

THE OPEN UNIVERSITY OF TANZANIA



**International Conference on the Future of
Tourism (ICFT)**

16th -17th April 2019

**Organized by: The Open University of Tanzania
Venue: Njiro VETA Hotel, Arusha-Tanzania**

**Proceedings Editors Prof. Jan-Erik
Jaensson Dr. France Shayo**

The Open University of Tanzania
Kawawa Road,
P. O. Box 23409
Dar es Salaam,
TANZANIA

©The Open University of Tanzania, 2019

ISSN - 2507-7821

ISSN - 2507-7872 [Online Publication]

All rights reserved. No part of this publication may be reproduced, stored, in a retrieval system or transmitted in any form or by any means; electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of The Open University of Tanzania.

FOREWORD

Dear Authors and Esteemed Readers

It is with deep satisfaction that I write this Foreword to the Proceedings of the 2nd International Conference on the Future of Tourism (ICFT) held in Arusha, Tanzania, April 16 - 17, 2019.

ICFT continues a tradition of bringing together researchers, academics and professionals from all over the world, experts in tourism and hospitality. The conference particularly encouraged the interaction of research students and developing academics with the more established academic community in an informal setting to present and to discuss new and current work. Their contributions helped to make the Conference as outstanding as it has been. The papers contributed the most recent scientific knowledge known in the field of Sustainability of Tourism; Domestic Tourism and SMEs Development; Tourism and Economic Development; Culture and Tourism; Innovation in Tourism; Customer Care in Tourism; Methods of Measuring Tourism; and National Tourism Policy.

In addition to the contributed papers, two invited keynote presentations were given: by Mr. Richald Rugimbana, the Executive Secretary of Tourism Confederation of Tanzania who spoke about the Issues for future tourism development with special focus of Tanzania; and Prof. Zororo Muranda, Pro-Vice Chancellor, Chinhoyi University of Technology in Zimbabwe who gave presentation on the Future of tourism: Tourism of the future.

The Conference was preceded by a tailor made training in *e-Tourism and Management of World Heritage sites*. The facilitators of training were: Prof. George Oreku, a professor of ICT from the Open University of Tanzania and Mr. Erick Kajiru, an expert of Management of UNESCO World Sites from the UNESCO Commission in Tanzania.

These Proceedings will furnish the scientists of the world with an excellent reference book. I trust also that this will be an impetus to stimulate further study and research in all these areas.

We thank all authors and participants for their contributions.

Ladislaus F. Batinoluho, PhD

Conference Coordinator

Department of Tourism and Hospitality Management

P. O. Box 23049, Dar es Salaam, Tanzania

Tel: +255 767 636606

Email: tourism@out.ac.tz

Website: <https://icft.out.ac.tz/>

ENVIRONMENTAL CONSERVATION AND ITS INFLUENCE ON TOURISM DEVELOPMENT IN RWANDA: CASE STUDY OF RWANDA ENVIRONMENT MANAGEMENT AUTHORITY (REMA)

Kalulu Ronald, Kabera Callixte and Tushabe Emmy
University of Tourism, Technology and Business Studies (UTB), Rwanda
kaluluronald@gmail.com

Abstract

The study explored environmental conservation and its influence on tourism development in Rwanda. The study objectives were designed for the study and literature review was guided by research objectives and was attained from secondary sources. The total population, mainly from REMA, tourists, tourism players was 109 respondents who were all included in the sample using both convenience and purposive sampling techniques. Tools for collecting data were questionnaires, documentaries and interview. Data was analyzed using tables, frequencies and percentages. Findings on the causes of environmental degradation in Rwanda were poor cultivation practices, deforestation, overgrazing, soil exhaustion, widespread poaching. The impact of environmental conservation on tourism development in Rwanda were the ability of the conserved flora and fauna to generate tourism revenue when visited by tourists, stabilizing biodiversity, quality air for visitors, and increase of wildlife conservation. The relationship between environmental conservation and tourism development were highly significant in that, if there is environmental conservation, then, tourism resources will be developed hence attracting visitors at the destination. The study proposed environmental sustainability in Rwanda such as; 3R (recycle, re-use and reduce); implementing carrying capacity, green tourism, use of renewable energy, planting more trees and plants, efficient waste management, soil conservation and better agricultural practices as well as pollution Control.

Keywords: Environmental conservation, Tourism, Development

Introduction

The globe has three major types of environment from which tourism can benefit. These include the aerial, aquatic and atmospheric or land environment. Therefore, the quality of the environment is essential not only to man but to all flora and fauna hence forming the backbone of tourism though the relationship of tourism with the environment is complex as it involves many activities that can have adverse environmental effects (Andereck et al, 2014).

Man has put a lot of pressure on the environment, in that, today than in the past, there has been rampant developments which has come with mixed blessings. On a positive note, there has been economic development and infrastructure improvement. However, these developments have greatly impacted on the environment as it displaces forests, mountains, and valuable resources all which are habitats for wildlife. At the same time, the constant use of chemical fertilizers, pesticides and insecticides plus other means of land degradation has had great effect on the environment as well as becoming obstacle to tourism development because it hinder environmental conservation. The above has led to a level where the planet is reaching unsustainable levels as it faces shortage of resources like quality water, quality air, quality space and quality food yet these are the same resources that tourists need for consumption at the destinations visited.

Today's disposal of chemical waste and plastics into the waters has had bad eventualities as it leads to a contamination of water and fish in the nearby thus causing severe health problems for people living in the area and is seen by Hodgson (1996) and Holden (2006) as the first event that caused environmental concerns among the public (Joseph et al, 2013). In the 1960s, researchers started to realize how mankind is influencing and changing the environment of our planet, leading to the creation of academic studies about environmental concerns due to human influence.

With the spread of development in the 1970s, Europe, America and other parts of the earth, caused a lot of negative environmental impacts (Mathieson et al, 2015). These impacts gave rise to public concerns about ecological issues leading to the establishment of several Non-Governmental Organizations (NGOs) like 'Greenpeace' or 'Friends of the Earth' which influenced the media and political structures to draw their attention towards problems in the environment (Andereck et al, 2013). During the 1980s the tourism industry reached from the 'Western countries' into areas as the Caribbean, South East Asia and the African Continent, broadening awareness about consequences for the environment due to tourism development.

