



**TOURISM IMPACT ON ENVIRONMENT- EVALUATING THE ROLE OF  
TOURISM TOWARDS SUSTAINABILITY**

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*Abstract*

*Sustainable Tourism contributes towards economy because it influences the environment of the hosts nation where tourists' activities are conducted. The research paper seeks to investigate tourism impact on the environment for evaluating the tourism role towards sustainability. The researcher has considered the collection of qualitative data from various sources in order to conduct an in-depth study. The use of inductive approach has been made so that more qualitative data can be extracted to support the nature of the study. The findings elucidated that tourism impacts on the environment are evident by the economic, health and social influences which contribute in both positive and negative manner.*

*Keywords: Tourism, Environment, Australia, Health, Social, International*

**I. INTRODUCTION**

Tourism has emerged to be one of the fastest growing sectors in the world and has contributed to the growth of the economy at a tremendous rate. With the economic significance of tourism in the growth and development of a country, positive environmental importance is also a key criterion to be addressed. With the increase in a number of tourists in a destination, the local environmental regulations also need to be enhanced.

According to Rabbany, et al., (2013), tourism has influenced biodiversity and ecosystems which has lead to serious harm to the natural resources including marine life, freshwater as well as forests. In recent times, sustainable tourism has grabbed a lot of attention because it helps in increasing the number of visitors and makes the environment green-savvy with utmost assurance of protection of future generations of the country.

The topic "Tourism impact on the environment" is significant as tourism has impacted the pristine environment by depleting the natural resources, by causing noise, air and water



pollution and by physically degrading the ecosystems of the country such as rainforests, coral reefs, mangroves, and seagrass beds (Ramdas & Mohamed, 2014). Thus, it has become critically important for different geographies of the world to ensure sustainable tourism development by acknowledging the balanced utilization of resources, without creating any negative impact on the environment and preserving the cultural and natural heritage of the country. Efficiently managed tourist activities can help in the understanding of cultural, economic, social and environmental values, thus offering an enriching experience to the visitors.

The tourism industry of Australia has been flourishing since many years as the country is famous for its cultural assets and natural resources. As a result, the industry contributed around AUD 49.7 billion to GDP in 2016 (WTTC, 2017). According to an article published by Camarda & Grassin (2014), with high contribution of Australia's tourism in the economic development of the country, environmental aspect is not being acknowledged. The country is a home to natural habitats such as crustacean and coral species, islands and reefs, national parks, forests, and fossils, which attract a lot of domestic and international visitors from all over the world. Thus, it is highly important for the tourism authorities to focus on the maintenance of ecological processes and cultural integrity of the country, by following a sustainable approach. The management and protection of environmentally sensitive areas would increase the competitiveness of Australia's tourism industry.

The objectives of the research paper are to throw some light on the sustainable practices followed by the tourism authorities of Australia in regards to the protection of cultural assets, natural habitat, and heritage of the country. Also, it focuses on the Erik Cohen Theory and Butler TALC Model of Australian tourism industry by discussing the behavioral patterns and evolvement of tourism in the country. It further discusses the contribution of the tourism sector in sustainable environmental development to make the destination as one of the most developed sectors of the world in terms of socio-cultural, economic, political and environmental aspect.

## **II. LITERATURE REVIEW**

### **2.1 Tourism**

One of the most resource-intensive industries in today's world is the tourism sector. In the modern era, the tourism destinations are working hard to increase their local and global reach by investing in travel and tourism, to enhance their economic contribution with the aim of protection of biodiversity, natural habitats and cultural diversity (Lu & Nepal, 2013). By 2027, it is expected that the contribution of global tourism sector would increase from 3.6% in 2016 to 3.9% in 2027 towards the GDP growth (WTTC, 2017). In the light of 21<sup>st</sup> century, tourism is facilitated by the growth in technology and communication which has increased the linkage of tourism authorities with the infrastructure and hospitality experts to achieve a balance between environmental costs and economic benefits. Tourism activity also brings positive change in the



living standards of the residents as it generates employment opportunities which further increase the personal income and expenditure of households. The marketing tourism activities should be in line with the integrity of the cultural and natural heritage so as to prevent the negative influence on the sustainable environment and support the positive contribution towards economic growth.

