Preserve the sustainable environment in New Zealand:
think globally, act locally to preserve

Andries J Du Plessis*, Bernhardett Theron**, Hasan Mohammad*** and Vikram Dihr****

TYPE OF PAPER: Full paper

CATEGORY: Management

This research intends to identify the differences between different groups of people in terms of their attitudes and self-reported behaviours, background, nationality, age, religion, and gender. The value add of this research is that this is a longitudinal study and perceptions of students over a six year period could be compared. A total of 260 questionnaires were distributed to under- and postgraduate students studying business at the institute; 224 usable questionnaires returned resulting in a 86.7% response rate. Only six closely related questions were used in this paper. The main research question is: What can you as international student do to preserve the environment in New Zealand? Six sub-research questions were also asked in the questionnaire. Owners, CEOs and Managers of these private tertiary institutions should take note of this study. They could take the lead as it should go further to all universities in New Zealand to help to preserve the environment.

Keywords: Future, environment, sustainability human resources

1. INTRODUCTION

In business literature sustainability and sustainable development are referred to as the triple bottom line to reflect the simultaneous focus on environmental, social, and economic concerns. Other views are descriptions such as environment, equity and economy as well as people, planet and prosperity. New terms are emerging, or the existing ones are being amended to include adventure or similar concepts. Sustainability, protection and conservation are under pressure from competing and often conflicting land users and activities. Protection of the natural environment is thus a critical issue for adventure operators (Chiliya, 2016).

Even businesses are under pressure from shareholdes and owners to make money by reducing costs and increasing their profits, as well as stress from industries as more competitors join the boom in adventure industries such as safaris, hunting, fishing trips and so on. The question can well be asked if there

*Dr A J Du Plessis, UUNZ Institute of Business, Auckland, New Zealand, Email: aduplessis@unitec.ac.nz
**Ms Bernhardett Theron, Lecturer, UUNZ Institute of Business, Auckland, UUNZ New Zealand, Email: btheron@uunz.ac.nz
***Mr Hasan Mohammad, Lecturer and NZDipBus Programme Coordinator, UUNZ Institute of Business, Auckland, New Zealand, Email: hasan@uunz.ac.nz
****Mr Vikram Dihr, Lecturer, UUNZ Institute of Business, Auckland, New Zealand, Email: vikram@uunz.ac.nz
is enough regulations, rules and legislation to protect sustainability of the environment (Porter and Kramer, 2011). The problem of sustainable development is compounded by the fact that there are more than 200 definitions of it, that is why putting it in practice is even harder (Smith and Sharicz, 2011).

Bhalachandran (2011 as cited in Chiliya, 2016) is of the opinion that sustainability is the buzzword in industrialised countries and it has been absorbed into the lexicon of globalisation. Legrand et al (2010 as cited in Chiliya, 2016) are expressing their concern about the responsibility of the people on our planet who do not care about the imbalances in nature caused by technological, economic, political and cultural factors because practitioners see different parts of the picture typically in terms of different time scales and sometimes with different meanings.

Because it is not clear how people make decisions about environmentally ‘friendly’ behaviour this research was executed to shed light on people’s attitudes towards sustainability and the environment, how they approach environmentalism, water conservation, energy conservation, recycling, reducing waste (e.g. composting) and using green energy sources (e.g. solar and wind power), their attitude towards animals and how to act locally to preserve the environment. It is also not clear whether or not there are any voluntary modifications in their behaviour at all in relation to environmental issues. Therefore, this research intends to identify the differences between different groups of people in terms of their attitudes and self-reported behaviours, background (country of origin) age, religion etc, if any.

The value add of this research is in the fact that this is a longitudinal study and perceptions of students over a six year period could be compared. Furthermore, tertiary institutions should pay attention to the outcome of this study to alter / amend / or add to their curricula a paper for international tertiary students on every level with facts on sustainability and how to preserve the limited resources especially in New Zealand with the clean green image, for future generations.

