NIILM University

Eco Tourism

CONTENTS

Chapter 1

Introduction

Tourism is travel for recreational, leisure, or business purposes. The World Tourism Organization defines tourists as people "traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes".

Tourism has become a popular global leisure activity. After slowly recovering from the contraction resulting from the late-2000s recession, where tourism suffered a strong slowdown from the second half of 2008 through the end of 2009, and the outbreak of the H1N1 influenza virus, international tourist arrivals surpassed the milestone 1 billion tourists globally for first time in history in 2012. International tourism receipts (the travel item of the balance of payments) grew to US$1.03 trillion (€740 billion) in 2011, corresponding to an increase in real terms of 3.8% from 2010. In 2012, China became the largest spender in international tourism globally with US$102 billion, surpassing Germany and United States. China and emerging markets significantly increase their spending over the past decade, with Russia and Brazil as noteworthy examples.

Tourism is important and, in some cases, vital for many countries. It was recognized in the Manila Declaration on World Tourism of 1980 as "an activity essential to the life of nations because of its direct effects on the social, cultural, educational, and economic sectors of national societies and on their international relations."Tourism brings in large amounts of income in payment for goods and services available, accounting for 30% of the world's exports of services, and 6% of overall exports of goods and services. It also creates opportunities for employment in the service sector of the economy, associated with tourism. These service industries include transportation services, such as airlines, cruise ships, and taxicabs; hospitality services, such as accommodations, including hotels and resorts; and entertainment venues, such as amusement parks, casinos, shopping malls, music venues, and theatres.

Ecotourism is a form of tourism involving visiting fragile, pristine, and relatively undisturbed natural areas, intended as a low-impact and often small scale alternative to standard commercial (mass) tourism. Its purpose may be to educate the traveler, to provide funds for ecological

conservation, to directly benefit the economic development and political empowerment of local communities, or to foster respect for different cultures and for human rights. Since the 1980s ecotourism has been considered a critical endeavour by environmentalists, so that future generations may experience destinations relatively untouched by human intervention. Several university programs use this description as the working definition of ecotourism.

Generally, ecotourism deals with living parts of the natural environments. Ecotourism focuses on socially responsible travel, personal growth, and environmental sustainability. Ecotourism typically involves travel to destinations where flora, fauna, and cultural heritage are the primary attractions. Ecotourism is intended to offer tourists insight into the impact of human beings on the environment, and to foster a greater appreciation of our natural habitats.

Responsible ecotourism programs include those that minimize the negative aspects of conventional tourism on the environment and enhance the cultural integrity of local people. Therefore, in addition to evaluating environmental and cultural factors, an integral part of ecotourism is the promotion of recycling, energy efficiency, water conservation, and creation of economic opportunities for local communities. For these reasons, ecotourism often appeals to advocates of environmental and social responsibility.

Criteria:

Ecotourism is a form of tourism that involves visiting natural areas—in the remote wilderness or rural environments. According to the definition and principles of ecotourism established by The International Ecotourism Society (TIES) in 1990, ecotourism is "Responsible travel to natural areas that conserves the environment and improves the well-being of local people." (TIES, 1990). Martha Honey, expands on the TIES definition by describing the seven characteristics of ecotourism, which are:

- Involves travel to natural destinations
- Minimizes impact
- Builds environmental awareness
- Provides direct financial benefits for conservation
- Provides financial benefits and empowerment for local people

- Respects local culture

Supports human rights and democratic movements such as:

conservation of biological diversity and cultural diversity through ecosystem protection promotion of sustainable use of biodiversity, by providing jobs to local populations sharing of socio-economic benefits with local communities and indigenous peoples by having their informed consent and participation in the management of ecotourism enterprises tourism to unspoiled natural resources, with minimal impact on the environment being a primary concern. Minimization of tourism's own environmental impact affordability and lack of waste in the form of luxury local culture, flora and fauna being the main attractions local people benefit from this form of tourism economically, often more than mass tourism Conservation biology is the scientific study of the nature and status of Earth's biodiversity with the aim of protecting species, their habitats, and ecosystems from excessive rates of extinction and the erosion of biotic interactions. It is an interdisciplinary subject drawing on natural and social sciences, and the practice of natural resource management.