## **2.2 Role of Sustainability in Tourism**

According to Butzmann & Job (2015), sustainable tourism is defined as the management of ecological, cultural and biological resources in such a way that needs and wants of tourists, environmental authorities, and industry experts can be addressed without hampering those resources. With the emergence of the dynamic and challenging environment, it has become difficult for different geographies to develop and manage their tourism services and products along with the maintenance of social and economic benefits of local businesses and communities, to protect the cultural and natural assets (Butzmann & Job, 2015). That is the reason why the role of sustainability has become important in promoting the tourists activities. It has been observed that in developing nations, tourism not only contributes to economic development but also promotes conservation of social and natural sciences. However, in developed nations such as US, UK, and Australia, environmental management lacks its significance as technology has overpowered sustainability and recreational use outweigh the sustainable use of tourism products (Buckley, 2013).

Structured Ecotourism has gained a lot of attention in the recent years in which importance is given to the endangered tourist areas to help them emerge as sustainable tourism products. With the wide growth in tourism activities, as evident from the outnumbering of international tourist arrivals in comparison to the local population by a ratio more than 1:1, (for example, Iceland -5.1:1, Croatia - 3.3:1 and Montenegro - 2.6:1), environmental and sustainable pressures need to be managed (WTTC, 2017).

## **2.3 Erik Cohen Theory Tourism**

In 1979, Erik Cohen proposed the theory of “A Phenomenology of Tourist Experiences”, in which different views of tourist experiences were highlighted along with the relationship with a variety of ‘centers’ and their location. According to this theory, every society (country) has a ‘center’ which stores the moral and cultural values as they are the base values used by the tourists to travel. Some tourists witness pressure at their ‘center’ and search destinations with a better ‘center’ to gain some relief. On the other hand, some tourists take the base of their ‘center’ as an excuse to travel and search for similar ‘centers’ as a choice by considering the moral values of their own ‘center’ (Herbst, 2013). Further, Cohen highlighted five categories of tourist experiences – Diverse, Existential, Experimental, Recreational and Experiential. These categories revolve around two types of tourists – Organized Mass Tourist and Individual Mass Tourist who possess human and behavioral characteristics that are linked to the theory of sustainable tourism (MacCannell, D. (2013). Sustainable tourism is important to achieve growth in tourist activities so that environmental and depleted resources of a tourist destination remain preserved (Cohen & Cohen, 2016). Thus, the Erik Cohen Theory of Tourism “phenomenological



criterion of tourist experiences” is linked to the achievement of a sustainable environment (Benckendorff and Zehrer, 2013).

#### 2.4 Butler's Tourist Area Life Cycle (TALC)

Tourist Area Life Cycle (TALC) was invented by Butler in 1980, which signifies that tourist destinations undergo through various stages of life cycle, witnessing massive development and boom until stagnation occurs (Pornphol & McGrath, 2012).

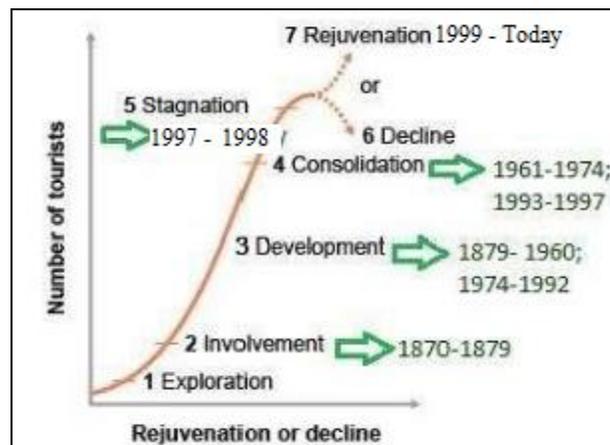


Figure 1: Butler's Tourist Area Life Cycle for Australia

(Source: (Pornphol & McGrath, 2012))

