

Attitudes toward Environment Issues and Behavioral Intentions towards Reducing Carbon Footprints: An Empirical Study of Fiji

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ABSTRACT: Global warming is a worldwide issue but it is developing island countries like Fiji and Kiribati who suffer first-hand impacts. This study seeks to study attitudes of educated Fijians towards environmental issues particularly Tourism and their intentional behaviour in reducing these impacts by minimizing their carbon footprints. The attitudes and behavioral intentions are ranked in averages to show the most to least important issues and intentions. It concludes that Tourism is not regarded as a high impact environment issue because of either lack of awareness or an intentional lack of awareness. Awareness campaigns in Fiji are generic in nature as most mentioned behaviours were unspecific meaning most Fijians know what to do but do not how to. The two aspects acting as Fijian peoples' contribution towards a Sustainable Future of Fiji.

KEYWORD: Attitudes; Behavioral Intentions; Sustainability; Environment; Carbon footprints; Awareness

1 INTRODUCTION

While citizens of most economies do not have a say in legislations and policies of their countries towards reducing emissions, the only realistic way of having a say is through their behaviour in reducing carbon footprints. Carbon emissions in Fiji are mostly by liquid fuel (88.09% of total emissions) and 5.11% being from solid fuel in Year 2003 (World Bank, 2013). On individual level, attitudes shape behavior as stated by the Cognitive consistency theory which means that person's behavior is mostly consistent to that of his attitudes. In this paper, we study the attitudes of Fijians towards environmental issues based on impacts and their behavioral intentions toward reducing carbon footprints. A recent report on Fiji's Tourism Development Plan states "For conservation of biodiversity to be fully appreciated and actively pursued at national and regional level, WWF also supports efforts to mainstream conservation into national and sectoral plans, policies and programmes. The Strategic Environment Assessment (SEA) of Fiji's Tourism Development Plan exemplifies this approach. The objective of the SEA was to assess the environmental and sustainable development impacts of the Plan to enable the Ministry of Tourism and its partners to make future plans sustainable. The SEA indicated a major need for the present policy to be reviewed in order to protect Fiji's environment and people. There were concerns about Fijians benefiting

economically from tourism" (WWF). This adds relevancy to this study in order to analyze how Tourism is perceived as an environmental issue in Fiji.

2 LITERATURE

Ajzen's (1985) Theory of Planned Behavior states that attitudes toward behavior, subjective norms and behavioral control collectively shape an individuals' behavioral intention and behavior. This theory works best where situation-specific cognition influences specific behavior (Bamber, 2003). Policies often have little impact on consumer behavior without education and enforcement. While anti-littering campaigns work because individuals can see the direct link between littering behavior and visual environment impact but campaigns like "Live more green by reducing carbon emissions" are unlikely to succeed because the call is too amorphous (Mckercher and Prideaux, 2011). Staats, Harland & Wilke (2004) state that voluntary pro-environment behaviour change should target small number of specific behaviours where cause and effect can be seen. Many researchers (Anable, Lane & Kelay, 2006; Ester, Simoes, & Vinken, 2004; Kollmuss, & Agyeman, 2002) acknowledge the existence of a gap between awareness and actions. As a few studies have shown that more informed individuals feel less personally responsible for and less concerned about

global warming than less informed individuals (Kellstedt, Zharan, & Vedlitz, 2008). McKerchera and Prideaux (2011) review that information overload and choice overload might be another cause of this gap as consumers get bombarded by so many messages about environment issues from diverse range of sources with incomplete or conflicting information that puts them in a state where they do not know where or how they should act. Situations like these may lead to “Green fatigue” (Greenberg, 2008) where enthusiasm for change falls over time.

The review of the literature helps us construct the objectives of this study. Firstly, the attitude of educated Fijians towards different environment issues including Tourism. Tourism acts as a key part of this study as it is the major foreign exchange earner of Fiji with further expansion plans as the WWF report warns Fiji of “irreversible environmental damage and could lead to tension between tourist developers, landowners and local communities” (WWF). Therefore, studying individual attitudes towards Tourism as an environment issue will show the level of awareness on the negative impacts of Tourism in Fiji. The second objective of this study is to categorize behavioral intentions of individuals into Specific and Generic so as to understand if awareness campaigns in Fiji are generic or specific in nature.

