

## 1.0 INTRODUCTION

Environmental stewardship refers to responsible use and protection of the natural environment through conservation and sustainable practices. Aldo Leopold (1887–1949) championed environmental stewardship based on a land ethic "dealing with man's relation to land and to the animals and plants which grow upon it." (Leopold, 1949). It can also be defined as "the responsible use (including conservation) of natural resources in a way that takes full and balanced account of the interests of society, future generations, and other species, as well as of private needs, and accepts significant answerability to society" (Worrell & Appleby, 2000). One of the main reasons people travel is to visit areas that are unspoiled, natural, beautiful, or unique in terms of their local environment. Unfortunately, through our actions either as tourism businesses or as visitors, we risk damaging the natural environments we depend on (Hardin, 1968; Williams & Ponsford, 2008). For this reason, environmental stewardship in tourism is of paramount importance.

## 2.0 History of Environmental Stewardship

The topic of stewardship entered public consciousness in the middle of the last century in the works of writers such as Aldo Leopold (*A Sand Country Almanac*), Garret Hardin (*The Tragedy of the Commons*), and Rachel Carson

*(Silent Spring)*. Building on this growing consciousness, the concept of sustainability and sustainable development was introduced.

One of the first commonly accepted definitions of sustainable development came from the World Commission on Environment and Development, later renamed the Brundtland Commission. It defined sustainable development as meeting “the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987). Sustainable development differs from environmental stewardship in that it may include aspects of social, economic and environmental sustainability, whereas environmental stewardship focuses solely on the natural world.

A related concept is environmental management, where the natural resources of the environment are managed through policies designed to protect natural values while providing a framework for use. In tourism, this management may be the responsibility of many groups including individual operators, tourism industry organizations, non-governmental organizations, or government agencies (Mercer, 2004; Williams & Ponsford, 2008).

### **3.0 The Need for Change**

Experts around the world agree that the need for stewardship has never been

greater, as there exists overwhelming evidence that the environment is being irrevocably damaged by human actions. Climate change caused by increased greenhouse gas emissions (World Tourism Organization, 2008a) and the loss of biodiversity due to declining habitat loss are just two compelling issues.

Tourism continues to grow globally, and many tourists are in pursuit of pristine, natural environments. Development of tourism products results in increased urbanization, overuse, exceeding carrying capacity, and contamination of natural resources (Williams & Ponsford, 2008). Later in this chapter, we'll provide several examples of specific tourism and hospitality impacts and approaches to mitigating them. There is one issue that takes precedence over all others: climate change. The next section focuses specifically on this critical global issue and its relationship to the tourism industry.

#### **4.0 Tourism and Climate Change**

The Intergovernmental Panel on Climate Change (IPCC) concluded the “observed increase in global average temperatures since the mid-20th century is very likely (> 90% probability) the result of human activities that are increasing greenhouse gas concentrations in the atmosphere” (World Tourism Organization, 2008a, p. 38). Climate change should be considered to be one of the most important challenges currently facing the tourism industry.

## Tourism and Climate Change

The Intergovernmental Panel on Climate Change (IPCC) concluded the “observed increase in global average temperatures since the mid-20th century is very likely (> 90% probability) the result of human activities that are increasing greenhouse gas concentrations in the atmosphere” (World Tourism Organization, 2008a, p. 38). Climate change should be considered to be one of the most important challenges currently facing the tourism industry.

## Climate Change and Tourism

The report entitled *Climate Change and Tourism: Responding to Global Challenges*, published by the World Tourism Organization (2008b), discusses the implications of climate change to the global tourism industry. It also suggests climate change adaption measures to be undertaken ([www.sdt.unwto.org](http://www.sdt.unwto.org), 2008).

## Impacts of Climate Change

According to the World Tourism Organization, impacts from climate change on tourism include (2008a):

**Direct climate impacts** are changes that occur as a result of warming trends, cooling trends, or extreme weather events. Examples include a lack of snow to

operate mountain resorts, melting glaciers in mountainous regions, and floods, landslides, and wildfires that could affect tourist areas.

**Indirect environmental change impacts** are the byproducts of climate change. Global temperature changes may create water shortages, a loss of biodiversity, impacts to landscape aesthetics, and damage to infrastructure through extreme weather events. Examples in tourism include the inability to maintain resort facilities in desert environments due to water shortages, erosion of tropical atolls from rising sea levels, extinction of valuable wildlife species due to changes in habitat, and increased costs of maintaining infrastructure in the face of environmental change.