Australian tourism industry evolved during the 1870s and experienced a decline during 1979-89, followed by a consolidation phase in 1993 - 1997. The sector became stagnant in 1997 - 1998., after which it entered in rejuvenation stage as it eventually became positive after 1999 and witnessed a growth rate of 11.7% during 1999-2009. Since 2009, the tourism industry of Australia has been growing (Pornphol & McGrath, 2012). It has been researched by Dodds (2015), during 1960-70 many tourist destinations such as the Balearic Islands and Malta were established on an ad-hoc basis, as a result, they were unplanned and caused severe havoc to the environment and social activities. Similarly, in 2016, the environmental degradation was also caused to the Great Barrier Reef which is the world's largest reef located in the coast of Queensland, Australia, due to oil spilling and gas mining activities (Griffith, 2016). Thus, it is critical to promote sustainable tourism to ensure rejuvenation of Australia's tourism industry.

#### 2.5 Tourism and it's Contribution to Sustainability

The outlook of the tourism sector in Australia seems to be robust in the future as the country is rich in cultural assets and natural resources which drive the main tourist traffic (Moyle, et al., 2017). Hence, it is the responsibility of tourism authorities to ensure sustainable tourism so as to manage, conserve and protect the cultural heritage of the country to have a favorable impact on



Australia's tourism. Many researchers have highlighted the sustainable aspects of tourism so as to manage the resources in such a way that the ecological processes, cultural integrity and biological diversity of the country remain preserved to maintain the life support systems (Camarda & Grassin, 2014). Since Australia is blessed with many islands, parks, forests and coral reefs, thus, manpower is being recruited to ensure active participation in achieving sustainable tourism in the country.

Tourism contributes towards sustainability to a great extent as with promotion of green environment among the tourists, deployment of sustainable activities would be accomplished in their daily routine. For instance, the Hidden Valley Cabins located in Queensland is very famous among the tourists due to its highly efficient sustainable services offered. The valley, being an eco-resort, works on the principle of energy conservative practices and uses solar powered and waste management techniques to promote sustainability at their workplace (Notch, 2014). The deployment of sustainability in tourism practices do not only promote the social, economic and political development for the local population and communities but also reduce the operating costs by deploying the eco-friendly operating model for attaining competitive advantage in sustainable tourism (Ramdas & Mohamed, 2014).

Ecotourism ensures the preservation of natural habitat and heritage without any environmental degradation to support the developments in infrastructure. This not only proves beneficial for the tourists but also for the population of the country, which is being practiced rigorously by the tourism authorities (Upton, 2016). For example, during 2011 - 2016, the Australian Government constantly worked on preserving the terrestrial reserves, that is, national parks which are the unique feature of the country and need protection due to their high recognition among the tourists. Approximately USD 320 million every year is being contributed by the two national parks of Australia which are Uluru Kata and Kakadu national parks (AG, 2016). Thus, the focus is to increase the sustainable practices for maintenance of such parks to enhance the tourism experience to achieve social and environmental benefits.

## **2.6 Literature Gap**

Many types of research have been published on the tourism impact on the environment and the role of sustainability in tourism. As discussed above, according to Buckley (2013), developing countries are more concerned towards the technological enhancement instead of achieving environmental benefits, unlike developed nations. However, with the growth in sustainable practices in tourism importance is given to the tourist areas to help them emerge as sustainable tourism products. According to Griffith (2016), Great Barrier Reef is one of the most popular tourist places in Australia, however, due to environmental degradation, the place has lost its charm. Despite the discussion of sustainable practices to attract more number of tourists, none of the researchers highlight the main reason that led to change in behavioral aspects of tourists when visiting a tourist destination, This aspect has been covered in this research under Eric Cohen Theory of Tourism as it links tourist experiences with sustainable tourism.