International students have certain perceptions about sustainability and they could be some of our leaders of tomorrow, so what are their views and perceptions on sustainability? Which factors affect their ‘green’ behaviour, and how perceptions are formed, with specific consideration to the demographic factors? This paper discusses the views of respondents who had to answer questions such as whether plants and animals exist to be used by humans, and the earth is like a space ship with limited room for resources, and the use of products that could be harmful for the environment, and what is important for the future of the planet and how to preserve nature to a sustainable level. The next sections refer to the problem description, the research questions and sub research questions, with an in-depth analysis, conclusions and recommendations.
2. PROBLEM DESCRIPTION

In previous studies (Kagawa, 2005; Du Plessis et al, 2010; Du Plessis et al 2014) it was found that students generally are not serious to preserve the environment for the future, in some areas. They also have the perception that sustainability is a term primarily concerned with the environment but they were lacking a deeper understanding of it.

In this regard, a business problem is identified as: “By promoting sustainability and awareness to preserve the environment through education and curriculum, the sustainability perceptions of international students at UUNZ Institute of Business could change for the better”.

The aims and objectives of the research project

The main aims of this research project are to make international students aware of New Zealand’s clean green environment and secondly to preserve the environment for future generations.

Based on the aims mentioned above, the following aspects are identified as the main objectives of the research project by means of the main research question and sub-research questions where the participants had to give their view on the following sub-research questions:

- Plants and animals exist primarily to be used by humans
- The earth is like a space ship with only limited room and resources
- I will not use products that are harmful to the environment
- All animals and plants are important to the future of the earth
- It is important that animals and plants do not become extinct
- To preserve the nature, we have to think globally and act locally

The main research question is: What can you as international students do to preserve the environment in New Zealand?

3. LITERATURE REVIEW

In his research project Chiliya (2016) refers to the World Commission on Environment and Development (WCED) who was convened by the United Nations to examine the degradation of the global environment and subsequent impact for long-term economic and social development. This commission is called the Brundtland Commission after the Prime Minister of Norway who was the first chairperson. This commission’s first report published in 1987 referred to the term sustainable development, and put emphasis on the resources for natural sustainability of the environment.

Several definitions flowed out of this report and Svenson and Wagner (2012) refer to sustainability as the organisation’s efforts to manage its impact on the earth’s life and eco systems and its whole business networks. In its simplest
definitions, sustainability means preserving the natural capital. However, for modern human beings, living involves using the non-renewable resources (Bonevac, 2010). For example, the amount of raw materials like coal, iron or oil, are available is limited and is non-renewable after use. This makes the conditions of sustainable consumptions implausible and controversial. It also necessitates the need of substituting some alternatives for the non-renewable resources to perform similar functions (Crowther, 2002) and commands that the society must only use the resources that can be regenerated (Aras and Crowther, 2008).

It can be deduced from the literature that everybody is in favour for sustainability hence it is difficult to argue against it. In this study the respondents could well become leaders in New Zealand in a few years so if they, as leaders, are convinced about sustainability, everybody in the organisation will follow the leader.

The World Business Council for Sustainable Development (WBCSD) was formed in 1995, and the Agenda for Action policy (AFA) in the same year. The WBCSD has designed a ‘Dimensions of Sustainability Model’ that illustrates confluence between sustainable development goals and important priorities and they use as an example the cement industry, in Table 1 below.

**Table 1: Dimensions of Sustainability Model**

<table>
<thead>
<tr>
<th>Dimensions of Sustainability</th>
<th>WBCSD Issues</th>
<th>Cement Industry Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Resource &amp; ecosystem preservation</td>
<td>Quarry management, emission control, carbon dioxide and climate</td>
</tr>
<tr>
<td>Society</td>
<td>Quality of life &amp; social equity</td>
<td>Product use, employment, training &amp; community engagement</td>
</tr>
<tr>
<td>Governance</td>
<td>Public policies &amp; management practices</td>
<td>Product standards, emission trading rules, waste fuel policies &amp; access to resources</td>
</tr>
<tr>
<td>Economy</td>
<td>Wealth &amp; opportunity creation</td>
<td>Shareholder returns, resource efficiency &amp; innovative products</td>
</tr>
</tbody>
</table>


The four key dimensions include: governance, environment, society and economy. The model provides the cement industry with a comprehensive framework for addressing serious issues including climate change, and business leaders feel it will help them progress towards creating effective and efficient businesses in the 21st century according to Nordqvist, Boyd and Klee (2002).

