Balinese Perception towards Healthy Green Hotel Implementation in Bali

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Abstract

This study elaborates the challenges of Green Hotel implementation. The questionnaire is firstly developed in this study but constructed from Green Hotel Guidelines (GHG) measurement items which are issued by Ministry of Tourism of the Republic of Indonesia. The data collected is analyzed with Importance-Performance Analysis which also known as Gap Analysis as for the results reveal the gap between perception and the expectation of the stakeholders towards Green Hotel along with different understanding on the aspects measured. There are two stakeholder groups that hinder the implementation of a green hotel and make green hotels are slow to be developed.

Keywords: Green Hotel; Green Hotel Guidelines, Gap Analysis

1.0 Introduction

The tourism industry in Indonesia has experienced a significant increase where the Island of Bali is one of the preferred tourist destinations for domestic and foreign tourists. The increasing number of tourists always accompanied by hotel development and it will give a significant impact to environment damages resulted by tourism activities. Hotel development sector plays an important role to create a green and healthy atmosphere for the environment. More than 65.7 million international tourists traveled intra-ASEAN by the year 2009, and Asia Pacific Travel Association forecasts 86.7 million tourists by the year 2015. In order to minimize the negative impacts of this growth, Green tourism must be implemented, and be an imperative for all tourism stakeholders (ASEAN Secretariat, 2016).

Many efforts have been made to minimize the impact of the deteriorating environment through green movements in the hotel industry by implementing green principles through water conservation, energy saving, use of environment-friendly materials and reduce solid waste. The Ministry of Tourism has also been conducting the Green Hotel award program every two years for the hotel industry in the country to those who have implemented the environmentally sound standards and criteria to encourage hotel managers having pro-environment attitude and improving sustainable and environmentally friendly management. (Ministry of Tourism of the Republic of Indonesia, 2016)

The paradigm shift among hotel industry stakeholders will be useful to transform the markets to better respect the environment which tends to cause environmental degradation. The challenge will be even greater among the hotel industry in the ASEAN region with the creation of ASEAN Green Hotel Standards. Indonesia needs to have a pro-environment attitude in tourism development that brings investment and good image. Bali as a country's frontline in advancing the Green Hotel in ASEAN needs to promote green hotel development. This noble initiative can be realized by urging a green hotel guideline and rating tools. Therefore, the Ministry of Tourism

of the Republic of Indonesia has been developing Green Hotel Guideline (GHG) and working together with the Green Building Council Indonesia (GBCI), the Association of Indonesian Hotel Engineers (ASATHI), and other relevant stakeholders.

2.0 Literature Review
There are four references can be used to asses a green hotel in Indonesia as follows: 1) Green Hotel Guidelines (GHG) issued by the Ministry of Tourism of the Republic of Indonesia, 2) GREENSHIP Rating Tools issued by Green Building Council Indonesia (GBCI), and 3) ASEAN Green Hotel Standard issued by The ASEAN Secretariat, Public Outreach and Civil Society Division. 4) EDGE (Excellent in Design for Greater Efficiencies) issued by the International Finance Corporation (IFC) - World Bank Group.

However, Green Hotel Guidelines adopts GBCI GREENSHIP Rating Tools, because GREENSHIP is not dedicated for Hotel only but all kind of buildings in general, with six similar aspects measured, namely; 1) Appropriate Site Development (ASD), 2) Energy Efficiency and Conservation (EEC), 3) Water Conservation (WAC), 4) Materials Resources & Cycle (MRC), 5) Indoor Air Health and Comfort (IHC), 6) Building & Environment Management (BEM), and one additional aspect of 7) Environmentally Friendly Hotel Management and Operations (HMO).

2.1 Green Hotel
ASEAN Green Hotel Standard defines Green Hotel as an establishment for the promotion of the Environmentally friendly and Energy Conservation. This main management consists of an engineering department, housekeeping department, front office department, facilities department. (ASEAN Secretariat, 2016)

In Indonesia setting, the Green Hotel building which is also a public facility must refer to the building code rules and tourism regulations related to environmental protection set by the government. Without such compliance, a green hotel that cannot meet administrative requirements automatically does not meet the Green Hotel criteria. (Ministry of Tourism of the Republic of Indonesia, 2016)

2.2 Green Building and Tourism Industry in Bali
Bali is one of the famous tourist destinations in the world so that the development of hotels follows as a result of the increasing number of tourists who come to the island. In fact, the island economy is heavily dependent on the tourism industry as a major contributor to development. The development of hotels has dominated the construction industry in Bali and produced the largest gas emissions.