As (Bosselman (2014) points out that research about local and global impacts of the Environment conservation on tourism development throughout the decade of the 1990s increased, causing debates and serious protests about various ethical concerns: "An ethical dimension was increasingly introduced into environmental campaigning over rights of non-human life, with high-profile and sometimes violent actions being taken for the liberation of animals from experimentation. Environmental conservation in the United States over the past several decades has focused on regulating production industries, such as manufacturing and mining. However, there has been increasing interest in the

tourism activities. Environmental conservation contributed \$91 billion in revenue into the U.S. economy in 1998.

In 2005, Fáilte Ireland set up an Environment Unit which is now part of the Policy and Planning Unit. The purpose of the Unit is to advocate a high-quality physical environment for tourism and to promote good environmental practice throughout the tourism sector. As part of its role as a prescribed body in the planning process, Fáilte Ireland also aims to strengthen its partnerships with Local Authorities (Catner et al, 2016). Tourism itself is a vast subject and law relating to tourism is in context of everything that is covered under the tree of tourism. In busy and hectic life today, the word tourism itself brings a sense of joy and calmness. Every human being enjoys and cherishes the bounteous gift of nature (Becker, 2009). Across Europe in the 20th century, Man has always been attracted towards the Mountains, Green valleys, gushing and meandering water sources, woods and forest glades, stretching shores of golden beaches, wilderness, and wildlife in shore nature (Terry et al, 2010). The adverse impact environmental conservation has on the tourism development both undermines the basic resource for tourism in coastal areas and heavily affects other non-tourist economic activities. (John et al, 2018). According to Martha (2016). Environmental protection in Tanzania began during the German occupation of East Africa (1884-1919) colonial conservation laws for the protection of game and forests were enacted, whereby restrictions were placed upon traditional indigenous activities such as hunting, firewood collecting and cattle grazing. In year 1948, Serengeti was officially established as the first national park for wild cats in East Africa. Since 1983, there has been a more broad-reaching effort to manage environmental issues at a national level, through the establishment of the National Environment Management Council (NEMC) and the development of an environmental act.(Bacon et al, 2017). In 1998 Environment Improvement Trust (EIT) start working for environment & forest protection in India from a small city Sojat. Founder of Environment Improvement Trust is CA Gajendra Kumar Jain working with volunteers (Beeh, 2016).

For tourism to be successful and to exist, there must be a well-protected and conserved environment with a mix of quality air, quality vegetation for the fauna, quality water and food and health living for man (Hall et al, 2014). It is also clear that an improved environment improves the quality of visitation to destinations as the environment is able to sustain the needs of visitors. This means that tourism development should in all respects be appropriate to the character of the place in which they are situated and it should apply to the scale, design and nature of the place as well as to the particular land use, economic and social requirements of the place and its surroundings (Amaro, 2013; UNEP, 2016). The industry is dependent upon the country's natural environment and cultural heritage to sustain the distinctive tourism product and to develop environmentally-based ecotourism products. East African committee in 2014

declared that the beneficial uses to tourism of a range of environmental resources - particularly water - are made clear to those with a responsibility for protecting them. Overseas tourist numbers are expected to increase to 10 million in 2012. (Godsman et al, 2011). In order to facilitate this growth without increasing pressure on the environment, Rwanda needs to make commitments on air emissions, waste management, water quality and forest protection (Laws, 2013).

Rwanda has variety of rich biodiversity that can attract many tourists such as Volcanoes National Park (VNP) which inhabits some of the rarest and endemic wildlife species including mountain gorillas MINITERRE (2003). However, the environment is facing different threats resulting from human activities including poaching, hunting, bamboo collection, and others.

Despite the importance of tourism, there are many threats to this environment caused by human activities based on their dependence on forest resources to supplement livelihoods (Bush et al., 2010). Some of these threats, such as mining, poaching for bush-meat, timber harvests, wood harvests for handicrafts, medicinal plants, minerals, honey gathering that also causes fire outbreaks, construction, fire, and illegal honey gathering that often results into fire outbreaks (Plumptre et al., 2004) and many others, all of which have led to significant deforestation and degradation of this rather fragile mountain gorilla habitat in the AR (Plumptre et al., 2004). It has also resulted into significant habitat loss that directly threatens already endangered species such as mountain gorillas (Plumptre et al., 2003, 2004, 2007). For example, since the mid-1980s, about 1560 square kilometers of forest cover has been lost and converted to other land uses in the Albertine Rift (Plumptre et al., 2007). Historically, human-induced biodiversity threats to mountain gorilla habitats of the GVL, especially the Virunga National Park in the Democratic Republic of Congo (DRC) and Volcanoes National Park in Rwanda have been primarily attributed (and continue in the case of DRC) to the decades of civil wars in the East African great-lakes region (Plumptre, et al., 2001). These wars have made it impossible for organized and effective law enforcement and conservation efforts in conflict areas. As conservation efforts evolved through these conflicts, one of the primary challenges for conservation in the Albertine Rift is the increasing forest dependence behavior of Some of the forest resources include charcoal firewood, Endangered species at VNP, such as mountain gorillas, continue to face threats resulting from impoverished park neighboring communities (Plumptre et al., 2004; Bush et al., 2010) and (Martin et al., 2011; Plumptre et al., 2003).

It means that government should put up aggressive mechanisms and efforts if tourism is to thrive as it solely depends on environmental quality. Conservation involves improvement, and protection of human and natural resources in a wise

manner, ensuring derivation of their highest economic and social benefits on a continuing on long-term basis. Conservation is achieved through alternative technologies, recycling, and reduction in waste and spoilage and (unlike preservation) implies consumption of the conserved resources. According to new Oxford American Dictionary (third edition), Conservation is the action of conserving something, in particular. It involves preservation, protection, or restoration of the natural environment, natural ecosystems, vegetation, and wildlife. Furthermore, it shows that Conservation is preservation, repair, and prevention of deterioration of archaeological sites and artefacts.

Upon realising the importance of tourism to Rwanda's economy, the government formed the Rwanda Environment Management Authority (REMA) institution with mandate to facilitate coordination and oversight of the implementation of national environmental policy and the subsequent legislation (Martha, 2009). REMA's mission is to promote and ensure the protection of the environment and sustainable use of natural resources through decentralized structures of governance and seek a national position to emerging global issues with a view to enhancing the wellbeing of the Rwanda people (Lincoln et al, 2014). Rwanda's conservation measures have attracted many visitors and eventually inflow of foreign currency in the country (Kavacs et al, 2010) as overseas visitors agree that Rwanda is a clean and environmentally green destination. The tourism industry has successfully traded on Rwanda's positive environmental image for decades, but unprecedented economic growth in recent years has put the quality of this core tourism product under increasing pressure. Strategic tourism assets, which are important for the sustainable growth of tourism in Rwanda, should be safeguarded from encroachment and damage by inappropriate development. These assets include special landscapes, important views, good water quality, the setting of historic buildings and monuments, biodiversity and access points to the coast and open countryside (Liddle et al, 2008).