Chiliya (2016) is also of the opinion that with the current use of the resource patterns, a mere modicum of development would demand the resources of an
additional planet earth, even assuming that technological advances proceeded apace. The realisation that resources were growing insufficiently to allow the so-called developing world to develop alongside the same lines as the first world, promote the desire too of equitable distribution. It means that the economy growth must slow down dramatically which will not be allowed or supported by the industrial economies of the world.

Craals and Verbeek (2014) and Du Plessis, Nel and Al-Shamaa (2012) are of the opinion that sustainable entrepreneurship takes care of the natural environment. They further postulate that the question of the effect and remedy for the impact of a business on natural resources and the landscape include environmental care, eco-efficiency, clean products, sustainable technology, sustainable industry fields and eco-design. The consequence for business behaviour is that either environmental integrity becomes a business goal next to profit seeking or that environmental protection becomes a real constraint on profit maximisation. The integration of environmental concerns into business practices is driven by both regulation and self-regulation. This brings us to the point where the questions in this research project focused on what the people and more specific business people (in this study business students) can or will do in the future of New Zealand.

3.1 Q 4 Plants and animals exist primarily to be used by humans

According to the World Wildlife Fund (2002) the poor life conditions, such as poverty, starvation, lack of significant health care facilities, deprived education and underprivileged economic opportunities is often seen as a reason for a high fertility rate and further strains the natural resources that eventually diminish. The relationship between these conditions and sustainability needs more research in order to understand its effects. The technological advancement and increased human knowledge, have given us the capability to modify the environment. The human-nature relationship has changed and experienced a reversal according to Abedi-Sarvestani & Shahvali (2008). However, the social-sciences do not yet fully understand what people’s attitudes towards sustainability and more specific plants and animals are.

It is not clear how people make decisions about environmentally ‘friendly’ behaviour and it is not clear whether or not there are any voluntary modifications in their behaviour at all in relation to environmental issues. Therefore, a research was executed to understand people’s attitudes towards sustainability and the environment, how they approach environmentalism, water conservation, energy conservation, recycling, reducing waste (e.g. composting) and using green energy sources (e.g. solar and wind power). It also tries to identify the differences between different groups of people in terms of their attitudes and self-reported behaviours in terms of plants and animals, if any (Toh, Chen, Du Plessis, 2013).

Successful change depends on a complete system of complementary practices and culture, habits, tradition and frames of reference are factors to bear in mind before any organisation can implement any change towards plants and animals or do programme development. A further problem is not in
finding consensus about the presence of change but in finding agreement on just about everything else.

When implementing social programmes or policies to protect plants or animals (environment), care should be taken to design a non-threatening participative implementation process in a gradual manner. These include changing the culture of an organisation. Successful change is likely to require strong leadership from the top; therefore, management must have the support of the employees, their understanding and participation. Obviously synergy is obtained when resources have been combined and coordinated effectively to add extra benefit and value to the organisation. A code of ethics is an organisation’s statement of its crucial values and is a means of formalising and making explicit its ethical stance. It goes hand in hand with a code of conduct. Together they provide the ground rules for day-to-day behaviour and serve as a guide (Du Plessis 2015) how decisions might be made towards plants and animals.

3.2 Q7 The earth is like a space ship with only limited room and resources

Chiliya (2016) is also of the opinion that with the current use of the resource patterns, a mere modicum of development would demand the resources of an additional “planet earth”, as our planet earth should not be like a space ship even if it is assumed that technological advances proceeded apace. The realisation that resources were growing insufficiently to allow the so-called developing world to develop alongside the same lines as the first world, promote the desire too of equitable distribution. It means that the economic growth must slow down dramatically which will not be allowed or supported by the industrial economies of the world.