Buildings development in Indonesia that applies the concept of green building is still too small compared to countries that have green building certification, such as LEED (USA) which was established in 2000 that has implemented 111,726 projects in green building certification (LEED, 2018), while CASBEE (Japan) was established in 2004 and already has 16,471 green projects (CASBEE, 2018) in March 2015 of, and DGNB (Germany) in 2007 with 1,226 projects (DGNB System, 2018).

In Indonesia, GREENSHIP certification issued in 2009, has carried out only 134 projects for the category of 1) new buildings, 2) existing buildings, 3) interior spaces, and 4) neighborhood. As for Bali alone, there is only one project registered for GREENSHIP, namely Six Senses Uluwatu Villa Resort, Bali, and another one is Royal Tulip Springhill Hotel at Jimbaran Hijau which used EDGE certification endorsed by GBCI and issued by The International Finance Corporation-World Bank (PT. Sertifikasi Bangunan Hijau, 2018).

This shows us that green hotel certification is not considered urgent by hotel players in Bali. This study aims to look at the reasons for this very small number of green hotels. There are many stakeholders involved in the process of certifying green buildings, from the design to operational stages, so this study emphasizes stakeholder perceptions to know their reluctance and/or rejection in implementing green hotels in Bali.

3.0 Methodology
This study applies Gap Analysis, a method to find out the gap between two values of one variable and similar to the IPA (Importance-Performance Analysis) method which aimed to assess the differences in performance and to determine whether requirements are being met. If not, what steps should be taken to ensure they are met successfully. The IPA also refers to the gap between "where we are" (the present state) and "where to be" (the target state) and known as quadrant analysis. The measurement of importance is presented on the vertical axis (Y) while performance is presented on the horizontal axis (X) in a two-dimensional matrix. The two axes divide the IPA grid into four quadrants where the crossing point is the means of importance and performance. Each attribute can be shown in accordance with the score of their respective interests and performance (Lin, Chan and Tsai, 2009). The IPA model is a simple graphical tool to streamline strategies of Green Hotel based on their expectation (importance) and perception (performance).

3.1. Sampling
Stakeholders in Hotel industry are the respondents with six categories of them, namely; 1) Hotel developers, 2) Hotel management and staffs, 3) Government officers as regulator, and 4) Hotel guests, 5) Communities surrounding of hotels, and 6) Academics, and 7) Professions related to Green Hotel.

The samples come from the snowballing networks of GBCI Bali and PT. Jimbaran Hijau as a Tourism Developer, such as architects of Indonesian Architects Association (IAI) Bali, the 1st and 2nd batch of Greenship Associates of GBCI Bali, Guests of Royal Tulip Springhill Hotel at Jimbaran Hijau, Government officers of Badung Regency, Denpasar Municipality officers, lecturers/academicians at Udayana University and Warmadewa University, people of Bhuana Gubug village, Jimbaran. In total, 35 samples are obtained with the

proportion of 5 respondents from developers, 5 hotel staffs, 5 government officers, 5 local (Balinese) hotel guests, 5 people from communities surrounding, 5 lecturers/academicians, and 5 Greenship Associates (architects & engineers).

3.2. Sample Pools
The Samples are taken from four hotels that are awarded in Green Hotel Award 2018 by the Ministry of Tourism as follows: 1) Fairmont Sanur, 2) Sanur Paradise Plaza, 3) Tandjung Sari Sanur, 4) Maya Sanur, and 5) Royal Tulip Jimbaran the only Green Hotel with EDGE.

Fig. 1: Four Hotels awarded in Green Hotel Award 2018 and 1 hotel certified by EDGE (the IFC – World bank Group)

3.3. Questionnaire

The instrument used is purposely developed for this study, but based on the Green Hotel Guidelines (GHG) items measured, so there was none replication study using the same questionnaire. Respondents are asked to choose whether they already knew about the items of the aspects, to measure their perception (performance) and whether they agree with them, to measure their expectation (importance).