The study adopted the following as the research questions. (1) What are the causes of environmental degradation in Rwanda? (2) What is the impact of environmental conservation on tourism development in Rwanda? (3) What is the relationship between environmental conservation and tourism development? and finally (4) What are the appropriate measures of environmental sustainability in Rwanda?

Literature review

This section presents review of related literature and the various studies in relation to the problem under investigation.

Environmental conservation

Environmental conservation is an umbrella term that defines anything we do to protect our planet and conserve its natural resources so that every living thing can have an improved quality of live (DelRosso,2017) Environmental conservations include activities such as managing our landscapes, habitats, species and access to our countryside. It is all about protecting the UK's natural environment. It is not about profits but helps address some of our big challenges, such as climate change, and contributes to biodiversity and health and social inclusion (Bush, 2014).

The causes of environmental degradation

Environmental degradation comes about due to erosion and decline of the quality of the natural environment. It is caused directly or indirectly by anthropogenic activities that extract various environmental resources at a faster rate than they are replaced, and thus depleting them (John et al, 2018). On this regard, degradation means damage or reduction in quality of environmental features, primarily influenced by human activities. Some natural events such as landslides and earthquakes may also degrade the nature of our environments. The primary cause of environmental degradation is human disturbance. The degree of the environmental impact varies with the cause, the habitat, and the plants and animals that inhabit it (Becker, 2009). Continued environmental degradation can completely destroy the various aspects of the environment such as biodiversity, ecosystems, natural resources, and habitats. For instance, air pollution can lead to the formation of acid rain which can in turn reduce the quality of natural water systems by making them acidic. This is a typical example of environmental degradation. Environmental degradation is therefore a concept that touches on a variety of topics namely deforestation, biodiversity loss, desertification, global warming, animal extinction, pollution, and many more (Martha, 2016).

Overpopulation and Over-exploitation of natural resources as the human population keeps on enlarging, puts pressure on the environment. According to a study by the UNEP Global Environment Outlook, excessive human consumption of the naturally occurring non-renewable resources can outstrip available resources in the near future and remarkably destroys the environment during extraction and utilization. Overpopulation simply means more pollution and fast extraction of natural resources compared to how they are being replaced (Hall et al, 2014). Ruinous Agricultural Practices, intensive agricultural practices have led to the decline in quality of most of our natural environment (Cessford, 2017). Majority of farmers resort to converting forests and grasslands to croplands which reduce the quality of natural forests and vegetation cover. The pressure to convert lands into resource areas for producing priced foods, crops, and livestock rearing has increasingly led to the depreciation of natural environments such as forests, wildlife and fertile lands (Kavacas et al, 2010).

Furthermore, the intensive agricultural practices destroy fertile lands and nearby vegetation cover due to the accumulation of toxic substances like bad minerals and heavy metals which destroy the soil's biological and chemical activities. Runoffs of agricultural wastes and chemical fertilizers and pesticides into marine and freshwater environments have also deteriorated the quality of wild life habitats, natural water resources, wetlands and aquatic life (Edington et al, 2016). Landfills, one of the calamitous effects of landfills are the destruction of nearby environmental health together with its ecosystems. The landfills discharge various kinds of chemicals on the land adjacent to forest, various natural habitats, and water systems such as underground and surface water which makes the environment unappealing to the survival of trees, vegetation's, animal and humans. It even interferes with the animals interactive food chains because the chemicals contaminate plants, and waters which are consumed by the animals. Besides the foul smell from the landfills and periodic burning of the wastes make living in such environments unbearable (May et al, 2011).

Increase in deforestation, the act of deforestation (cutting down of trees) has impacted on the world in terms of depreciating the natural environment and wildlife. It has also impacted on humans on the account of changes in environmental support processes such as weather conditions. Some of the reasons for deforestation include farming, construction, settlement, mining, or other economic purposes. For more than one hundred years, the number of trees on the planet has plummeted, resulting in devastating consequences such as biodiversity loss, soil erosion, species extinction, global warming, and interference with the water cycle (Mathieson et al, 2012).

Environmental pollution, most of the planet's natural environments have been destroyed and a large portion is under huge threat due to the toxic substances and chemicals emitted from fossil fuel combustions, industrial wastes, and homemade utilities among other industry processed materials such as plastics. Land, air, and water pollution pose long-term cumulative impacts on the quality of the natural environments in which they occur (Fussel et al, 2015). Improper Land use Planning and Development, the unplanned conversion of lands into urban settings, mining areas, housing development projects, office spaces, shopping malls, industrial sites, parking areas, road networks, and so on leads to environmental pollution and degradation of natural habitats and ecosystems. Mining and oil exploration, for instance, renders land unusable for habitation and causes other forms of environmental degradation by releasing toxic materials into the environment. Improper land use has led to the loss and destruction of millions of acre of natural environments across the globe (Boo, 2017).

Natural Causes, despite the fact that environmental degradation is under normal circumstances associated with anthropogenic activities, natural causes are also contributors. Natural events such as wildfires, hurricanes, landslides, tsunamis

and earthquakes can totally lower the survival grade of local animal communities and plant life in a region (Redlin et al, 2010). These disasters can also destroy alter the nature of the landscape rendering it unable to support life forms on it. Besides, occurrences such as hurricanes and flooding can wash or force the migration of invasive species into foreign environments which can lead to its eventual degradation (Mathieson et al, 2012).

Impact of environmental conservation on tourism development

The formulation of positive impacts resulting from environmental conservation on the tourism is questionable because as Chimura et al (2018) argues, by using such an expression, it is meant that the environment is being protected from further negative impacts caused by human influence worse than tourism like deforestation or mining. So called ecotourism or nature- based tourism can lead to beneficial outcomes for the environment when financial benefits, earned from tourism, are being channelled into preserving wildlife, by doing so the tourism industry helps to sustain ecosystems while still using these ecosystems as a form of tourist attraction (USA Today). Wildlife tourism has changed from exotic animals being hunted down by rich European colonialists for their pleasure, to tourists spending a significant amount of money to get the opportunity to observe rare animals in their natural surroundings without destabilizing the sensitive ecosystem they live in (Edington et al, 2016).