### III. METHODOLOGY

The methodology used in this research is the inductive and explanatory approach. As per inductive approach, existing theory is used to form evaluate the data available on the topic under study. According to explanatory approach to research, practical application of ideas is done to analyze the cause and effect of the research conducted by the scholars and researchers. The data collection approach used in this study is qualitative and research. Qualitative research mainly concentrates on the journal articles, literature reviews and reports published on the role of sustainability in tourism. The qualitative data has been gathered to judge the behavioral patterns of the tourists and the importance of sustainability in tourism. All the data collected has been analysed in a descriptive format, after which inductive and explanatory research strategy would be applied to check the accomplishment of objectives. Explanatory research would be extremely useful in drawing a conclusion from the analysis and is qualitative in nature.

### IV. RESULTS

Tourism, no doubt imposes massive influence on the environment of Australia. The discussion will be based on economic impact, social impacts and health influences of sustainable tourism. Before moving onto the impacts of tourism, it is necessary to illustrate the importance of tourism for Australian region.

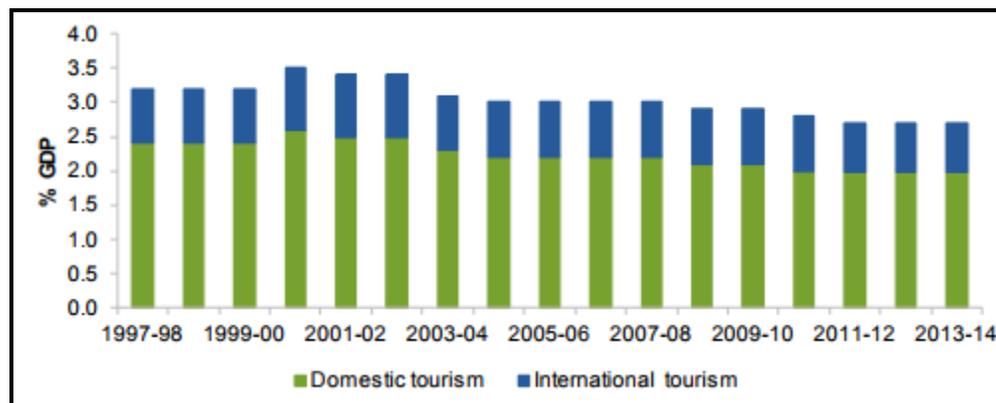


Figure 2: Increase In GDP in Australia (Internationally and Domestically)

(Source: AGPC, 2015)

The graph above clearly highlight that the GDP in Australia is increasing because the tourism activities both domestic and internationally are progressing. The international visitors are coming to Australia, thus increasing the GDP of the country and leaving a positive economic impact (AGPC, 2015).



	1998-99 to 2003-04		2003-04 to 2007-08		2007-08 to 2012-13	
	Tourism	All	Tourism	All	Tourism	All
	%	%	%	%	%	%
<b>Labour productivity</b>	2.0	2.4	1.6	1.1	0.7	1.8
<b>Capital productivity</b>	-1.5	-0.9	-2.6	-2.7	-1.9	-3.1
<b>Multifactor productivity</b>	1.0	1.1	0.1	-0.5	-0.3	-0.3

Figure 3: Growth in Different Australian Sectors

(Source: AGPC, 2015)

The table above is the illustration of tourism contribution to all the industries functioning in Australia. Such industries include retail trade, accommodation, service, and food industry, media, information and telecommunication (AGPC, 2015). As evident from the table, labor productivity in overall industries has been decreased and multifactor productivity is also decreased (Amelung and Nicholls, 2014).