No	Item	Do you know?		Do you agree?	
		No	Yes	No	Yes
A	**Appropriate Site Development / ASD (6)**				
1	There is enough landscape area regulation to be planted with vegetation as a green open space.				
2	Availability of green open space, functions as water catchment and as habitat for biodiversity which is protected by Indonesian law & international law.				
3	Use of roof cover materials that avoid the effects of surface heating and ambient temperature.				
4	Use of local plants and local cultivation.				
5	Providing pedestrians and access around hotel that connect building to building and to public roads.				
6	Making bio-porous holes in the yard for more water absorption in the yard and building environment.				
B	**Energy Efficiency & Conservation / EEC (14)**				
7	*Give awards and sanctions in the implementation of energy conservation.*				
8	Use of energy-saving technology.				
9	Use of energy-efficient household appliances.				
10	General campaign and education to encourage energy savings as outlined in the hotel standard operating procedures.				
11	Providing guidance / manual operation of various electronic device features, both for employees and guests.				
12	Periodic maintenance of the electricity distribution system.				
13	Using a backup power plant that supports one another with the main electricity system.				
14	Use of alternative energy sources such as the utilization of solar energy for water heating systems.				
15	Lifestyle and habits to reduce electrical energy use by turning off lights when not in use.				
16	Reduce the use of electric or gas water heaters in the main building, spa and laundry with hot water installations using copper pipes placed on the roof.				
17	Documenting the inspection schedule of electrical installations ranging from water heater, Air-Con panel, sanitary, refrigerant, fire extinguishing system, gas, laundry machine, kitchen appliances, collection tank and ground tank, power generator, safety box and battery, pump, STP (.(Sewage Treatment Plant), exhaust fans, drain, boiler, salt chlorinator (all of which are recorded monthly with detailed job descriptions).				
18	Monitoring of electricity meter (KwH) through information on electricity bills for the last 8 months which is equipped with a graph of electricity usage.				
19	Socialization of the manual of Air-Con usage, automatic mode procedure, and temperature adjustments during automatic mode.				
20	*Installing motion sensors or timers for lighting in corridors that are not crowdedly passed.*				
C	**Water Conservation / WAC (15)**				
21	Calculation of water requirement that is close to the standard of clean water usage of SNI (Indonesian National Standard), which is 250 liters/bed/day				
22	Scheduling watering plants as effective as possible, especially in the dry season.				
23	Replacement of the plant watering system towards a system that is more efficient in consuming water				
24	Gradually replacing the water fixtures with a more water-saving system in the toilet bowl, sink and automatic faucet.				
25	Establish an operational team that specifically handles water management in buildings.				
26	Water saving campaign in all rooms.				
27	Inspection of pipeline installation, water pumps and water fixtures.				
28	Conduct the laboratory testing independently to maintain the quality of clean water and pond water.				
29	Waste water from laundry facilities, kitchens and bathrooms is used for watering gardens and nurseries (if available) after processing through STP				
30	The use of rainwater as alternative source of water so that it is always minimal in the use of ground water (Rainwater Harvesting).				
31	Maintenance of water softener equipment that uses resin/ion material to clean laundry that is safer against wastewater produced.				
32	Periodic replacement of water filters, using safe materials such as coral reefs, palm fibers, silicate sand and charcoal.				
33	Separation of piping both for greywater and blackwater, so that the quality, quantity and capacity to be processed can be known.				
34	Separation of piping for clean water and recycled water from the source to the end point of use of the two types of water, so that the number of uses of the two types of water can be known.				
35	Wastewater recycling system using Reverse Osmosis (RO) where wastewater treatment is separated based on its specific gravity.				
D	**Material Resources & Cycles / MRC (3)**				
36	Material Purchasing Practice; where 50% of local/regional material production and 5% of materials that can be recycled, based on total expenditure.				
37	Clearly using insulation systems that do not contain styrene, ceilings or partitions that do not contain asbestos, composite wood products & agrifiers that emit low "formaldehyde" and paints & carpets with low VOC (Volatile Organic Compound) emission.				
38	Disseminate environmental & social policies (Earth Check), as some International Chain Hotels have also promoted to suppliers, contractors, and business people, to carry out joint movement and campaign to prioritize environmental friendly local products.				
E	**Indoor Health & Comfort / IHC (4)**				
39	To have and to carry out maintenance management mechanisms for mechanical ventilation system and periodic air & exhaust fan system that is recorded, documented and with the help of competent experts and equipment.				
40	Installing no-smoking signs in most areas of the hotel, especially green spaces for the purpose of reducing exposure to building users and to the surface of interior materials from smoke-polluted environments so that the health of people can be maintained.				
41	Rooms used by guests and employees have been designed and made in such a way to get good air circulation so that the comfort of temperature in the room is maintained and to reduce potential toxins that may accumulate from the indoor materials used.				
42	Integrated with active and passive efforts in landscape processing to maintain noise levels that arrive inside the hotel in reasonable conditions, especially rented room units.				
F	**Building & Environment Management / BEM (7)**				
43	A structure has been established that is integrated in the operational & maintenance of hotel structure.				
44	Together with the components of the community around the Hotel in collaboration with the environmental conservation movement both on land and at sea through tree planting. Cleaning competitions on villages, beaches and other public places.				
45	Handling Hazardous waste (Bahan Beracun Berbahaya / B3) according to standards				
46	Reducing the amount of solid waste by using more materials that can be reused,				
47	Reducing the amount of liquid waste from restaurants, kitchens and other places is processed through the STP installation.				
48	Supporting greening efforts in the surrounding area; in public facilities, schools, places of worship, urban open spaces, roads.				
49	There has been a green effort of the hotel management team together with residents around the hotel to deal with seasonal waste problems by carrying out mutual assistance to clean up the garbage.				
G	**Hotel Management & Operation (7)**				
50	Conducting work safety (Kesehatan & Keselamatan kerja / K3) campaigns for hotel staff to prioritize safety in their divisions.				
51	Installing boards and posters as information on safety in work and site plan evacuation routes in the event of a fire hazard.				
52	Monitoring through monthly reports on workplace accidents that occur for a month.				
53	Sustainable Green Movement, hotel staffs must participate as a form of hotel concern for the environment (i.e. applying paper-saving usage back and forth or using electronic mail to communicate, and machine printers centrally while reducing toner usage)				
54	To increase the level of awareness and to remind the Green Hotel program, the hotel publishes news on bulletin boards, posters and other means. Suggestion boxes are provided in several places to encourage hotel employee participation and involvement in ecological & environmental activities				
55	Guests are given the opportunity to contribute to hotel activities towards the environment and empowerment of local community.				
56	Proactive communication with stakeholders (i.e. Regional Environment Management Agency (Badan Pengeloila Lingkungan Hidup Daerah/BPLHD) by submitting reports of Environmental Management & Monitoring Efforts / UKL & UPL) to solve problems and decisions to be recorded.				