This change allows sensitive ecosystems to stabilize its biodiversity, provides tourists with the possibility to experience unique nature and creates a new, sustainable source of income for local communities, especially in low-developed regions where this form of tourism can be utilized to reduce the consequences of agriculture, deforestation and the overuse of natural resources (USA Today). Environmental conservation can contribute directly to the tourism development of sensitive areas and habitat and the environmental conditions is better so this promote the increase in number of visitors who came in the areas (May et al, 2011). Revenue from park-entrance fees and similar sources can be allocated specifically to pay for the protection and management of environmentally sensitive areas. Special fees for park operations or conservation activities can be collected from tourists or tour operators. Some governments collect money in more far-reaching and indirect ways that are not linked to specific parks or conservation areas. User fees, income taxes, taxes on sales or rental of recreation equipment, and license fees for activities such as hunting and fishing can provide governments with the funds needed to manage natural resources. Such funds can be used for overall conservation programs and activities, such as park ranger salaries and park maintenance (National research council, 2005).

Tourists are getting aware of their travel behavior, advances in technology and transportation take place, infrastructure and facilities reach new levels, all these

factors are shaping and changing the tourism industry and future research is necessary to reduce the negative impacts of tourism upon the environment. Therefore, a rise of environmental awareness among tourists can lead to an increase of wildlife conservation because the tourism industry is going to realize how people base their decision making on the sustainability aspect of a destination which will lead to an increased demand of nature based or green tourism (Noack et al, 2016). The Travel industry of America (2018) Environment and Tourism emphasizes a holistic view of the tourism system and how it interacts with nature, illustrating the positive and negative effects of this relationship. It emphasizes how ontologies of the environment influence the planning and management of tourism for natural resource conservation and human development. It is an invaluable tool for anyone studying Human Geography, Tourism and Environmental Studies, as well as for policy makers and consultants working in the field of tourism development (David et al, 2016).

Relationship between environmental conservation and tourism development

Tourism and environment are closely linked to one another: on one hand tourism destinations are relying on natural resources, so called ‘common pool resources’ (CPRs) in academic circles, as mountainous regions, coral reefs, any kind of natural waters and others which function in form of attractions; and on the other side, environment can change in a positive as well as in a negative way due to tourism influence (Wagner, 2016). The rise of sea the level, the meltdown of glaciers and the polar ice, the change in temperatures all over the globe are not just bringing transformation from an environmental point of view, but they are also impacting numerous other fields of society like in this case, tourism.

By remarking David and Noack(2016) explanation of coral reefs, uses the example to explain how the handling of ‘common pool resources’ is affecting the environment, tourism and other sectors: the ecosystems of coral reefs are highly sensitive to any shift in temperatures or the chemical composition of the surrounding water, therefore it is essential that all actors like accommodation providers, tour guides and tourists do not damage the reef in any possible way otherwise future tourist arrivals will decline due to a loss in quality of the attraction resulting in reduced income for the entrepreneurs of the local community, which means decreased revenues generated from taxes for the local, regional or national government of the destination leading to a loss of potential investment (Redlin et al, 2010). The effects of environment change tourism development the resulting from human behavior are undeniable and have to be minimized by future research. Environmental conservation can be a major tool for tourism development but, if not properly planned it can have destructive effects on biodiversity and tourism in general, and can result in the misuse of natural resources such as freshwater, forests and marine life. At a number of

sites tourism development has resulted in serious water shortage affecting both local communities and industry, forests have been depleted and coral reefs have been damaged (Schulz et al, 2010).

The problem of environment conservation both undermines the basic resource for tourism in coastal areas and heavily affects other non-tourist economic activities. Negative impacts from improper environmental conservation occur when the level of visitor use is greater than the environment's ability to cope with this use within acceptable limits of change. An uncontrolled environment poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources. With all those challenges there will be no sustainable tourism development because sustainable tourism development always needs to respect the environment and refer to accepted principles of sustainability (Seabloom et al, 2009). It must be planned to make balanced use of the resources of any site, thus avoiding negative effects, reducing visitor satisfaction, or adversely impacting the local society, economy and culture. Sometimes it may be difficult to quantify limits, but they are essential for sustainable tourism. Thus, if it is to maintain the main elements on which it is based, the tourism sector needs to invest in the maintenance of the natural environment. If properly planned, environmental conservation can become a positive force for tourism industry development (Wang et al, 2017).

Visitors can intrude upon wildlife in a variety of ways, from their visual presence to their movement, noise, and behavior. Different species will perceive the consequent disturbance in different ways and for different reasons. (Yee et al, 2012). Wildlife tolerance and response, and any impact consequence, will vary among different species, settings and times. Factors contributing to these variations can include different feeding patterns; territoriality; breeding seasons and behaviors; lifecycle maturity; alarm behaviors; and ecological niche competition. Some visitor effects, such as trampers passing by, may be incidental to wildlife, whereas others, such as ecotourism visits or photography, may be specifically directed at wildlife. Additional visitor-related effects can also arise from the ways in which wildlife responds to the presence of staff; any of their associated construction, maintenance and research activities; and the effects related to the presence of facilities and structures (Woodring, 2014). When visitors come to a natural environment, they can import harmful external material, substances, or biota. Visitors may accidentally introduce hazard sources such as exotic weeds, predators, and diseases. They may also introduce hazards from negative behaviors such as fuel leakage or disposal; soap chemicals from washing; littering; bringing dogs; or inappropriate fire practices

(Willard et al, 2012). Similar hazards arise from the activities of management staff, both direct and indirect, in facility provision and maintenance. These may be direct introduction effects, such as exotic seeds in track fill or building materials; leachate from timber; and chemicals from material degeneration. Or they may be indirect effects, such as providing access routes for predators; fire potential; and providing focal points for visitor congregation. (Rejeski, 2017).