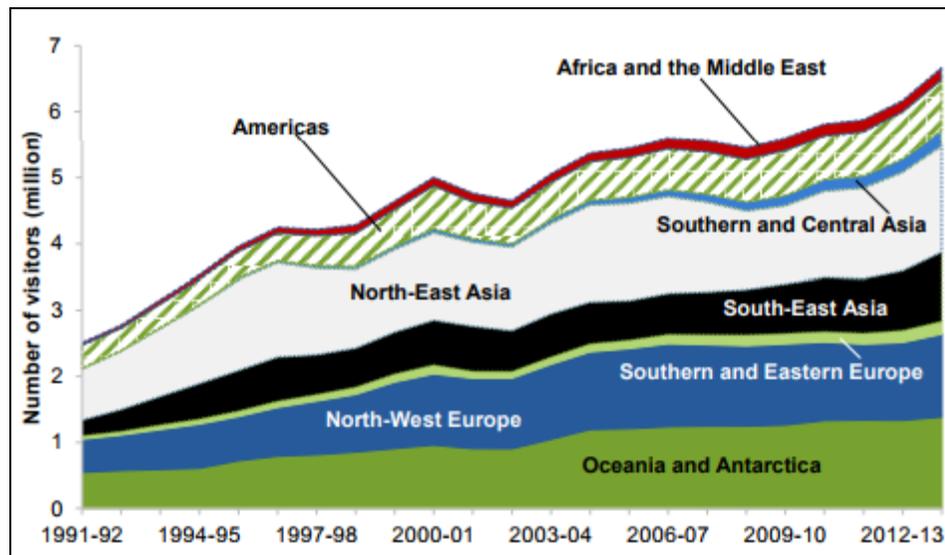


Figure 4: Number of Visits from Emerging Nations

(Source: AGPC, 2015)

According to Australian Bureau of Statistics, the number of visits to Australia from emerging countries of Asia is increasing because the demand for the international tourism has been quite stronger since past two decades. International short-term visitors in Australia were 2.5 million in 1991 which increased and was almost doubled in 2013-14, rising to 6.7 million. In addition, it



is estimated that 4.5% growth will be experienced every year in the number of international visitors heading towards Australia by 2023 (AGPC, 2015).



**Figure 5: Top 10 Regions- International Visitors come to Australia**

(Source: AGPC, 2015)

The graph mentioned above reflects on the top 10 regions where international tourists visit Australia, thus contributing positively to the economy of Australia. Visitors from India and China are on the top list as a large number of tourist activities are observed from them, leading to the flow international currency and enhancing the overall Australian economy (AGPC, 2015).

According to Deery *et al.* (2012), tourism also impacts the environment of the country socially as well because people from entirely different backgrounds tend to visit Australia. They also have differences in terms of income level and contrasting lifestyles. The tourist from other cultures brings positive cultural influences along with them which affect the prevailing environment. Differences in taste and preferences are also observed in Australia, there are different restaurants that offer Asian foods and an increase in their sales is observed in the previous years. In contrast to this, these disparities often become very severe in terms of political as well as social consequences.

Similar to this, there are various negative effects of tourism as well which are in the form of increased air pollution. Air pollution imposes negative environmental influence, travelling by road, air and water affects marine as well as human life. On the other hand, the cause for air emission is excessive air travel it contributes up to 60% because tourist migrates from one region to other. Similar to this, emissions from transport can also become the cause of photochemical pollution; global warming and acid rain etc. car rentals and campervans are deemed to the popular travel transportation in the countries like New Zealand and Australia, thus, becoming the reason of air pollution (Amelung and Nicholls, 2014).



On the other hand, tourism seeks to showcase the regional areas which also encourages future tourism and also offers jobs to the residents. Tourism also leads to the overcrowding as it is indicated from Uluru, where various services are launched to meet the increased demands. However, the tourism has health impacts as well which affects the prevailing environment. As stated by Dwyer *et al.* (2016), Australian Health Tourism is responsible for healthcare systems to the international visitors. In contrast, in rural Australia, there are noted an increase in the STD (Sexually Transmitted Diseases) as a result of international tourists engaging with locals.