Fig. 2: Questionnaire of Green Hotel aspects based on Green Hotel Guidelines

3.4. Data Analysis

The Importance-Performance Analysis has two steps; 1) Finding level of conformity, to see the perception (performance) score and expectation (importance) score, and 2) Determining the quadrant crossing point, using Cartesius diagram in dividing the scores into four domains separated by two lines perpendicularly intersecting to the crossing point (X, Y) where X is the average score of performance and Y is the average score of importance.
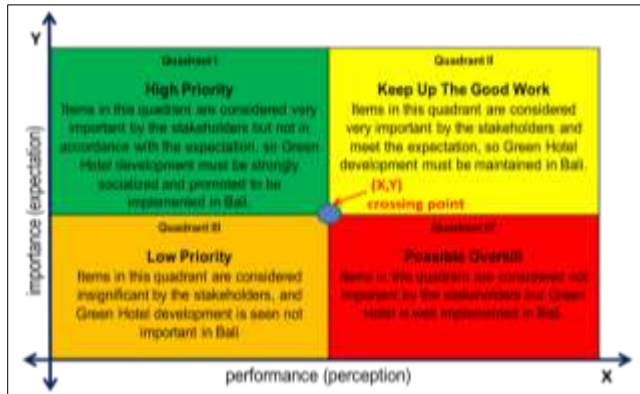

Fig. 3: Four Quadrants of Importance-Performance Analysis (IPA)
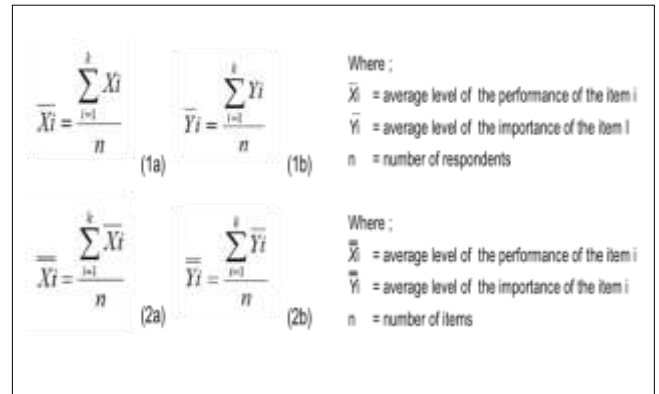

Fig. 4: Formulas used for Quadrant Analysis

For quadrant analysis, we need to calculate the average score of importance and performance for each item with the formula (1a) and (1b), while for whole items, we get the average score using formula (2a) and (2b) as shown above. All data gathered from 35 samples is analyzed by IBM SPSS Statistics version 25 using Mean Analysis to group all aspects into the IPA four quadrants.