Measures to sustainable environment

We all want to protect our planet, but we're mostly too busy or too lazy to put up big change that would improve our lifestyle and save the environment. In celebration of Earth Day, here are some reminders about how you can contribute to saving our one and only planet. Population boom and fossil fuel based technological advancements have taken serious measures on our natural environment (Noack et al, 2016). There should be planting more trees and plants as they have environmental, economic, and social benefits. Trees improve the air quality of the place we live in by absorbing carbon dioxide and releasing oxygen, and give us food and shade. A regular sized tree can clean about 330 pounds of carbon dioxide while producing oxygen for the whole community every year. (Shanklin, 2013). Trees also combat the greenhouse effects, reduce the pressure on heating and cooling, and therefor saves energy. Trees also save us from climatic changes, natural disasters, and catastrophes. Find nonprofit organizations in your area that promote sustainability and join these groups. There are also many organizations promoting sustainability and environmental awareness on the internet. You can easily get involved and help these organizations promote sustainability. Joining and helping out a few sustainable organizations can go a long way in making a big difference in our local communities, society and environment (Carol et al, 2011).

Collect rainwater and save it to water your lawn. You can buy rainwater barrels at your local home improvement store or even make your own. We all know what we need to do to protect the environment, whether that is recycling, reducing our power consumption by switching electronic devices off rather than using standby, by walking short journeys instead of taking the bus. Businesses are regulated to prevent pollution and to keep their own carbon emissions low.(Wager, 2016) There are incentives to installing renewable power sources in our homes and businesses. Environmental protection is the third pillar and to many, the primary concern of the future of humanity. It defines how we should study and protect ecosystems, air quality, integrity and sustainability of our resources and focusing on the elements that place stress on the environment. It also concerns how technology will drive our greener future; the EPA recognized that developing technology and biotechnology is key to this sustainability, and protecting the environment of the future from potential damage that technological advances could potentially bring (Shanklin, 2013).

Reduction of waste, this is the first out of the measures to sustain the environment that I would like to introduce in this entire article and want you and my other readers to learn and make use for good. In daily life, we waste a lot of things such as plastics, paper, etc. You can recycle these wastes instead of throwing them in a trash can. You can categorize them into non-recyclable and recyclable products and send recyclable products to a recycling company. Buying reusable and used items is a great way to protect the environment (Steffens, 2013). By choosing used products, the demand for new products will be reduced and of course, your money will be also saved. Visit local used furniture and used appliance stores to find your needed items. The packaging used to protect products from unwanted damages. However, you should choose products with minimal packaging. This is because it needs energy and new raw materials to create. When shopping, buy items that use minimal packaging. If you have to buy something that needs to be packaged, try to choose products with the least packaging as possible as you can. More importantly, avoid choosing products that is packaged with styro foam. It is a popular packaging material, but it contributes to land pollution as it releases hydrocarbons and it is also difficult to recycle (Stipanuk et al, 2016).

The best measure taken on protection of the environment and make it sustainable is installing solar panels on your roof if you are trying to save the environment. Using alternative energy sources as much as possible is a good way to protect the environment. Start from your house by getting solar panels installed and using solar power for room and water heating. Solar panels are used to convert sunlight into electricity without causing pollution. Solar energy is renewable and you will never worry about running out of it. It also needs a little maintenance to work at maximum efficiency. Besides, there is no noise made in the process of producing electricity. Finally, solar panel technology is continually developing so reducing the cost of production and simultaneously increasing the efficiency is not impossible. In fact, this is among the best tips on how to protect the environment so that you should not look down but learn and consider installing it as soon as possible (Andreck et al, 2013).

Forest conservation, Forest plays the vital role for the environment conservation. The Ministry of Forest and Soil Conservation has launched various programmes for the conservation of forest and environment. Community Forest Programme is one of the examples of conservation programmes that help to protect the land, water and other components of the environment. Afforestation must be done for the conservation of forest. Laws about forest protection and awareness generation help in the conservation programme (National research Council, 2005).

Soil conservation is an important measure to sustain the environment. Control of landslides, flood, and soil erosion helps to protect the land. Afforestation, tree

plantation, protection of pasture land helps to conserve the soil. Terrace farming on slope land, use of compost fertilizer and minimizing the use of chemicals also helps to protect the soil. Ministry of Forest and Soil Conservation, Ministry of Agriculture, etc. are conducting various programmes to protect the soil (Vignola et al, 2010).

Construction of toilets in every house and management of enough public toilets also help to keep the environment healthy. Cleaner production techniques can be important tools for planning and operating tourism facilities in a way that minimizes their environmental impacts. For example, green building (using energy-efficient and non-polluting construction materials, sewage systems and energy sources) is an increasingly important way for the tourism industry to decrease its impact on the environment. And because waste treatment and disposal are often major, long-term environmental problems in the tourism industry, pollution prevention and waste minimization techniques are especially important for the tourism industry (Bosselman, 2014).

Pollution Control, Industries and vehicles emit the smoke, dust and harmful gases that pollute the environment. Chemical fertilizer and chemical poisons like insecticides, herbicides, pesticides, etc. also pollute the environment. Pollution must be controlled to keep the environment healthy. The government of Nepal is making an effort to control the pollution (Joseph et al, 2012).

Conservation of Heritage, Temple and parties are our cultural heritage. They are our identity. They must be preserved for future generation. We must keep the areas of cultural heritage free from pollution. Unfortunately, there seem to be many people who think that only governments and big companies in general should do something to conserve the environment. This is however untrue. (Amaro, 2013). Every single individual is actually able to participate in protecting this planet from pollution and suffocation caused by all kinds of residues and waste “produced” by the world’s population. It is actually quite easy to go green. Taking care of the environment should be everyone’s responsibility and privilege at the same time; the privilege to conserve the planet for the generations to come (UNEP, 2016). There are numerous ways in which environment protection and conservation can be achieved. Nevertheless, we will try to enumerate ten of the most common and simple ones. They are easy to do by absolutely anyone with a little bit of good will. There are three essential verbs you should keep in mind: reduce, recycle, and reuse (Economic society, 2018).

Research Methodology

The research made use of primary data as well as secondary data, and especially inclined towards qualitative research though persuasive evidence comes through a triangulation of measurement processes and this was utilized to merge

quantitative and qualitative research methods (Aliaga and Gunderson, 2002). The study used survey techniques and data collection included observation and structured questionnaires developed to find out the enablers of environmental conservation and tourism development. Additional essential data was also collected through interviews especially to key leaders in REMA, tourists and tourists' players/operators and responses were analysed using descriptive statistics. A 5-point Likert scale was used to measure the level of agreement. It was administered to 109 respondents. However, the data gathering faced hardships such as the spread of the youth in the district as well as language of communication made the data collection hard and communicating with the some respondents was not easy due to the fact that they did not understand English hence creating a language bottleneck. Despite the above limitations, the research team utilized the available means to achieve the goals by getting interpreters, permission from authority. The modified questionnaire was pilot tested on 80 respondents in Universities where most potential and would be future tourism leaders the country are situated. This was also more practical as students in colleges are more accessible and with the help of colleagues in other colleges similar testing environment could be assured (Ashmore, 2008).

