to be studied more deeply to find out whether the implementation of sustainable development at The Apurva Kempinski Bali is good and could be a model for other hotels who want to implement green practices to support sustainable development in their company, especially in Province of Bali.

Some similar researches have been done previously, such as the one by Deraman (2017) entitled "Green Practices in Hotel Industry: Factors Influencing the Implementation". Research which was published by Universiti Teknologi MARA Cawangan Terengganu, Malaysia aims to determine the influencing factors toward the implementation of green practices in hotels and to identify the most influencing among all factors. Also, a research was conducted by Husted (2017) entitled "The Impact of Sustainability Governance, Country Stakeholder Orientation, and Country Risk on Environmental, Social, and Governance Performance" which was published by EGADE Business School, Tecnologico de Monterrey, Mexico. This study examines the impact of sustainability governance on the environment, social, and corporate governance.

Based on all descriptions above, the researchers are interested in exploring green hotel practices based on Earth Check Certification at The Apurva Kempinski Bali to support sustainable development". This research becomes an urgent and important study to find out what efforts are being made by The Apurva Kempinski Bali hotel to support sustainable development towards green hotels through green practices in the hospitality industry based on earth check certification.

Methodology

This paper is using qualitative descriptive analysis by collecting data, observations with participant observation techniques, and interviews related to the formulation of the problems. Descriptive research is research that is intended to explore or clarify an existing symptom, phenomenon, or social reality. It seeks to describe several variables related to the problem and unit under study (Samsu, 2017). Qualitative descriptive analysis is used to describe how the implementation of the green hotel practices implemented by The Apurva Kempinski Bali which is analyzed by the 10 indicators developed by Earth Check known as key performance areas. The key performance areas include greenhouse gas emission, energy efficiency conservation and management, management of freshwater resources, ecosystem conservation and management, social and cultural management, land use planning and management, air quality protection, wastewater management, solid waste management, and environmentally harmful substances (EarthCheck, 2018).

The method of determining informant used is purposive sampling, which is a sampling technique with certain considerations (Sugiyono, 2015). The data analysis technique used in this research is the flow chart analysis technique proposed by Miles & Huberman which is stated that the flow of data consisted of three activities, they are reduction, data display, and drawing conclusion/verification. In principle, this data analysis activity is carried out throughout research activities or during data collection, and the most core activities include data reduction, data display, and verification or conclusion (Samsu, 2017).

Results and discussion

Results

Implementation of Green Hotel Practices Based on Earth Check Certification

1. Greenhouse Gas Emission

Greenhouse gas emission is often coming from energy, land use and forestry, and waste (Rahmadania, 2022). Energy consumption coming from fuel, electricity and gas. To compensate for the high purchase of fuel, the management used some of electricity vehicles. The Apurva Kempinski Bali has buggies and moggies that use electricity to support business operations.



(Source: The Apurva Kempinski Bali, 2022)

Figure 2. Buggy Charging Station

The Apurva Kempinski Bali with a total of 14-hectare area has registered its business into Izin Komersial/Operasional with no of commercial license is 8120104820429 which was issued on 2 August 2018. It means that Apurva Kempinski Bali has to meet the government requirement for running the business process, including land use and forestry. In terms of waste management, The Apurva Kempinski Bali has collaborated with the Tunjung Mas Social Community Group 3R. The Apurva Kempinski Bali has developed the hydroponic team as the center of hotel sustainability development. They have developed the eco-enzyme program, coffee briquettes program, organic pesticide, urban farming, hydroponic, and compost program.

2. Energy Efficiency Conservation Management

The Apurva Kempinski Bali is using the services of PLN (Perusahaan Listrik Negara or State Company of Electricity) for hotel operations. It is the main power to supply the hotel operations with a capacity reach amount of 5.540 KVA. However, as a backup, the hotel also has its generator in case of a power outage by PLN. This generator set function is as a backup power with 3 set installation of Mitsubishi Generator Set type MG-7PF 2000 KVA/1600 KW. The saving energy campaign has been done and well-maintained. It is included on the computer users to switch off the desktop when not in use, to not plug into the adaptor when not in use, to always switch the lamp off when it can use the sunshine in the room/office, to always switch off the printer when not in use and to not use lift/elevator if not brings goods/stuff. From 15,785,680 kWh in 2019, in 2020 it decreased slightly due to the COVID-19 pandemic to 14,681,240 kWh and increased sharply in 2021 to 17,079,440 kWh. It shows that from 2019 to 2020, the consumption decreased by 7%, this is also supported by the saving energy campaign held by the hotel during the low season. While from 2020 to 2021 the consumption increased by 16.34 % due to the business getting better after hitting by a pandemic situation.