<i>Purpose of travel</i>	<i>Spend in Australia per night</i>	<i>Duration of stay</i>	<i>Total spend in Australia</i>	<i>Repeat trip</i>
	\$	nights	\$ per visitor	%
Holiday	91	26	2 393	51
VFR	57	29	1 635	75
Business	171	14	2 336	69
Employment	75	118	8 856	74
Education	120	140	16 745	67
Other reason <sup>b</sup>	85	28	2 400	67
All purposes	92	35	3 256	63

**Figure 6: Tourist Purpose of Visiting Australia**

(Source: AGPC, 2015)

The table above clearly explains the purpose of international travelers in order to know their spending sector wise because it impacts economy positively. More traveling is done for the purpose of meeting friends and relatives (VFR) which has resulted in an increase in migration to Australia. They make repeat visits as their contribution is 75% to the overall sector (AGPC, 2015).

Deloitte Access Economics ranked Tropical North Queensland (TNQ) as the most tourism-reliant region of Australia in 2008 however, despite this, this very region experienced a decline by 20% of Japanese visitors from 2006-2014. The similar trend is being observed in Canada where Japanese visitors and their visits were declined. The reason for that being the fact those visitors may find it less likely to consider long-haul destinations for traveling than short-haul destinations (Dwyer *et al.* 2016). According to Kulendran and Divisekera (2007), the income which is generated by the tourist visits affects the national balance of payment; this also helps in generating income from the direct taxation and also from indirect taxes by the purchase of goods and services from the end of tourists.

From the results, it is evident that sustainable tourism impacts positively. However, some of the negative effects are also associated. Similar to this, sustainable tourism is one of the concepts



that promote tourists from other nations to Australia to positively impact economy, society, and environment.

## V. CONCLUSION

- The discussion has proven that there are various impacts of tourism on the environment. The economic impact is the most crucial one because tourism contributes to the overall economy. It leads to the flow of foreign currencies as international visitors in Australia are increasing, especially from China and India.
- The political effects of the tour are also being discussed which shows that it also affects the political stability of the country. In addition to it, the research paper has highlighted the impact of environment on tourism.
- There is no doubt, a positive impact of tourism on the environment. In addition, the social effects of the tour are also proven; tourism is one of the sources of bringing in people belonging to different cultures.
- The health impacts of the tourism are also very crucial and cannot be neglected as they are negative in nature and can affect the standards of Australian nationals.

## VI. RECOMMENDATIONS

The policymakers of the tourism industry in Australia should focus more on promoting their valuable tourism by using different marketing strategies. They should focus more on promoting their tourism by attracting tourist which will contribute to the GDP of the country and will also make sure that more tourists should visit the country. The Tourism and cultural policy makers of the country should focus on encouraging the development of different mobile application that would be helpful in promoting their tourism. Policymakers should also encourage closer association among the local bodies, cultural institutions, and service providers. The policymakers should highlight the country's natural beauty as an asset for the promotion of the niche destination marketing strategy. In this way, the contribution of tourism will be positive towards the environment.

## VII. LIMITATIONS

Although the research paper was successful in accomplishing its aims the researcher faced some unavoidable limitation during the investigation. The major one was the time limitation; it was not enough for the researcher to gather all the necessary data and information within the short span of time. It could be better if the researcher had a longer time for gathering the information. Another thing which was the major concern was that only qualitative data was used for the



research. The research paper could have been more informative if both qualitative and quantitative data would be gathered. Moreover, the interviews with the higher authorities in Australia that works in Tourism Research Australia (TRA) would have been interviewed in order to offer depth to the topic under study.