The Major Findings

This chapter illustrates the general information regarding the findings obtained from the study about environmental conservation. The study was undertaken to achieve and to answer a variety of questions which specifically were; (1) what are the causes of environmental degradation in Rwanda? (2) What is the impact of environmental conservation on tourism development in Rwanda? (3) What is the relationship between environmental conservation and tourism development? and finally (4) What are the appropriate measures of environmental sustainability in Rwanda? Literature was reviewed, data was collected and analyzed and eventually presented in tables, figures and narrative.

Demographic findings

The study revealed that majority of the respondents were female which is in agreement with the recent World Bank report about distribution of gender. Most of the staff at REMA and tour firms/companies had attained education. These findings are not new as they are supported by other studies that most people do not enter into entrepreneurship probably because of lack of adequate formal education (Ashmore, 2008; Rashid and Wilhelm, 2016; Auken, 2006). Most respondents were married. The respondents showed the indicators of a good environment including biological diversity which indicates that the greater the diversity the healthier the environment, food production, average surface temperature and Carbon dioxide concentration in the atmosphere, human population and resource depletion.

The causes of environmental degradation in Rwanda

The causes of environmental degradation in Rwanda, as confirmed by 52% of the respondents were poor cultivation practices in the small mountainous country with the highest rural population density in Africa, largely on steep mountainous terrain on old leached infertile soils. This has led to declining agricultural yields and increasing levels of land degradation as rural farmers cultivate ever more marginal lands. An initial scoping exercise showed that the key issue within the land degradation scenario was poor cultivation practice leading to increasing and severe erosion of soil and consequent sedimentation of watercourses, loss of soil fertility and overall loss of ecosystem productivity and health. Other causes were deforestation in many places of Rwanda particularly soon after genocide in April 1994, where the total area covered by forests had been reduced to around 470,000 ha, from 700,000 ha in the pre-war situation. The respondents also said that the significant decimation of forests was a result of the drastic increase in needs for wood for construction of makeshift shelters for the Displaced Persons and as a source of energy for cooking during the war. Some respondents affirmed that overgrazing was also a big problem in the Eastern part and southern part of the country especially the that most returning refugees who settled in the region had large herds of cattle concentrated in this area and overgrazing was a problem due to the limited carrying capacity of the dry region.

8% of the respondents said soil exhaustion. With unsustainable agriculture remain in Rwanda that cause soil exhaustion and this resulting in a serious level of land degradation throughout the country. The respondents said that soil exhaustion in Rwanda has two direct causes Soil Erosion and Loss of Soil fertility. Soil erosion in Rwanda is a result of a combination of several factors: extremely steep slopes, non-application of soil protection measures, application of inappropriate soil conservation techniques, unreliable heavy rains and the general low level of awareness of both the farmers and local leaders on the economic benefits of soil protection investments. Continued decline in soil fertility is mainly a result of “soil mining” such continued cultivation without replenishing soil fertility with plant nutrients through application of organic manure or/and mineral fertilizers. The other causes were poaching especially in the rural areas where the citizens are catching animals as their meals.

The impact of environmental conservation on tourism development in Rwanda

According to table number 7, the impact of environmental conservation on tourism development in Rwanda, led to acquisition of tourism fees especially in protected areas of Akagera national park and volcanoes national park and Nyungwe park. In these parks, revenue was earned in form of visitor entrance fees, and concession fees and this led to tourism development.

There was also stabilization of biodiversity as 37% of the respondents said that when there is conservation, the flora and fauna stabilize thus leading to quality visitation. The respondents from REMA said that they protect environment to avoid greenhouse effects, climate change and so on in order to protect the planet from decimate but also with partnership of RDB they conserve environment also to create better environmental pictures that will attract the foreigners and receiving some cashes from those visitors, the respondents from both sides in RDB and REMA they confirmed that as if such cases take place immediately it is the development of tourism industry because those visitors will lodge in the hotels, use the local restaurants, consumes some product and services in the nations so that the tourism businesses increment will take place as well.

27% of the respondents said fresh air that attracts visitors. The respondents said that no body feel courage of heading in the region where there environmental devastation because even the air in the region is not fresh, when the environmental conservation is properly planned and implemented leads also to fresh air maintains in the country that makes each and every one among the visitors wish to go in the regions and 23% of the respondents said the impact of increase of wildlife conservation. With a rise of environmental awareness among tourists can lead to an increase of wildlife conservation because the tourism industry is going to realize how people base their decision making on the sustainability aspect of a destination. The respondents said that the term environmental conservation is the practices of protecting the natural environment on individual, organization controlled or governmental levels, for the benefit of both the environment and humans.

The respondents said that Rwanda Environmental Management Authority facing the problems of handling nature disaster like earth quakes, floods and climate change and these problems leads to environment degradation but the management of these calamities is not easy because it comes for the sake of God and people have nothing do with it. The budget relating to the protection of the environment also is insufficient because of the location of Rwanda where there a likely to happen aloft disasters.

The relationship between environmental conservation and tourism development in Rwanda

A well conserved environment really results into tourism promotion and development as majority respondents asserted. The correlation was highly significant in that when the environment is properly conserved, there will be the increase of natural resources which in turn will attract more visitors in the country hence tourism development. Positive changes in the quality of life could follows like personal income increases, helps to improve living standards for those more directly involved in industry, supports the diversity of restaurants and other cultural entertainment, influence the assortment of goods for sale in

many local shops that would not be available in the same amount if tourism did not exist to support them, park areas are often improved, street furniture and design criteria introduced, greater care and attention placed on overall environmental quality, new opportunities and only 6% of the respondents ticked weak, by that the respondents said that tourism development doesn't rely on environmental conservation.

Appropriate measures of environmental sustainability in Rwanda

The appropriate measures of environmental sustainability in Rwanda should include; planting more trees and plants and that REMA and RDB must put in place sound policies and laws governing the utilization of forest resources which have proven relatively effective due to both law enforcement and acceptance of the need by local people through a high degree of awareness creation. A number of forest management mechanisms were put in place, including the Ministerial Order of 2000, prohibiting tree harvesting in all public forests, the Ministerial Decree of 2003, establishing procedures governing Public Forest Management contracts and the establishment of the Forest Protection Service, created through the Prime Minister's Order of 2002.