Impacts of mitigation policies on tourist mobility will become apparent as the tourism industry adjusts to environmental changes. Environmental impact mitigation strategies may create challenges for the long-term sustainability of the tourism industry. Tourism products may be offered over a shorter season, prices may increase due to a rise in operating costs, and there may be a shortage of pristine natural areas available for visits.

Indirect societal change impacts will slowly become apparent. Economic growth may be stunted in some areas and increase in others, creating societal inequality between nations. Political instability may arise in areas that are facing drastic

environmental impact. All these changes will present new challenges to the industry and may threaten the long-term security of the industry (Watson, Zinyowera, & Moss, 1997; World Tourism Organization, 2008a).

## **Environmental Stewardship and Sustainability**

It is aimed at the following:

- **Environmentally Responsible Facilities Operations** – It will assess environmental implications in the design, construction and operation of campus infrastructure grounds and buildings. To the extent practical, facilities development and maintenance will promote environmental sustainability through resource conservation, ecologically-sound landscaping practices, sustainable building design and operation, and transportation that minimizes environmental impact (www.niehs.nih.gov, 2018).
- **Pollution Prevention** – The ES also seek people to minimize solid waste generation and the potential release of pollutants into the environment first through source reduction, secondarily through reuse and recycling, and finally through treatment and disposal.
- **Minimize Hazardous Waste and Toxic Materials** – The ES also help people to minimize the generation of hazardous wastes. The Institute will

maintain policies and processes for the safe and efficient use, tracking, storage and disposal of hazardous and toxic materials.

- **Environmentally Responsible Acquisition** – ES urges people to promote environmental responsibility through its contracting and purchasing choices. When purchasing products and services, the Institute will strive to obtain the best value by considering life cycle environmental impacts along with cost and functional performance.
- **Conservation of Energy, Water and Other Resources** – ES enables people to reduce resource consumption by eliminating wasteful practices and promoting efficient use, and by evaluating and implementing feasible and practical conservation measures in existing buildings, renovations, and new construction.
- **Green Technology** – ES aids people to recognize the significant impacts of computing, communication, refrigeration and other technologies on human health and the environment. The Institute will actively promote the efficient and sustainable use of technology.
- **Environmental Education and Awareness** – ES also provide ongoing education for all employees, contractors and visitors concerning the importance of environmental responsibility in all Institute operations. Further, the Institute will share relevant and accurate information on its

environmental performance with the public ([www.niehs.nih.gov](http://www.niehs.nih.gov), 2018).

## **Environmental Stewardship Theory**

Some basic concepts of environmental management and ethics, especially as they apply to tourism, include carrying capacity, footprint, tragedy of the commons, and the tourism paradox.

### **Carrying Capacity**

Carrying capacity is “the average maximum number of individuals of a given species that can occupy a particular habitat without permanently impairing the productive capacity of that habitat” (Rees, 2001).

This concept has been applied to tourism in the context of a tourism carrying capacity (TCC) “the maximum number of visitors which an area can sustain without unacceptable deterioration of the physical environment and without considerably diminishing user satisfaction” (Salerno, Viviano, Manfredi, Caroli, Thankuri, & Tartari, 2013).

### **Footprint**

**Ecological footprint:** This is essentially a tool to analyze the impact of a population on Earth (Rees, 2001). The model calculates the total area of land and



water resources used to support the population, presenting it in a manner that can be easily related to – usually in terms of the amount of land needed to support an individual at the standard of living that person is used to.

Typically, residents of industrialized, developed nations (such as Canada) require a larger land area to support their lifestyle than residents of developing nations, who have smaller ecological footprints due to lower consumption.

### **Tragedy of the Commons**

**Tragedy of the commons:** This is an economic theory first proposed by Garrett Hardin in 1968, which states that if individuals are given the chance to overuse a common property, they will, in order to realize the maximum personal benefits. If every person does this, common property quickly becomes overused and damaged (Hardin, 1968).

For example, a group of tourism operators may look at a pristine natural area and see a chance for economic profit, and in the race for development, little or nothing is done to protect the area. If this unchecked development were to continue, the damage to the environment could reach a point where the elements that attracted tourists in the first place are irreversibly damaged, thus resulting in the “tragedy” that Hardin discusses (Hardin, 1968).

The tragedy of the commons leads to something known as the **tourism paradox**, a concept that describes the paradoxical nature of tourism's relationship with the environment.

### **The Tourism Paradox**

A common theme promoted by many tourism destinations is their location in some of the most ecologically fragile environments in existence — coastal, mountain, and river environments (Williams & Ponsford, 2008). Tourism requires these areas to be intact to serve as an attraction to visitors. Tourists expect a clean physical environment, appropriate seasonal conditions, and diversity of wildlife. Destinations failing to provide at least some of these elements risk losing their competitive edge in the global market; visitors will steer clear of polluted, barren landscapes with unpredictable or uncomfortable weather.