(Source: The Apurva Kempinski Bali, 2022)

Figure 3. Saving Energy Campaign

In terms of water savings, The Apurva Kempinski Bali has implemented the practices of water savings, for example, in the guest room, the hotel provides a statue in the form of Jalak Bali as a communication tool between guests and the hotel which means that when the statue is placed on the bed or sheets, it means the guest wants to change their sheets. If the statues are still on the table side of the bed, it means the guest does not want to change their sheets. This campaign has had a good impact on decreasing laundry water consumption. The laundry water consumption decreased year by year, from 2019 to 2020 decreased by 57.22%, and from 2020 to 2021 decreased by 33.01%.

The Apurva Kempinski Bali used three types of water to support the operations, they are freshwater, sewage treatment plant (STP) water, and seawater. To maintain the freshwater at the hotel, the Engineering on power plant division has a regular schedule to check the plumbing leaks to make sure there are no leaks occurred. The Apurva Kempinski Bali uses 95.5% of low/dual flush which is known as the neo rest toilet at the hotel. General total toilet available in the hotel is 648 with hand flush toilets in total is 29 units and neo rest toilet is 619 units. The shower is available in each restroom within the hotel area. Total shower installed at the hotel is 560-unit spread out from guest accommodation, staff locker, public area restroom, gym & spa facilities. Sprinkles are available in several spots in the area with the total sprinkles being 148-unit sprinkles.

3. Ecosystem Conservation and Management

The Apurva Kempinski Bali is not located in the forest but can disturb the near ecosystem specifically on the east of the hotel at the ocean and on the north of the hotel an empty land. The marine ecosystem specifically in the swimming area in the sea is safe from marine life (fish, coral reefs, sea animals) since the hotel has installed a wave barrier that can indirectly protect the deep-sea biota from getting impacted by recreational activities carried out by the guests. Meanwhile, The Apurva Kempinski Bali is known as the Koral "underwater" Restaurant full of fish and sea animals. The biota inside the big aquarium is legally displayed to the guest with letters, one example is a travel document (letter for the transfer of marine animals). The Apurva Kempinski Bali also contributed to the ecosystem of a turtle through the program of turtle release. When on 21 November 2021, the hotel released as many as 40 turtles into the sea released by the guest and staff in charge. The turtle released is *Penyu Lekang (Olive Ridley Sea Turtles)*.

4. Land Use Planning and Management

As the scope of the statement said that the hotel is laid on 14 of hectare area on the cliff and in front of the beach area. The Apurva Kempinski Bali is a hotel that was built without destroying the original condition of the previous land. This can be seen that the building follows the original cliff without any land leveling or land

destruction during construction. The concept of the property is also inspired by local architecture. The Apurva Kempinski Bali cascades down the hillside like one of Bali's iconic rice paddies, emerging from the cliff tops and gradually making its way down to the Indian Ocean. The Apurva Kempinski Bali provided facilities and accessibilities to the person with disabilities. It is proven from the assigned room provided by the hotel special for a disabled person, that is rooms 1603 and 1703. The room is equipped with a special restroom with a panic button installed not only in the restroom but also beside the bed.

5. Air Quality, Noise, and Light Controls

Air quality has been discussed before in section 1, this section will be focusing on noise emission and light emission. Noise emission according to Minister of State Decree Environment *No. KEP 48/MENLH/11/1996* definition of noise is unwanted sound from a business or activity at a certain level and time that can cause disturbance to environmental health and comfort (Djalante, 2013). The noise comes from the Genset room and boiler room. This is supported by the evaluation of environmental effect has been compiled by the organization entitle *Dokumen Evaluasi Lingkungan Hidup (DELH)* which is stated that the increase of the noise emission is possibly caused by the operational of Genset and boiler, specifically when there is an outage from the PLN power supply. The test for noise emission in this particular area has been tested regularly every year. The level of noise at the hotel is not allowed to up to 70 dB match with the *KepMenLH No.48 Tahun 1996*.