Another measure should be efficient waste management. Efficient waste management is an important measure in reducing environmental impact and promoting sustainability. The respondents said that there are three keywords are reduce, reuse, and recycle which can significantly reduce global impact and conserve natural resources, reduce pollution, and reduce our carbon footprint. The first step to minimizing waste is to buy only the products that you need. Avoid excessive packaging and recycle everything that you can. 15% of the respondents said 3R(Recycle, re-use and reduce) the respondents said that rather than throwing out items like clothing or food jars, consumers can find new uses for them and thereby reduce their consumption of new resources. Composting, using jars to store beverages or leftover food, and trading or selling used DVDs rather than throwing them out are all examples of ways people can reuse. The respondents said that Communities have a variety of recycling programs, such as curbside pickup of recyclables, drop-off centers, buy-back centers that pay you for valuable items and deposit-refund programs and also the respondents discussed reduce as reducing your consumption or buying less. Designing items like plastic bottles in ways that use less material is another way to reduce consumption. Using steel cutlery instead of plastic utensils, buying used goods, mending clothes instead of buying new ones and consuming less electricity are all examples of ways you can reduce in your own life.

10% of the respondents said use of renewable energy. The respondents said that most renewable energy comes either directly or indirectly from the sun. Sunlight, or solar energy, can be used directly for heating and lighting homes

and other buildings, for generating electricity, and for hot water heating, solar cooling, and a variety of commercial and industrial uses.

15% of the respondents said measure of Soil conservation, Pollution Control, ban the use of non-biodegradable plastic bags and packaging materials.

Conclusion

The study conclude that all objectives have been achieved based on the study findings got from the field, environmental conservation influence the tourism development since the natural resources are proper conserved, focuses on areas where environmental impacts can be addressed and reduced through Planning Policy, in terms of land use and the built environment. The environmental conservation theme also covers work to support tourism development and regeneration at a local level.

Recommendations

Based on the above discussions and conclusions, and after coming to the end of the study, the study propose the following as appropriate recommendations to conserve the environment as well as promote tourism in Rwanda;

The study recommends that government should mobilize the farmers to invest in soil protection structures to conserve the environment.

The study recommends that there should be an improvement Land use Management and resulting improved production of organic matter that will largely contribute to the combat against desertification, climate change that reducing the natural resources attracts tourists.

The study also recommends that there should be decentralization and environment Management Project aims at building capacity for sustainable management of environmental and natural resources.

References

- Amaro, Belisa. (2013). Ecotourism and Ethics. *Earth Island Journal*, 14 (3). [On-line]. Available: www.earthisland.org/eijournal/fall99/dis_fall99/ecotourism.html) and Animals: A Review. *Biological Conservation*, 17, 182-206.
- Andereck, Kathleen L. (2013). The Impacts of Tourism on Natural Resources. *Parks and Recreation*, 28 (6), 26-32.
- Bacon, Peter R. (2017). Use of Wetlands for Tourism in the Insular Caribbean. *Annals of Tourism Research*, 14, 104-117.
- Beeh, Jenny E. (2016). Adventure vs. Ecotourism: Environmental Impact of So-Called Ecotourism Activities. *Earth Action Network, Inc.*, 10 (3), 46-48.
- Bialkowski, C. (2011). Hotels Working Hard to Clean Up the Environment. *Convene: The Journal of the Professional Convention Management Association* (October, pp. 45-46). *Boating Industry*, 61 (2), 8-9.

- Boo, Elizabeth. (2017). *Ecotourism: The Potentials and Pitfalls*. Washington, DC: World Wildlife Fund.
- Bosselman, Fred P. (2013). In the Wake of the Tourist. Washington, DC: The Conservation Foundation. *American Journal of Environment, Energy and Power Research* Vol. 1, No. 7, September 2013, PP: 117-130, ISSN: 2329-860X (Online) Available online at www.ajeep.com
- Bosselman, Fred P. (2015). In the Wake of the Tourist. Washington, DC: The Conservation Foundation.
- Burr, Steven W. & Walsh, Jeffrey A. (2014). A Hidden Value of Sustainable Rural Tourism Development. *Trends*, 31 (1), 9-13.
- Bush, Melinda. (2014). Panel Analyzes Trends in the Evolving Agent-Hotelier Relationship. *Travel Weekly*, 48 (47), 25-30.
- Carey, Sandra & Gountas, Y. (2017). Tour Operators and Destination Sustainability. *Tourism Management*, 18 (7), 425-431.
- Cass, Ginny & Jahrig, Shannon. (2012). Heritage Tourism: Montana's Hottest Travel Trend. *Montana Business Quarterly*, 8-27. Terry Davies and Sarah Cahill Discussion Paper 00-14
- Cessford, G.R. (2017). Impacts of visitors on natural and historic resources of conservation significance: Part 2 Research and information needs. Science and Research Internal Report, No. 157. Department of Conservation, Wellington. 29 p.
- Chmura, Gail L. & Ross, Neil W. (2018). *The Environmental Impacts of Marinas and Their Boats*, National Oceanic and Atmospheric Administration Office of Sea Grant, U.S. Dept.
- Carol W., Petrillose, Michael J., & Pettay, Amy. (2011). Solid Waste Management in Selected Hotel Chains and Individual Properties. *Hospitality Research Journal: The Professional Journal of the Council on Hotel, Restaurant, and Institutional Education*, 15.
- David M. & Roffman, Harold. (2016). *Hospitality Facilities Management and Design*. East Lansing: Educational Institute of the American Hotel and Motel Association.
- Deady, Tim. (2010). ASTA Conference Reaps Suggestions for Guarding Environment. Kenya. 123P
- Del Rosso, Laura. (2017). Responsible Tourism is Focus of Travel Expo: 2017 New Travel Expo. *Travel Weekly* 56 (14), 10-13.
- Ecotourism Society (2018). *Ecotourism Statistical Fact Sheet*. [On-line]. Available: www.ecotourism.org.
- Fussell, Lori Marie Snook. (2015). Carbon Monoxide Exposure by Snowmobile Riders. *National Park Service's Park Science*, 17 (1), 1-6. [On-line]. Available: [www.nature.nps.gov/parksci/vol17\(1\)/07carbon.htm](http://www.nature.nps.gov/parksci/vol17(1)/07carbon.htm).
- Gartner, William C. (2016). *Tourism Development: Principles, Processes, and Policies*.
- Gee, Chuck Y., Makens, James C. Makens, & Choy, Dexter J.L. (2009). *The Travel Industry*. New York: Van Nostrand Reinhold.