4.0 Findings

This study reveals why Green Hotel has not been considered important yet on the island. GBCI Bali and the Government of Bali should promote Green Hotel even harder. Findings are discussed from three perspectives; 1) the items of the assessment, 2) the aspect of the Green Hotel, and 3) the role of stakeholders.

4.1 The items of the assessment.

Of 56 items, most of them are not being prioritized by the stakeholders and only 4 items are considered as a high priority, 22 items are acceptable and meet the expectation, 18 items are prioritized low and not urgent, and 12 items are considered not important and can be excluded in Green Hotel assessment. The crossing point (X, Y) is (0.68, 0.82) as seen in Figure 5 below.
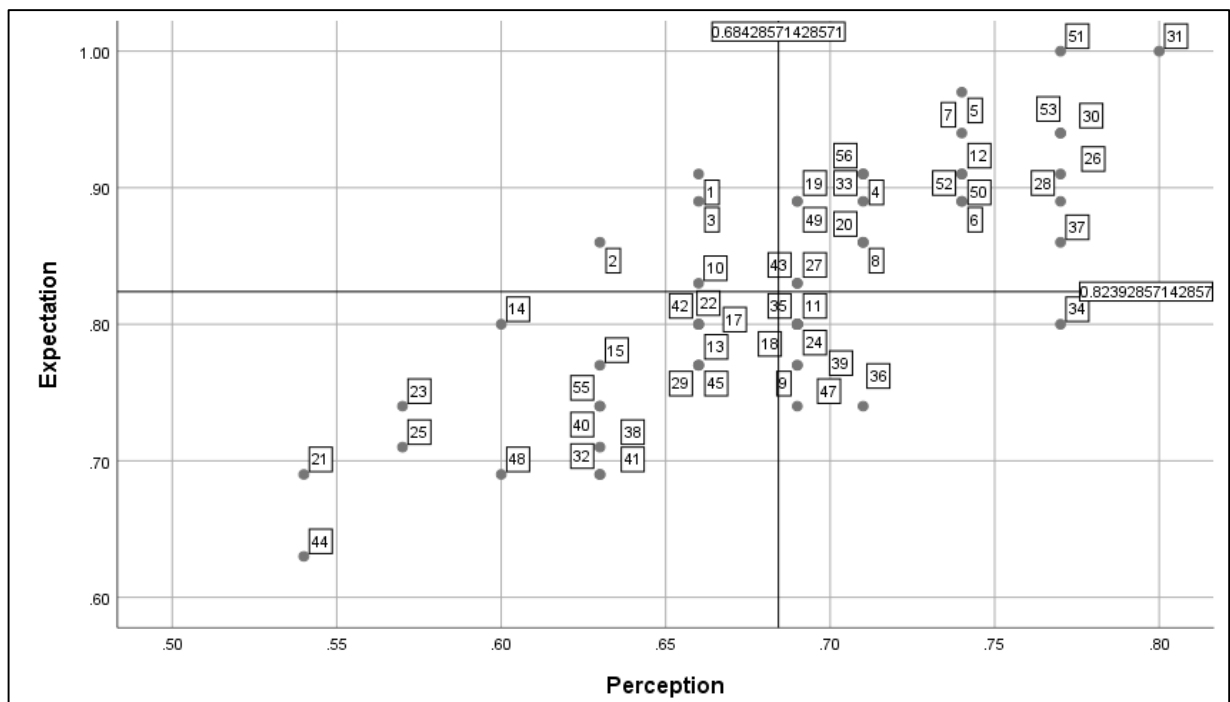

Fig. 5: Items grouped into Four Quadrants

Quadrant-I indicates items or attributes that are considered important by stakeholders but not well implemented, as follows:
(1) There is enough landscape area regulation to be planted with vegetation as a green open space. (ASD-1)
(2) Availability of green open space functions as water catchment and as habitat for biodiversity which is protected by law. (ASD-2)
(3) Use of roof cover materials that avoid the effects of surface heating and ambient temperature. (ASD-3)
(10) General campaign and education to encourage energy savings as outlined in the hotel standard operating procedures. (EEC-4)