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#### REFERENCES

- [1]. AG, (2016) Parks Australia Sustainable tourism overview 2011–2016, Melbourne: Australian Government.
- [2]. AGPC (2015), Australia's International Tourism Industry [Accessed on 10th January'2018] Available at < <http://www.pc.gov.au/research/completed/international-tourism/international-tourism.pdf>>
- [3]. Amelung, B. and Nicholls, S. (2014). Implications of climate change for tourism in Australia. *Tourism Management*, 41, pp.228-244.
- [4]. Benckendorff, P. and Zehrer, A. (2013). A network analysis of tourism research. *Annals of Tourism Research*, 43, pp.121-149.
- [5]. Buckley, R., (2013) Tourism and Environment. *Annual Review of Environment and Resources*, 36(12), pp. 397-416.
- [6]. Butzmann, E. & Job, H., (2015) Developing a typology of sustainable protected area tourism products. *Journal of sustainable tourism*, 25(12), pp. 1736-1755.
- [7]. Camarda, D. & Grassin, i. L., (2014) Environmental impacts of tourism, Melbourne: CIHEAM.
- [8]. Cohen, E. & Cohen, S., (2016) Current sociological theories and issues in tourism. *Annals of Tourism Research*, 39(4), pp. 2177-2202.
- [9]. Deery, M., Jago, L. and Fredline, L. (2012). Rethinking social impacts of tourism research: A new research agenda. *Tourism Management*, 33(1), pp.64-73.
- [10]. Dodds, R., (2013) Sustainable Tourism Policy—Rejuvenation or a Critical Strategic Initiative. *An International Journal of Tourism and Hospitality Research*, 18(2), pp. 277-298.
- [11]. Dwyer, L. Forsyth, P, Spurr, R and Ho, T. (2016), The Economic Impacts And Benefits Of Tourism In Australia A General Equilibrium Approach [Accessed on 10th



- January'2018] Available at  
<[https://www.sa.gov.au/\\_\\_data/assets/pdf\\_file/0014/162005/App\\_N\\_The\\_Economic\\_Impacts\\_and\\_Benefits\\_of\\_Tourism\\_in\\_Australia\\_a\\_General\\_Equilibrium\\_Approach.pdf](https://www.sa.gov.au/__data/assets/pdf_file/0014/162005/App_N_The_Economic_Impacts_and_Benefits_of_Tourism_in_Australia_a_General_Equilibrium_Approach.pdf)>
- [12]. Griffith, H., (2016) Great Barrier Reef suffered worst bleaching on record in 2016, Sydney: BBC.
  - [13]. Herbst, J. K., (2013) Erik Cohen, The Phenomenology of Tourist Experiences, Melbourne: SAGE.
  - [14]. Kulendran, N. and Divisekera, S. (2007). Measuring the economic impact of Australian tourism marketing expenditure. *Tourism Economics*, 13(2), pp.261-274.
  - [15]. Lu, J. & Nepal, S. K., (2013) Sustainable tourism research. *Journal of Sustainable Tourism*, 17(1), pp. 5-16.
  - [16]. MacCannell, D. (2013). *The tourist: A new theory of the leisure class*. Univ of California Press.
  - [17]. Moyle, C.-I.J. et al., (2017) Have Australia's tourism strategies incorporated climate change?. *Journal of Sustainable Tourism* , 23(11), pp. 1-19.
  - [18]. Notch, J., (2014) *Growth of Sustainable Tourism in Australia*, Melbourne: Notch Communications.
  - [19]. Pornphol, P. & McGrath, G. M., (2012) *Implementation of the tourism area life cycle model as an advisory decision support system*, Melbourne: SAGE.
  - [20]. Rabbany, M. G. et al., (2013) Environmental effects of Tourism. *American Journal of Environment, Energy and Power Research*, 1(7), pp. 117-130.
  - [21]. Ramdas, M. & Mohamed, B., (2014) Impacts of Tourism on Environmental Attributes, Environmental Literacy and Willingness to Pay: A Conceptual and Theoretical Review. *Procedia - Social and Behavioral Sciences*, 144(21), pp. 378-391.
  - [22]. Upton, G., (2016) *Steps to sustainable sustainable*, Melbourne: Australian Government.
  - [23]. WTTC, (2017) *Travel & Tourism Economic Impact 2017 Australia*, London: World Travel & Tourism
  - [24]. WTTC, (2017) *Travel & Tourism Global Impact & Issues 2017*, London: World Travel & Tourism.