3 METHOD

This study focuses on attitudes of Fijians especially Teachers and High school students towards reducing their carbon footprints. Teachers, senior High school students and advanced degree holders in private sector were selected for this study. These specific groups were selected in order to measure attitude and behaviors of the educated population in Fiji. This was also done to measure the awareness and information on sustainability that are instilled through Fiji’s education system in both Schools and Universities. The High school students were selected to present the attitudes of the future generation towards reducing carbon footprints as they will be most affected by the future impacts of current emissions and existing environment issues. Teachers at respective schools were contacted and upon agreement they were asked to specify the likely number of participants including fellow teachers and students. Approximately 300 questionnaires were distributed among teachers of Primary schools and teachers and senior students of High schools in Fiji. 232 completed questionnaires were received with a response rate of 77.33%. Research and particularly

questionnaires has very low regard in developing countries as shown by the response rate. A popular and Facebook page in Fiji with 17,644 Likes was approached to share the online survey link and ask its members to complete it. The questionnaire link got 6 Likes and no comments while all their other posts have an average of a 100 Likes. Online surveys have issues such as low response rates which can lead to biased results. (Schonlau, 2002 and Couper and 2000, Fricker and Groves, 1989)

The first part of the questionnaire focused on gender, age, occupation and education level while the second part focused on individual attitude towards 21 environmental issues in terms of impact level of each to Fiji. The third part focused on existing behavior and change in behavior towards minimizing individual carbon footprints. Responses of second and third parts were adopted from content analysis of McKerchera and Prideaux (2011) but not limited, as respondents were free to add both environmental issues and behaviors that were not otherwise listed. Respondents were urged to be as honest as possible for the credibility of the research. An honest effort was made to ensure the credibility of this study but limitations persist based on the methodology of this paper.

4 FINDINGS

The attitudes toward local environment impact and behavior to reduce these impacts are listed by mean score of all responses from the highest to the lowest. In the study, 58.3% of all respondents were Female and most respondents (23.3%) between the ages of 21 to 25 with majority being Degree holders (42.7%) followed by Diploma holders (23.7%) and Secondary school seniors at 18.5%. More than half (55.4%) of all respondents were employed in the Public-sector.

4.1 *Attitudes towards environmental issues*

Table 1 shows that there were no new environment issues stated by any respondents with Littering identified as the issue with the most impact on the environment. The study by Mckercher and Prideaux (2011) is used to compare the results of this study form here on as their study identified Air Pollution as most important environment issue in over 22 different economies. The top five environment issue with most impact in Fiji were identified as Littering (4.12), Climate Change (3.88), Deforestation (3.82), Pollution (unspecified) (3.81) and Global Warming (3.79).

Table 1. Attitudes toward Environment Issues based on Impact level

Rank	Environment Issues	N	Mean	McKercher & Prideaux Rank of Issues
1	Littering	232	4.12	9
2	Climate Change	231	3.88	14
3	Deforestation	231	3.82	18
4	Pollution (unspecified)	230	3.81	2
5	Global Warming	232	3.80	5
6	Emissions from Transport	231	3.79	6
7	Energy Overuse (Electricity)	231	3.74	16
8	Water Pollution	231	3.73	8
9	Water Wastage	231	3.65	12
10	CO2 Emissions	229	3.64	20
11	Air Pollution	230	3.63	1
12	Inadequate waste recycling	230	3.56	3
13	Waste production/ Waste management	230	3.54	4
14	Extreme Weather	230	3.42	10
15	Noise Pollution	232	3.34	11
16	Dependence on cars	231	3.30	19
17	Traffic Congestion	232	3.18	7
18	Tourism	231	2.77	20
19	Over Development	232	2.67	13
20	Overpopulation	232	2.66	17
21	Air Transport	229	2.57	76

There were only two common issues in the top five issues in between the two studies and these were Pollution (unspecified) and Global Warming. The six lowest ranked issues in Fiji were Noise Pollution (3.34), Dependence on cars (3.03), Traffic Congestion (3.18), Traffic Congestion (3.18), Tourism (2.77), Over Development (2.67), Overpopulation (2.66) and Air Transport (2.57). There were four common issues from last six issues in both studies which were, Dependence on cars, Tourism, Overpopulation and Air Transport. Mckercher and Prideaux (2011) study state that Tourism ranked as an important issue in popular tourism destinations such as Hawaii (ranked 1st/ 2nd), Jerusalem (ranked 1st), Great Barrier Reef area of Australia (ranked 6th) and Florida (ranked 9th). These facts raise serious concern towards the attitude of Fijians towards Tourism as an environment issue as it is ranked 18th environmental issue in this study. Fiji is a popular tourism destination and majority of its foreign exchange is earned through the Tourism industry. To make this more of a damning issue, Fiji has ongoing plans to expand its Tourism industry. Koya F. (Fiji's current Tourism Minister) used few examples of projects like Yatul Beach Resort refurbishment, Pearl Resort Marina development, Vunabaka project, Kokomo Resort in Yaukuve, Nawi Bay Resort and Momi Bay Resort and stated "These projects will add at least 1000 new rooms to

the current room inventory, and this augurs well with the forecasted 6 per cent to 7 per cent growth of inbound passengers by Airports Fiji Limited," (quoted in Pratibha, 2014).