Quadrant-II shows items or attributes that are considered important and accepted by stakeholders to be implemented, as follows:
(4) Use of local plants and local cultivation. (ASD-4)
(5) Providing pedestrians and access around a hotel that connect building to building and to public roads. (ASD-5)
(6) Making bio-porous holes in the yard for more water absorption in the yard and building environment. (ASD-6)
(7) Give awards and sanctions in the implementation of energy conservation. (EEC-1)
(8) Use of energy-saving technology. (EEC-2)
(12) Periodic maintenance of the electricity distribution system. (EEC-6)
(19) Socialization of manual of AC usage, automatic mode procedure, and temperature adjustments during automatic mode. (EEC-13)
(20) Installing motion sensors or timers for lighting in corridors that are not crowdedly passed. (EEC-14)
(26) Water saving campaign in all rooms. (WAC-6)
(27) Inspection of pipeline installation, water pumps, and water fixtures. (WAC-7)
(28) Conduct laboratory testing independently to maintain the quality of clean water and pond water. (WAC-8)
(30) The use of rainwater as an alternative source of water so that it is always minimal in the use of groundwater. (WAC-10).
(31) Maintenance of water softener equipment that uses resin/ion material to clean laundry that is safer. (WAC-11)
(33) Separation of piping both for greywater & Blackwater, so that quality, quantity, capacity to be processed can be known. (WAC-13)
(37) Clearly using insulation systems that do not contain styrene, ceilings or partitions that do not contain asbestos, composite wood products & agrifiers that emit low formaldehyde and paints & carpets with low Volatile Organic Compound emission. (MRC-2)
(43) A structure has been established that is integrated into the operational & maintenance of hotel structure. (BEM-1)
(49) There has been a green effort of the hotel management team together with residents around the hotel to deal with seasonal waste problems by carrying out mutual assistance to clean up the garbage. (BEM-7)
(50) Conducting work safety (K3) campaigns for hotel staff to prioritize safety in their divisions. (HMO-1)
(51) Installing boards & posters as information on safety in work and site plan evacuation routes in the event of a fire hazard. (HMO-2)
(52) Monitoring through monthly reports on workplace accidents that occur for a month. (HMO-3)
(53) Sustainable Green Movement, hotel staffs must participate as a form of hotel concern for the environment (i.e. applying paper-saving usage back and forth or using electronic mail to communicate & machine printers centrally reducing toner usage). (HMO-4)
(56) Proactive communication with stakeholders (i.e. Regional Environment Management Agency/BPLHD) by submitting reports of Environmental Management & Monitoring Efforts / UKL & UPL) to solve problems and decisions to be recorded. (HMO-7)

Quadrant-III shows items that are considered less important by the stakeholders and are not well implemented, as follows:
(13) Using a backup power plant that supports one another with the main electricity system. (EEC-7)
(14) Use of alternative energy sources such as the utilization of solar energy for water heating systems. (EEC-8)
(15) Lifestyle and habits to reduce electrical energy use by turning off lights when not in use. (EEC-9)
(17) Documenting the inspection schedule of electrical installations ranging from the water heater, Air-Con panel, sanitary, refrigerant, fire extinguishing system, gas, laundry machine, kitchen appliances, a collection tank, and ground tank, power generator, safety box, and battery, pump, STP (Sewage Treatment Plant), exhaust fans, drain, boiler, salt chlorinator (all of which are recorded monthly with detailed job descriptions). (EEC-11)
(21) Calculation of water requirement that is close to the standard of clean water usage of SNI, which is 250 liters/bed/day (WAC-1)
(22) Scheduling watering plants as effective as possible, especially in the dry season. (WAC-2)
(23) Replacement of the plant watering system towards a system that is more efficient in consuming water (WAC-3)
(25) Establish an operational team that specifically handles water management in buildings. (WAC-5)
(29) Wastewater from laundry, kitchens, bathrooms is used for watering gardens & nurseries after processing through STP (WAC-9)
(32) Periodic replacement of water filters, using safe materials such as coral reefs, palm fibers, silicate sand, and charcoal. (WAC-12)
(38) Disseminate environmental & social policies (Earth Check), as some International Chain Hotels have also promoted to suppliers, contractors, business people, to carry out joint movement/campaign to prioritize environmentally friendly local products. (MRC-3)
(40) Installing no-smoking signs in most areas of the hotel, especially green space for the purpose of reducing exposure to building user & to the surface of interior materials from the smoke-polluted environment so that the people health can be maintained. (IHC-2)
(41) Rooms used by guests & employees have been designed and made in such a way to get good air circulation so that the comfort of temperature in the room is maintained & to reduce potential toxins that may accumulate from the indoor materials used. (IHC-3)
(42) Integrated with active & passive efforts in landscape processing to maintain noise levels that arrive inside the hotel in reasonable conditions especially rented room units. (IHC-4)
(44) Together with the components of the community around the Hotel in collaboration with the environmental conservation movement, both on land and at sea through tree planting, Cleaning competitions on villages, beaches, and other public places. (BEM-2)
(45) Handling Hazardous waste (B3) according to standards (BEM-3)
(48) Supporting greening efforts in the surrounding area; public facility, school, place of worship, urban open space, road. (BEM-6)
(55) Guests are given opportunity to contribute to hotel activities towards environment & empowerment of the local community (HMO-6)