An ethical approach leads to the best consequences for the greatest number of stakeholders. It is important for a business to record its code of behaviour and to make explicit the vision, mission, goals and objectives as well as the social responsiveness to all employees in the business. Such explicitness will ensure the integrity of the operation, product or service. Integrity is synonymous with predictable behaviour because what you said you would do is more likely to generate trust, than unpredictable behaviour according to Du Plessis (2015). So with the limited resources some countries have they should preserve it for the future as our planet is like a space ship with limited resources.

3.3 Q 22 I will not use products that are harmful to the environment

Sustainability of the environment requires people to rely as much as possible on renewable resources by getting power from the sun rather from fossil fuels such as oil, coal and so on. Besides the careful stewardship of natural resources, sustainability of the environment promotes the eradication of poverty and extreme income and wealth inequalities, the goal of full employment, the provision of access to quality and affordable basic services to all, and the fostering of a stable, safe and just society that can be self
supporting (Chiliya, 2016). A healthy organisation is able to link the past to the present and the future with the present in dealing with the products they use in manufacturing or the products they make available for users. Managers will have to put more emphasis on their employees’ products they use in their work areas as well as to educate them and their families.

3.4 Q32 All animals and plants are important to the future of the earth

One of the most common observations during survey-driven diagnoses or research initiatives, is the cynicism and scepticism and often overt reluctance by employees to take part in surveys or the idea generation system to find out what their views and opinions are in regards to the importance of animals and plants for the future. Their negative perception about plants and animals normally arises from the absence of feedback on the outcomes so that employees can educate them to be positive about preserving them for the future generations. The ideal will be to create a culture and attitude of participation within the organisation. Positive behaviour conceptualises suggestions as creative acts while initiative adds one particular facet to the creative process idea. The notion of ownership which generally accrues from participation is a major consideration in the implementation of suggestions or ideas how to preserve the environment in their place of work. It is through involving various stakeholder constituencies from the onset of the initiative, creating ideas, the pre-implementation stage, and during the diagnoses of generating ideas that psychological ownership for the preservation is finalised (Du Plessis et al, 2012).

3.5 Q 33 It is important that animals and plants do not become extinct

Employees might not be willing to adapt to or accept local rituals or practices in their host country. There is a difference between condoning corruption, and participating in harmless rituals. Tertiary institutions have a responsibility to promote environmental sustainability in New Zealand and to encourage students to ensure the business they will work for after their studies will become a learning business where the employees then learn as well as exchange knowledge and enhance new skills in regards to the importance of preventing the extinction of animals and plants. In some countries employees are slow to re-adapt to a new way of work or life or a new way of running a business.

The issue is how much influence cultural differences would bring to the workplace. Different approaches towards collectivism and individualistic cultures, according to Hofstede’s classic study, will create a degree of multiple negotiations for leaders and managers to consider (Du Plessis et al, 2014). Some cultures are collectivist, where working together as a team is valued, whereas others are more individualist. National differences in collectivism and orientation towards providing for and protecting plants and animals could become a problem if such cultures do not adapt to the clean green New Zealand where they have to protect and preserve the environment.
3.6 Q 34 To preserve the nature, we have to think globally and act locally

The precariousness of the environment is now evident to even the most casual observer. The global environment is changing rapidly and more dramatically than ever expected. Climate has become unpredictable with the UK and USA experiencing the coldest winter in a hundred years during the last decade’s winter seasons, and this has drastic effects on people across the world (Treanor, 2010).

Expectation gap is a term used to express the difference between the expectation and the perception of the actual experience. Living conditions and quality of life can be related to many aspects of the international students’ experiences, and particularly strongly related to their self-assessment of their study progress, friendship with the local people and the level of support they receive, and the clean green concept of New Zealand. The expectations of overseas students towards NZ living conditions vary as much as the students have varied attitudes towards life and preserving the environment.

The global financial crisis, and the subsequent worldwide recession, has had far reaching impact on people and businesses everywhere and specifically on employees in certain developing countries. They only wanted to survive and did not care about preserving the nature as it was a matter of survival. The economic uncertainty and volatility has created a real crisis in confidence in organisations, the likes of which haven’t been seen since the Great Depression of the 1930’s and preserving the environment was not a factor to even take into consideration (Du Plessis, 2014).