### **Resilience-Based Ecosystem Stewardship**

Resilience-Based Ecosystem Stewardship emphasizes resilience as a basic feature of the changing world as well as ecosystems that provide a suite of ecosystem services rather than a single resource, and stewardship that recognizes resource managers as an integral part of the systems they manage (Chapin et al., 2009). Resilience refers to the ability of a system to absorb disturbance and still

maintain its basic function and structure (Walker *et al.*, 2006).

### **Different types of environmental stewards**

There are 3 types of environmental stewards: doers, donors, and practitioners. Doers go out and help the cause by taking action. For example, the doers in an oil spill would be the volunteers that go along the beach and help clean up the oil from the beaches. A donor is the person that financially helps the cause. They can do anything from donating their money, to hosting public events to raise funds. They are typically governmental agencies. Lastly there are practitioners. They work on a day-to-day basis to steer governmental agencies, scientists, stakeholder groups, or any other group toward a stewardship outcome. Together these 3 groups make up environmental stewards and with the help keep the ecosystem running healthily (National Research Council, 2008). Anybody can be an environmental steward by being aware and knowledgeable of the world around them and making sure they do as little as possible to negatively impact our world. Without these groups it would be hard to get any sort of sustainability in our increasingly industrially based world (National Research Council, 2008).

**What are some examples of environmental stewardship? How does it benefit the environment?**

According to the EPA, “environmental stewardship is the responsibility for environmental quality shared by all those whose actions affect the environment” (Environmental Stewardship). The main benefits of environmental stewardship are conserving natural resources, combating pollution, and protecting biodiversity.

Several companies provide the best examples of environmental stewardship. I’m going to focus on the efforts Starbucks has made towards its environmental stewardship.

- LEED Certified Stores
  - LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. Starbucks continues to work to bring all of its stores to LEED® building standards and ensure that their approach to designing, building, and maintaining their stores is inclusive of a range of environmental goals (Environment)
- Recycling and Reducing Waste
  - Starbucks aims to shrink its environmental footprint and meet the expectations of its customers by increasing recycling, promoting reusable cups and reducing the waste associated with cups and

other packaging (Environment)

- Conserving Water and Energy
  - By conserving the energy and water they use and purchasing renewable energy credits, they're pushing to reduce the environmental footprint of their operations and help ensure access to clean water in coffee-growing communities (Environment)

If you would like to increase your environmental stewardship efforts on a personal level, you can do so in a number of ways:

- The easiest way would be supporting companies that exhibit environmental stewardship like Starbucks and many others.
  - By supporting these companies, you allow them to continue their environmental stewardship efforts, and pressure other companies into following suit.
- Reduce, reuse, and recycle.
  - Try to minimize consumption. You would be surprised how many things we can live without that we think we need for survival. Try to reuse items and repurpose them. Finally, make an effort to recycle your waste so it doesn't end in a landfill.
- Conserve water and energy

- Try to take shorter showers. Don't leave the water running while brushing your teeth/shaving (if you do). Turn off appliances and A/C when you're not home. Finally, try to combine laundry loads.
- Walk, ride a bicycle, use public transportation, or at least carpool.
  - All of these will help you emit less carbon dioxide and cut down your carbon footprint.
- Finally, the most helpful thing you can do is spread awareness and inform others about environmental stewardship is, which companies people should support based on their environmental stewardship efforts, and how people can improve their own personal environmental stewardship efforts.

One last important thing to keep in mind: be careful of greenwashing. Environmental stewardship is being demanded from companies by more and more consumers. However, some companies pretend to be environmentally conscious and responsible to boost sales without actually being environmentally conscious or responsible. The figure below illustrates some of the common greenwashing practices that you should look out for and avoid.

**1. Fluffy language**  
Words or terms with no clear meaning, eg 'eco-friendly'

**2. Green products v dirty company**  
Such as efficient light bulbs made in a factory which pollutes rivers

**3. Suggestive pictures**  
Green images that indicate a (unjustified) green impact, eg flowers blooming from exhaust pipes

**4. Irrelevant claims**  
Emphasising one tiny green attribute when everything else is un-green

**5. Best in class?**  
Declaring you are slightly greener than the rest, even if the rest are pretty terrible

**6. Just not credible**  
'Eco-friendly' cigarettes anyone? 'Greening' a dangerous product doesn't make it safe

**7. Gobbledygook**  
Jargon and information that only a scientist could check or understand

**8. Imaginary friends**  
A 'label' that looks like third-party endorsement...except it's made up

**9. No proof**  
It could be right, but where's the evidence?

**10. Outright lying**  
Totally fabricated claims or data

Source: ([www.quora.com](http://www.quora.com), 2018).