Quadrant-IV shows items or attributes that are considered less important by the stakeholders and can be deleted, as follows:
(9) Use of energy-efficient household appliances. (EEC-3)
(11) Providing guidance / manual operation of various electronic device features, both for employees and guests. (EEC-5)
(16) Reduce the use of electric or gas water heaters in the main building, spa, and laundry with hot water installations using copper pipes placed on the roof. (EEC-10)
(18) Monitoring of electricity meter (KwH) through information on electricity bills for the last 8 months which is equipped with a graph of electricity usage. (EEC-12)
(24) Gradually replacing the water fixtures with a more water-saving system in the toilet bowl, sink and automatic faucet. (WAC-4)
(34) Separation of piping for clean water and recycled water from the source to the end point of use of the two types of water, so that the number of uses of the two types of water can be known. (WAC-14)
(35) Wastewater recycling system using Reverse Osmosis (RO) where wastewater treatment is separated. (WAC-15)
(36) Material Purchasing Practice; where 50% of local/regional material production and 5% of materials that can be recycled. (MRC-1)
(39) To have and to carry out maintenance management mechanisms for mechanical ventilation system and periodic air & exhaust fan, a system that is recorded, documented and with the help of competent experts and equipment. (IHC-1)
(46) Reducing the amount of solid waste by using more materials that can be reused. (BEM-4)
(47) Reducing the amount of liquid waste from restaurants, kitchens & other places processed through the STP installation. (BEM-5)
(54) To increase the level of awareness and to remind the Green Hotel program, the hotel publishes news on bulletin boards, posters and other means. Suggestion boxes are provided in several places to encourage hotel employee participation and involvement in ecological & environmental activities. (HMO-5)

4.2 The aspect of the Green Hotel.
Of 7 aspects measured, only Material Resources & Cycle/MRC (4) is seen not related to the health issue by the stakeholders, and the aspect of Energy Efficiency & Conservation/EEC (2) viewed as high priority, while three aspects are considered important by the stakeholders which are Appropriate Site Development/ASD (1), Water Conservation/WAC (3), and Hotel Management & Operation/HMO (07), and two aspects are less related but still important to Health issue which is Indoor Health Comfort/IHC (5) and Building & Environment Management/BEM (6) as seen in Figure 6.

4.3 The role of the stakeholders.
Of 7 stakeholder groups, it seems that Hotel Guests (4) and Academics (6) do not care too much with Green Hotel, and only Hotel Developers (1) give attention to Green Hotel principles even they do not highly prioritize it, while the other stakeholders pay little attention to Green Hotel such as Hotel Staffs (2), Government Officers (3), Communities (5), and Green Professionals (7) as seen in Figure 7.
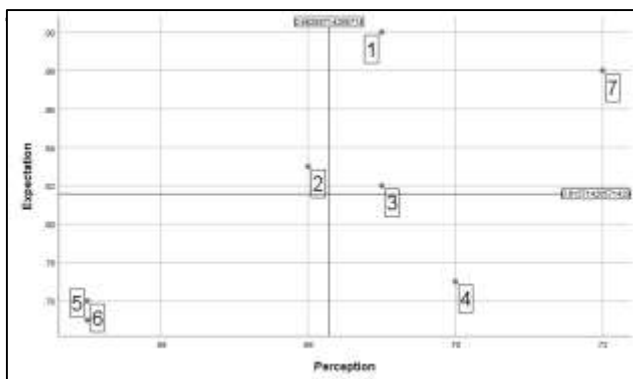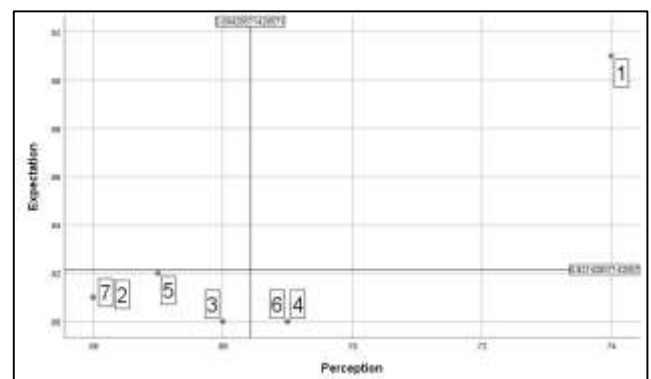