6. Wastewater Management

Wastewater commonly comes from the guest accommodation, kitchen production, laundry room, staff facilities, and so on. In terms of wastewater, the hotel has registered the property to the government of Badung Regency through *Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu* for Wastewater Disposal Permit Approval no 2864/LIMBAHCAIR/DPMPTSP/2021 which was issued on 24 June 2021. Besides, the wastewater at The Apurva Kempinski Bali is also well-managed using the STP (Sewage Treatment Plant) as mentioned before. STP supplies wastewater from two places, first from the kitchen and second from a toilet. STP production in 2019 is reaching an amount of 19.498 M³ and decreased due to the pandemic situation in 2020 reaching an amount of 6.454 M³. The wastewater production has a connection with the water consumption itself.

7. Solid Waste Management

The whole kitchen outlet in the hotel is equipped with a color-coded garbage bin. The color-coded for garbage bin in the kitchen is divided into two colors, yellow and white. Yellow for dry waste and white for wet waste. In addition, the hotel established a hydroponic team in 2019. This team has the responsibility to develop sustainable development within the hotel area. For example, modifying waste jerry-cans from laundry or RO room become pot. The hotel is also equipped with the license of hazardous and toxic waste issued by the government of Badung Regency through *Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu* about the operational license for hazardous and toxic waste (B3) no 1479/LIMBAH B3/DPMPTSP/2021. Back of house also supported the green practices by always maximizing the printings by using the double-side of the paper, always set up the printer to the eco-printings, and distributed the minutes-meeting, BEO, work plan, assignment, announcement, etc., by email, WhatsApp, or telegram group.

8. Management of Social and Cultural Issues

The hotel is facilitated by the Asha Boutique and Gallery. These hotel art shops become the center of trading local artisanal goods within the hotel area. The vendors which supply the artisanal goods in the boutique are local with 65% of the suppliers coming from Bali and others coming from another part of Indonesia. In addition, as the marketing strategy this year, the hotel is campaigning about unity in diversity program. The hotel will highlight the uniqueness of each region differently every month. From Sumatera, Java, Nusa Tenggara, Sulawesi, Maluku & Papua, whole regions will be highlighted fully this year, including for recreational activity.

The Apurva Kempinski Bali in its operation is strongly involved in the local belief, culture, and traditions. It is proven by the program offered by the marketing department such as Sunrise Purification at Geger Temple. This ritual is led by a Balinese priest with the offering and mantra to dismiss bad omens, prevent illness, and bad luck, and cleanse the guest's mind and body. The staff's religion is dominated by Hindus with the percentage of Hinduism staff being 77%. Indirectly it explained that the staff at The Apurva Kempinski Bali majority comes from local people (Balinese). Based on the data processed, it is known that the percentage of female managers at The Apurva Kempinski Bali is 37% and the male manager is 63%. The hotel has been facilitated by the Asha Boutique & Gallery to sell local artisanal goods. Besides, several services are needed by the hotel for example the waste vendor and pest control are based in Bali. In addition, the food and beverages suppliers are mostly based in Bali and often come from Plaga, Kintamani, Bedugul, etc.

9. Environmentally Harmful Substances

The whole chemical used at The Apurva Kempinski Bali is equipped with the MSDS (Material Safety Data Sheet). This information is consisting of the specification of the chemical, the storing method, first aid of the chemical, and so on. In addition, almost all the chemical at the hotel is supplied by Diversey Indonesia which is also completed by its sustainability letter. Each chemical room has equipped with personal protective equipment (PPE) for the staff who is in charge to handle any chemicals.

Discussion

Internal and External Effects of the Green Hotel Practices

To answer this section, the writer analyzed the information using the triple bottom line concept, which is the triple bottom line itself is the three-pillar conception of (social, economic, and environmental) sustainability, commonly represented by three intersecting circles with overall sustainability at the center (Purvis, 2019).

1. Internal Effects of the Green Hotel Practices

The hydroponic team is one of the big steps for the hotel to begin to develop sustainability within the hotel area in terms of the environment.



(Source: The Apurva Kempinski Bali, 2022)

Figure 4. Hydroponic Team

At the hydroponic team, there are four main programs have been executed. They are hydroponic systems, urban farming, sustainable activities, and tambulapot (*tanaman buah dalam pot*-fruit plan in pot) or fruits planted in the pot. Hydroponic team helped to decrease the amount of solid waste through cycling program, such as jerry-cans recycle, coffee briquettes, eco-enzyme, and composting.