5 BEHAVIORAL INTENTIONS

As shown in Table 2, there were no new behaviors mentioned by any of the respondents. Saving electricity/energy was the most mentioned behavior towards reducing respective carbon footprints in Fiji while Mckercher and Prideaux (2011) study identified Recycling as the most common behavior. The 5 most mentioned behavior changes in Fiji were saving electricity (1.93), Turning off lights (1.90), saving water (1.85), littering less (1.82) and turning off electric appliances (1.78). There were three common behavior in the five most mentioned behaviors between the two studies and these were saving electricity, turning off lights and saving water. The three least mentioned behaviors were buying organic food, driving less and I have changed but can't explain how. In this study behaviors are classified into two categories of Specific behavior and Generic behavior to identify as literature suggests that specificity and accuracy of knowledge is the key for change.

Table 2. Behavioral Intentions in order of mentions.

Rank	Behavioral Intentions	N	Mean	McKercher & Prideaux Rank of Actions Taken
1	Save electricity/ Energy	231	1.93	3
2	Turn-off Lights	231	1.90	5
3	Save water	231	1.85	4
4	Litter less	231	1.82	16
5	Turn-off electric appliances	231	1.78	14
6	Recycle	231	1.73	1
7	Reduce waste	231	1.70	17
8	Live more green/ Become more aware	231	1.64	15
9	Walk more	230	1.59	2
10	Use less paper	231	1.54	7
11	Use fewer plastic bags	231	1.52	6
12	Turn air conditioner down	231	1.50	12
13	Separate garbage (recyclable & non-recyclable)	231	1.44	8
14	Buy / Use fewer plastic bottles	231	1.43	13
15	Buy organic food	231	1.36	9
16	Drive less (lesser emissions)	231	1.35	10
17	I have changed but can't explain how	231	1.29	11

Table 3 shows the 17 mentioned behaviors classified into specific and generic behaviors. Only 35% (6 of 17) of all mentioned behaviors are Specific behaviors. A closer look at the two categories clearly shows that each specific behavior

directly leads to reduction of carbon footprints in specific ways while generic behaviors are too vague and with such behavioral intentions it is difficult for individuals to act since they know what to do but not how to do it.

Table 3. Behavior categorizes into Specific and Non-specific

Specific behavior	Generic behavior
Turn-off Lights	Save electricity/ Energy
Turn-off electric appliances	Save water
Walk more	Litter Less
Drive less	Recycle
Turn air conditioner down	Reduce waste
Buy/Use fewer plastic bottles	Live more green/ Become more aware
	Use less Paper
	Use fewer plastic bags Separate garbage Buy/ Use fewer plastic bottles
	Separate garbage
	Buy organic food
	I have changed but can't explain how

6 CONCLUSIONS

This study had two objectives, the first being individuals attitude towards environmental issues particularly tourism. The major concern has to be the attitude towards Tourism as an environment issue as it is ranked 18th out of 21 issues. As stated in the findings, Tourism is ranked highly as it has severe environment impacts in popular tourist destinations such as Hawaii, Jerusalem, Great Barrier Reef area of Australia and Florida (McKercher and Prideaux,

2011) but this study shows that Fijians do not consider Tourism as a high impact issue. On the contrary, Fiji's dependence on Tourism should project a critical attitude from individuals. The reasons to this low regard of Tourism as an environment issue can be hypothetically linked to three facets of awareness. The first being lack of or no awareness, secondly, ignorance on the part of leaders and thirdly, an intentional ignorance since the cost of educating and making people aware would stand a stumbling block for current and future

development plans of the tourism industry. It can be argued that awareness may exist without any changes in attitude but is very unlikely based on the figures of this study. This issue basically gives way for future research. The second objective was to categorize behavioral intentions into specific and generic which shows us that there are only 35% of specific behaviors out of all mentioned behaviors. This shows us that awareness campaigns in Fiji are generic in nature therefore authorities and campaigners need to target small number of specific behaviors where cause and effect can both be seen. To conclude, Fiji needs to significantly raise the bar in its awareness campaigns about the negative impacts of Tourism as citizens need to and have the right to know its negative impacts. Fiji also needs to move away from its generic form of awareness to specific issue awareness to create a realistic positive change in behavior of its people. These two conclusions of this study plays a vital role for the Sustainable Future of all Fijians and Fiji as a whole.

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