Fig 6. Aspects grouped into Four Quadrants   Fig 7. Samples grouped into Four Quadrants

5.0   Discussion
Twelve items (21,4 %) of the items measured are considered not important and only four items (7,1%) becomes the top priority. Almost all aspects have item(s) that is(are) considered not related to environment causing health issue, and the only aspect of ASD is seen very important so that all items in this aspect are remaining and three of them (50%) considered high priority. This means that landscape and green open space, surface heating and ambient temperature, local plants and local cultivation, pedestrians and access, and water absorption in the environment has very relevant to the Balinese's perception on Green Hotel.
The aspect of MRC is not seen as important and can be excluded. This might happen because many stakeholders do not have sufficient knowledge in Recycled materials, Hazardous chemicals, and substance, as well as do not know about the green efforts among global hoteliers that promotes local products in regards to shortening the carbon print.
It is surprising that Hotel guests and Academicians are those who do not give attention to Green Hotel implementation. This could be because of the snowballing sampling method that tends to get homogenous samples who have similar value within them, in this

case, those samples are ignorant of environmental issues. Hotel guests which are local Balinese might not feel the difference between staying in a regular and green hotel, while Academics may distrust and be suspicious of the integrity of green hotel practices known as Greenwash. Another possibility is the insufficient number of samples as there are only 5 samples in each category due to the limited time of the study.

6.0 Conclusion & Recommendations

There are different understandings on green hotel among stakeholders, although the interpretation of standard and criteria for determining green hotel can be appropriately assessed. There are also two stakeholder groups that hinder the implementation of a green hotel and make green hotel are slow to be developed. In addition, there is also still a limited source of information about Healthy Green Hotel so that the hotel Industry is less able to provide confidence.

Two recommendations are suggested; 1) Intensive campaigns, and 2) Comprehensive studies should be encouraged, as also claimed by a study of 75 respondents using SWOT analysis reveals that the implementation issue is felt by 58.55% of respondents as a challenge, the lack of supportive stakeholders gets 47.23%, resistance to change by 36.05%, insufficient knowledge/information 34.5%, and negligence due to being unfamiliar with green building 31.93% (Wimala, Akmalah, and Sururi, 2016).

Acknowledgment

References

ASEAN Secretariat, (2016). *ASEAN Green Hotel Standard*. Jakarta: Public Outreach and Civil Society Division

CASBEE. (2018). *CASBEE Certification System. 2018*. http://www.ibec.or.jp/CASBEE/english/certificationE.htm (retrieved on November 10, 2018).

DGNB System (2018). *DGNB pre-certified and certified projects. 2018* at http://www.dgnb-system.de/en/projects/index.php?filter_Freitextsuche=&filter_Land=&filter_Bundesland=&filter_Standort=&filter_Jahr=&filter_Zertifizierungsart=&filter_Nutzungsprofil=&filter_Zertifiziert_von_1=&filter_Verliehenes_Guetesiegel=&filter_Archite (retrieved on November, 2018).

LEED (2018). *Project LEED. 2018.* https://www.usgbc.org/projects (retrieved on November 10, 2018).

Lin, Shu-Ping, Chan, Ya-Hui Chan & Tsai, Ming-Chun (2009). A Transformation Function Corresponding to IPA and Gap Analysis. *Total Quality Management* 20 (8), 829-846.

Ministry of Tourism of the Republic of Indonesia, (2016). *Panduan dan Pedoman Pelaksanaan Green Hotel di Indonesia*. Jakarta: Kementerian Pariwisata Republik Indonesia.

PT Sertifikasi Bangunan Hijau. (2018). *Proyek Sertifikasi* at http://sertifikasibangunanhijau.com//sbh/project (retrieved May 12, 2018).

Wimala, M., Akmalah, E. & Sururi, M.R (2016). Breaking through the Barriers to Green Building Movement in Indonesia: Insights from Building Occupants. *Energy Procedia*, 470-472.