The shifting competencies of leadership are illustrated further in the differences between 20th and 21st century leaders. Organisations need leaders to lead now in a more sustainable, authentic way than many of their predecessors have done. Tomorrow’s leaders need to be values-centred leaders focused on building sustainable organisations that serve society, in contrast to the “command-and-control” style of the 20th century. Tomorrow’s leaders need entrepreneurial skills to grow businesses and create jobs, collaboration skills to build relationships across organisation lines to solve society’s most difficult problems in a global world. These tough times may arguably be the time to change the impression in many employees’ minds that the single imperative of their coming to work was to make shareholders richer. They have to be educated that the emphasis is now more than ever on reserving the environment and sustainability (Du Plessis, 2014).

4. METHODOLOGY

Background to the collection of the empirical data

It is the third repeat and execution of this type of study in UUNZ Institute of Business, making it very useful as it has become a longitudinal study.

This study focussed on quantitative measures of concern for conservation and sustainability and the underlying constructs in a local sample. A post hoc
design was used, comparing the concern for conservation and sustainability and the underlying constructs of students studying at UUNZ Institute of Business in Auckland New Zealand mainly in two age-grouped categories: students aged between 20 and 39 years, and 40 years and older. The group included different nationalities and religions.

The target population were international tertiary students of UUNZ Institute of Business, Auckland, NZ. A total of 260 questionnaires were distributed to under- and postgraduate students studying business at the institute; 224 usable questionnaires returned resulting in a 86.7% response rate. The sample method included the combination of Quota and Convenience Sampling. The choice of business students is deliberate because the researchers believed they will get a cohort of respondents with similar plans for the future, almost similar background, and within a certain age group in addition to materialistic aspirations. Some of these students already have their own business or plan to have it in NZ or might be in future in senior positions that could have a deciding standpoint on these issues.

Confidentiality was assured and it was explained to the students that he/she might, at any stage, withdraw from the study if he/she did not want to continue. There was no conflict of interest and the intellectual and cultural property ownership was respected.

**Questionnaire Design**

A questionnaire was used with permission from the previous researchers with 52 questions (using a Likert scale from 1 very strongly disagree to 7 very strongly agree) regarding some important characteristics about the views of students towards environments, culture, self feelings towards life regarding money and health, human and their interaction with natural resources. Including in these 52 questions, six closely related questions and demographic information were used for the current paper. The other questions are discussed in other papers as this is a huge study and cannot be dealt with in one paper.

**Data collection**

Questionnaires were distributed amongst the international tertiary students at UUNZ classes by the lecturers. Students completed the surveys anonymously and returned it to a box in their respective classes without the lecturer being present. Participation of all business students in the study was voluntary and through informed consent.

**5. ANALYSIS AND FINDINGS**

**5.1 Background**

For this research study, it was decided to use an inductive approach as data analysis. The inductive approach is a means to collect data and then investigate and analyse them to perceive which themes to follow up, focus on and create a conceptual framework (Collis and Hussey, 2015). Commonly, data analysis is referred to as the process of transforming and revealing raw
data into results. Data analysis enables the meaningful data collected and patterns to be identified. In an attempt to analyse qualitative data and present its meaningful findings, it is suggested that researchers need to decide a particular technique that is appropriate for reducing and restructuring the data in a form (Collis and Hussey, 2015).

**Questionnaire analysis**

Since there were a total of 224 usable responses it was found that the agree and strongly agree and disagree and strongly disagree figures would be used only as they are the most significant. Only six closely related questions were used in this paper. Below are the questions and the findings of each.

**5.2 Analysis and Findings to answer research questions and objectives**

Thus, the main research question is: What can you as international students do to preserve the environment in New Zealand? It can be deduced from the six questions’ answers that the international tertiary students are mostly in favour of preserving the environment of New Zealand in other words the clean green image.

**Q 4 Plants and animals exist primarily to be used by humans**

**Figure 1**

A total of 71% of females are of the opinion that plants and animals exist primarily to be used by humans. It is not clear what they regarded as “use” but only 29% of males strongly agree.