- Godsman, James G. (2011). Outlook for the Cruise Industry. Cruise Lines international Association. [On-line]. Available: <http://cobweb.utsa.edu/FACULTY/VHELLER/readings/cruise-outlook.html>.
- Hall M.C. (2014), "Trends in Ocean And Coastal Tourism: The End of The Last Frontier?", *Ocean & Coastal Management*, 44, pp. 601-618.
- Impacts. New York: Longman House.
- John & Crompton, John L. (2018). Developing and Testing a Tourism Impact Scale. *Journal of Travel Research* November, 37 (2), 120-130. Audubon Society. [On-line]. Available: www.audubon.org.
- Joseph E. Mbaiwa (2012) the socio-economic and environmental impacts of tourism development on the Okavango Delta, north-western Botswana. *Journal of Arid Environments* (2003) 54: 447–467 doi:10.1006/jare.2002.1101
- Kovacs, K.M. & Innes, S. (2010). The Impact of Tourism on Harp Seals (*Phoca groenlandica*) in the Gulf of St. Lawrence, Canada. *Applied Animal Behaviour Science*, 26, 15.
- Laws, Edward A. (2013). *Aquatic Pollution: An Introductory Text*. New York: John Wiley and Sons, Inc.
- Liddle, M.J. & Scorgie, H.R.A. (2008). *The Effects of Recreation on Freshwater Plants*
- Lincoln, Lori. (2014). Clear Waters; Cruise Lines Adopt Environmental Waste Management Policies. *Travel Weekly*, 53 (73), S16-S19.
- Magazine, 136 (4), 500-531.
- Martha S. (2016). Ecotourism's Impact on the Environment. *Environment*, 41 (5), 5-9, 28-33.
- Mathieson, Alistair & Wall, Geoffrey. (2015). *Tourism: Economic, Physical and Social Impacts*. New York: Longman House.
- May, Vincent. (2011). *Tourism, Environment and Development*. Tourism Management,
- McIntosh, Robert W. & Goeldner, Charles R. (2010). *Tourism: Principles, Practices, Philosophies*. New York: John Wiley and Sons.
- National Research Council. (2005). *Clean Ships, Clean Ports, Clean Oceans*. Washington, DC: National Academy Press. New York: Van Nostrand Reinhold.
- Noack, David R. (2016). Planes, Trains, and Cruise Lines: The Net has become a Cornucopia of Travel Information and Services. *Internet World*, 7 (7), 82-86. of Commerce; University of Rhode Island.
- Power, Thomas M. (2016). *Lost Landscapes and Failed Economies: The Search for a Value of Place*. Washington, DC: Island Press. *Recreation*, 28 (6), 26-32.
- Redlin, Michael H. & deRoos, Jan A. (2010). *Water Consumption in the Lodging Industry*. Washington, DC: The Hospitality, Lodging and

- Travel Research Foundation of the American Hotel and Motel Association.
- Rejeski, David. (2017). An Incomplete Picture. *The Environmental Forum*, (Sept/Oct pp. 26-34). Washington, DC: Environmental Law Institute.
- Schulz, Christopher. (2014). Hotels and Travel Agents: The New Partnership. *The Cornell Hotel and Restaurant Administration Quarterly*, 35 (2), 45-50.
- Seabloom, Robert W., Plews, Gary, & Cox, Frank. (2009). The Effect of Sewage Discharges from Pleasure Craft on Puget Sound Waters and Shellfish Quality. Washington State
- Shanklin, Carol W. (2013). Ecology Age: Implications for the Hospitality and Tourism Industry. *Hospitality Research Journal: The Professional Journal of the Council on Hotel*,
- Sidles, Darla. (2017). Changing the Way People Use Parks. *Natural Resource Year in Review, Planning and Preservation*. National Park Service. [On-line], Available:
- Solley, Wayne B. (2017). Preliminary Estimates of Water Use in the United States (Open-File Report 97-645). Reston, VA: U.S. Geological Survey.
- Steffens, Ron. (2013). Not Just Another Roadside Attraction: Towns Located Near National Parks. *National Parks and Conservation Association*, 67 (1-2), 26-31.
- Stipanuk, David M. & Ninemeier, Jack D. (2016). The Future of the U.S. Lodging Industry and the Environment. *Cornell Hotel and Restaurant Administration Quarterly*, 37 (6), 74-91.
- Travel Industry Association of America. (2018). *Tourism Works for America 1998 Report*. Washington, DC. [On-line]. Available: <http://www.tia.org/pubs/twfar98.stm>
- Vignola, Margo L. & Krutick, Jill S. (2010). *The Lodging Industry in the 1990's: Confronting Crowded Markets*. Salomon Brothers.
- Terry Davies Sarah Cahill (2010) *Environmental Implications of the Tourism Industry*. Discussion Paper 00-14 March 2000.
- Tim & Schwartzman, M. T. (2012). Ecotourism: Traveling to Save the Planet. *Travel Weekly*, 49 (34), 105-108. Transportation Efficiency Act to Support the Federal Aid in Sport Fish Restoration Program. *Travel Weekly*, 49 (50), 35-37.
- UNEP (2016), *Tourism Focus*, quarterly bulletin included in the Industry and Environment review and issue of the Industry and Environment review on Sustainable Tourism. Kigali, Rwanda. University Publisher York: Cambridge University Press, 2016.
- Wagner, Grace. (2016). A Work in Progress: Hotels' Environmental Programs. *Lodging Hospitality*, 52 (12), 59-61.

- Willard, Beatrice E. and John W. Marr. (2012). Recovery of Alpine Tundra under Protection After Damage by Human Activities in the Rocky Mountains of Colorado. *Biological Conservation*, 3(3), 181-190.
- Woodring, Jeannie. (2014). Ecotourism: Exploring the Last Frontier of Travel. *Alaska Business Monthly*, 10 (5), 50-56.
- www1.nature.nps.gov/pubs.
- Yee, Jordan G. (2012). *Ecotourism Market Survey: A Survey of North American Ecotourism Operators*. San Francisco: The Intelligence Centre, Pacific Asia Travel Association.
- United Nations, D. o. (2017 Revision). *World Population Prospects*. Department of Economic and Social Affairs, Population Division.