The involvement of local traditions and cultures is shown in the regular program offered by the hotel through the department of spa, gym, and recreations. The activities are packaged by the Balinese rituals for example melukat at Pura Geger. The harvest result of the hydroponic contributes to decreasing the budget cost of food and beverages although still in a small number.



(Source: The Apurva Kempinski Bali, 2022)

Figure 5. Local Culture & Traditions

Social insurance is given to whole employees, payroll is always on time, allowances & health insurance is for staff, and clinic facilities are for whole employees. The maximum facilities have been delivered to the employees to make sure they show their best performance. In terms of green practices from a societal perspective, the impacts are shown by the training result. The hotel often held green escape training and specifically collaborated with the hydroponic team to spread information about how to cultivate plants easily at home, how to install hydroponic installation, tips, and tricks for harvesting the plants, and how to make seeding, how to prepare plants media, and so on. It is indirectly supporting the sustainable goals of quality of education.

2. External Effects of the Green Hotel Practices

a. Saraswati Paper

The Apurva Kempinski Bali is one of the contributors to the waste suppliers for the organization. As the observation result, the waste papers and newspapers waste production at The Apurva Kempinski Bali is high with total newspaper waste in 2021 being 813 Kg and paper waste is 559 Kg. Therefore, Apurva Kempinski Bali donated the paper to Saraswati Paper as part of the sustainability development. One example of the donation from the hotel is on 25 January 2022.

b. Tunjung Mas

Tunjung Mas or *Kelompok Sosial Masyarakat 3R* located at Jalan Nusa Dua Selatan, Sawangan, Nusa Dua, Bali is a community organization which is specifically offers services for solid waste hauling and recycling, and composting. This organization

has worked as a waste vendor with The Apurva Kempinski Bali since the beginning of the hotel operation. Based on the contract agreement between Apurva Kempinski Bali and Tunjung Mas, the vendor has the responsibility to manage the solid waste at Apurva Kempinski Bali and report the data to the management through the steward department.

c. Solemen Indonesia Foundation

Solemen Indonesia Foundation (*Yayasan Solemen Indonesia*) is reputedly one of Bali's most visible and trusted charities founded in 2011. Solemen actively reaches people who fall through the healthcare cracks and are not helped by the existing network of charitable organizations and government programs. In addition, the hotel is also supporting the foundation through the artisanal goods and stuff belonging to Solemen offered at Asha Boutique & Gallery. The profit will be donated to the foundation as well. The goods are in the form of a bag, jewelry, hand-held fan, books, dolls, etc.

d. Smile Bali Foundation

Smile Bali Foundation (*Yayasan Senyum Bali*) is a non-profit, independent organization working to bring health care to people with craniofacial disabilities. To support this foundation, the hotel donates magazines and newspapers to the organization. As the hotel has a lot of magazines come from the marketing department's collaboration with the media, the hotel kept & collected the magazines as well as the newspaper to be donated to the organization in hope that the magazine and the newspaper are re-sell by the organization at Children Charity Smile Shop available at Sindhu (Jalan Pantai Sindhu, no 3 Sanur), Buyan (Jalan Danau Buyan, no. 27 B Sanur), and Ubud (Jalan Raya Nyuh Kuning).

e. CSR Sawangan

To begin to develop the sustainable business within the organization, the hotel is worked together with CSR Sawangan or Corporate Social Responsibility Sawangan. It is a local community organization as a media for the hotel or other corporations to do corporate social responsibility (CSR) specifically at Banjar Sawangan. CSR itself is a business activity in which the company is socially responsible to stakeholders and the wider community as a form of concern in improving welfare and having a positive impact on the environment. As the concern of the hotel to allow the local community to be employed at the hotel, besides become the staff, the hotel is also creating an agreement with the CSR Sawangan to specially employed local people to protect and look after the beach area in front of the hotel.

Conclusion

The implementation of green hotel practices based on earth check certification by The Apurva Kempinski Bali is well-managed and ready to join the certification with several improvements such as the evaluation of renewable energy, smart controls for showers, and taps, and so on. The implementation has given significant impacts both on the internal hotel and external hotel. This research lacks an interview with the guest perception. This study further suggests more direct interviews with guests to find out the guest perception related to the green hotel practices themselves.

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