The age group 20-39 years of age was the most popular group and Indians strongly agree with the same at 11.16% - see figures 2 & 3 below.
In Figure 4 below it is clear that 11.61% of Christians are of the opinion that plants and animals are primarily for use by humans and it can be deduced that it is because in their faith they have no holy animals or plants.
Q7 The earth is like a space ship with only limited room and resources

The respondents are mostly females in the age group 20-39 who are totalling 68% and 44.2% respectively. Figure 6 depicts that 20.54% of the Indians strongly agree and 20.09% of Christians do
Q 22 I will not use products that are harmful to the environment

A total of 73% females, in the 20-39 age group are from India with 28.13% with 19.64% Hindus. Figure 7 below depicts the religions who responded.

Q32 All animals and plants are important to the future of the earth

In this question 69% were female in the 20-39 year old group, and 40.63% are from India and 32.14 are Christians. Figure 8 below shows the different religions’ responses clearly and it can be deduced that Christians do want to
preserve the environment for the future and thus confirmed what was said in Q 4 Figure 4 that Christians do not have any holy animals or plants.

**Q 33 It is important that animals and plants do not become extinct**

A different point in regards to the percentages from Indians and Christians in regards to their background and religion was received in this question. A total of 32.59% of Indians and 27.23% of Christians reported that it is important for both animals and plants not to become extinct. Female respondents were 70% and the age group was 20-39 years old. Figures 8 and 9 below show the background and religions respectively.

**Figure 8**

![Bar Chart: IT IS IMPORTANT THAT ANIMALS AND PLANTS DO NOT BECOME EXTINCT](image)

**Figure 9**

![Bar Chart: IT IS IMPORTANT THAT ANIMALS AND PLANTS DO NOT BECOME EXTINCT](image)
Q 34 To preserve the nature, we have to think globally and act locally

The age group 20-39 years achieved the highest response rate again with 65.18% who strongly agree with this question followed by the Indian background respondents and then the Christian faith responded with 29.46% followed closely by the Hindu religion with 24.55%

Figure 10

5.3 Importance of the findings – Implications for tertiary Institutions

The importance of this study for tertiary institutions is that they get a very good idea about the thinking of international students from just about every continent or at least a very global audience.

Owners, CEOs and Managers of these private tertiary institutions should take note of this study. They could take the lead as it should actually go further to all universities in New Zealand as it could be very similar to all of them even if it was done at one institution only.

It could only benefit New Zealand’s future if all tertiary institutions include in their curricula at least one session on how to preserve New Zealand’s natural beauty and resources to inform the thousands of international students studying in New Zealand. Export education is a multi-billion dollar income for New Zealand but we can at the same time preserve our resources by thinking globally (international students) and act locally (programmes or papers to international students in New Zealand) on how to preserve our resources.
5.4 Recommendations

Future research and similar studies should be done to enable a comparison between countries and to record their progress. The authors of this paper are of the opinion that the drive for change needs to come from the CEO or manager of the tertiary institution and the plans need to be implemented by all levels of the organisation to gain organisational-wide commitment. Furthermore, international policy makers and governments need to enforce these regulations in future.

Another recommendation is to explain and make students aware of the clean green concept in New Zealand during the orientation / induction stage of the new international students.

6. CONCLUSION AND LIMITATIONS

This research project’s only limitation is that it was done at only one tertiary institution in Auckland among international students.

This research add value because it is a longitudinal study and perceptions of students over a six-year period could be compared. Tertiary institutions should pay attention to the outcome of this study to alter / amend / or add to their curricula a paper for international tertiary students on every level with facts on sustainability and how to preserve the limited resources especially in New Zealand with the clean green image, for future generations.

International students have certain perceptions about sustainability and they could become leaders of organisations in New Zealand so their views and perceptions on sustainability matters to us all. This paper discusses the views of respondents who had to answer questions such as whether plants and animals exist to be used by humans, and the earth is like a space ship with limited room for resources, and the use of products that could be harmful for the environment. The agree and strongly agree versus the disagree and strongly disagree responses were taken into consideration and the outcomes are discussed in the analysis section.
7. REFERENCES