### Plate 1: Demonstration of the essence of Environmental stewardship

Environmental stewardship can start with individual actions, regarding products that are purchased (or not), the use of best management practices in managing your home, landscape, neighborhood and community. Actions that reduce waste, clean-up water and provide for biological diversity are all example of



environmental stewardship. These actions can make both economic and environmental contributions to those who practice environmental stewardship.

Gordon Graham, former Real Property Analyst at Bank of America, Municipality of Anchorage, Signals Intelligence Whilst in ...answered Oct 10 2017 that Ten years ago I became a "Sound Steward" with People for Puget Sound. I left after a few years because nothing we were doing was an attempt to detoxify what in 2009 was designated as one of the two most "Poisoned Waters" in the US by a Frontline/PBS documentary. The other was Chesapeake Bay ([www.quora.com](http://www.quora.com), 2018).

Some of the myths and stories of the local First Peoples here in the NW, and by other aboriginal people round the globe, are examples of effective stewardship of the resources and life forms upon which they were dependent, a part of vs superior to "all my relations." Our planet's ability to adapt to our presence has been exceeded ([www.quora.com](http://www.quora.com), 2018).

Peter Noronha also reported on Feb 23, 2006 that a lot of little things do add up and make a big difference...in environmental stewardship. He advised that people should reduce the number of bags you use for shopping. Use reusable bags ([www.quora.com](http://www.quora.com), 2018) .

Reduce water usage and waste by closing taps and lower the flow to the smallest needed to do the job in reasonable time. Reduce the amount of fuel you use by choosing smaller, lighter vehicles. Carpool. Live close to where you work. Use public transit if you can ([www.quora.com](http://www.quora.com), 2018).

## **Conclusion**

Numerous studies suggest society will face increasing pressure for scarce resources and a changing natural environment due to habitat destruction, pollution, and climate change (Hardin, 1968; Mercer, 2004; Williams & Ponsford, 2008; Wong, 2004; World Tourism Organization, 2008b). The tourism industry must recognize its considerable contribution to this global challenge and take aggressive steps to mitigate the impacts.

On a global scale, the tourism industry needs to recognize its release of significant carbon emissions and explore ways to reduce these while maintaining the mobility needed for travel. On a local scale, tourism stakeholders need to recognize the risk they pose to the destruction of local pristine environments and take steps to ensure the sustainability of their operations. Only by working together can we ensure a future for tourism and our society as a whole.

## **Recommendations**

In order to have a sustainable environment, the following should be ensured:

1. Wastes should be properly managed
2. Pollution should be avoided
3. Activities that alter the natural status of the environment should be curtailed
4. Government should educate her citizens on the need to have a sustainable environment
5. Tree planting should be encouraged

### References

"Banff Considers Potential of Gondola Network":

[http://calgaryherald.com/business/local-business/banff-considers-](http://calgaryherald.com/business/local-business/banff-considers-potential-of-gondola-network)

[potential-of-gondola-network](http://calgaryherald.com/business/local-business/banff-considers-potential-of-gondola-network). Retrived 12th May, 2018.

[Climate Change and Tourism: Responding to Global Challenges \[PDF\]:](http://sdt.unwto.org/sites/all/files/docpdf/climate2008.pdf)

<http://sdt.unwto.org/sites/all/files/docpdf/climate2008.pdf>

Chapin, F. Stuart III, Gary P. Kofinas, and Carl Folke (eds). 2009. *Principles of Ecosystem Stewardship: Resilience-Based Natural Resource Management in a Changing World*. Springer. ISBN 978-0387730325.

<https://www.niehs.nih.gov/about/stewardship/index.cfm>. Retrieved 12th May, 2018.

<https://www.quora.com/What-are-some-examples-of-environmental-stewardship-How-does-it-benefit-the-environment>. Retrieved 15th May, 2018.

Increasing Capacity for Stewardship of Oceans and Coasts, p. 30 National Research Council. (2008). *Increasing Capacity for Stewardship of Oceans and Coasts*. The National Academic Press, 500 Fifth Street, NW Washington DC 20001.

Leopold, Aldo. 1949. *A Sand County Almanac*. Oxford University Press, New York.

Walker, Brian, and David Salt. 2006. *Resilience Thinking: Sustaining Ecosystems and People in a Changing World*. Island Press. ISBN 978-

1597260930.