Defination:

The term conservation biology was introduced as the title of a conference held at the University of California, San Diego in La Jolla, California in 1978 organized by biologists Bruce Wilcox and Michael E. Soulé. The meeting was prompted by the concern among scientists over tropical deforestation, disappearing species, eroding genetic diversity within species. The conference and proceedings that resulted sought to bridge a gap existing at the time between theory in ecology and population biology on the one hand and conservation policy and practice on the other. Conservation biology and the concept of biological diversity (biodiversity) emerged together, helping crystallize the modern era of conservation science and policy.

Natural resource conservation:

Conscious efforts to conserve and protect *global* biodiversity are a recent phenomenon. Natural resource conservation, however, has a history that extends prior to the age of conservation. Resource ethics grew out of necessity through direct relations with nature. Regulation or communal restraint became necessary to prevent selfish motives from taking more than could be locally sustained, therefore compromising the long-term supply for the rest of the community.

This social dilemma with respect to natural resource management is often called the "Tragedy of the Commons".

From this principle, conservation biologists can trace communal resource based ethics throughout cultures as a solution to communal resource conflict. For example, the Alaskan Tlingit peoples and the Haida of the Pacific Northwest had resource boundaries, rules, and restrictions among clans with respect to the fishing of Sockeye Salmon. These rules were guided by clan elders who knew lifelong details of each river and stream they managed. There are numerous examples in history where cultures have followed rules, rituals, and organized practice with respect to communal natural resource management.

Conservation ethics are also found in early religious and philosophical writings. There are examples in the Tao, Shinto, Hindu, Islamic and Buddhist traditions. In Greek philosophy, Plato lamented about pasture land degradation: "What is left now is, so to say, the skeleton of a body wasted by disease; the rich, soft soil has been carried off and only the bare framework of the district left." In the bible, through Moses, God commanded to let the land rest from cultivation every seventh year. Before the 18th century, however, much of European culture considered it a pagan view to admire nature. Wilderness was denigrated while agricultural development was praised. However, as early as AD 680 a wildlife sanctuary was founded on the Farne Islands by St Cuthbert in response to his religious beliefs.

Global conservation efforts:

In the mid-20th century, efforts arose to target individual species for conservation, notably efforts in big cat conservation in South America led by the New York Zoological Society.[44] In the early 20th century the New York Zoological Society was instrumental in developing concepts of establishing preserves for particular species and conducting the necessary conservation studies to determine the suitability of locations that are most appropriate as conservation priorities; the work of Henry Fairfield Osborn Jr., Carl E. Akeley, Archie Carr and Archie Carr III is notable in this era. Akeley for example, having led expeditions to the Virunga Mountain sand observed the mountain gorilla in the wild, became convinced that the species and the area were conservation priorities. He was instrumental in persuading Albert I of

Belgium to act in defense of the mountain gorilla and establish Albert National Park (since renamed Virunga National Park) in what is now Democratic Republic of Congo.

Systematic conservation planning:

Systematic conservation planning is an effective way to seek and identify efficient and effective types of reserve design to capture or sustain the highest priority biodiversity values and to work with communities in support of local ecosystems. Margules and Pressey identify six interlinked stages in the systematic planning approach:

- Compile data on the biodiversity of the planning region
- Identify conservation goals for the planning region
- Review existing conservation areas
- Select additional conservation areas
- Implement conservation actions
- Maintain the required values of conservation areas

Conservation biologists regularly prepare detailed conservation plans for grant proposals or to effectively coordinate their plan of action and to identify best management practices . Systematic strategies generally employ the services of Geographic Information Systems to assist in the decision making process.

Conservation biology as a profession:

The Society for Conservation Biology is a global community of conservation professionals dedicated to advancing the science and practice of conserving biodiversity. Conservation biology as a discipline reaches beyond biology, into subjects such as philosophy, law, economics, humanities, arts, anthropology, and education. Within biology, conservation genetics and evolution are immense fields unto themselves, but these disciplines are of prime importance to the practice and profession of conservation biology.

Is conservation biology an objective science when biologists advocate for an inherent value in nature? Do conservationists introduce bias when they support policies using qualitative

description, such as habitat degradation, or healthy ecosystems? As all scientists hold values, so do conservation biologists. Conservation biologists advocate for reasoned and sensible management of natural resources and do so with a disclosed combination of science, reason, logic, and values in their conservation management plans. This sort of advocacy is similar to the medical profession advocating for healthy lifestyle options, both are beneficial to human well-being yet remain scientific in their approach.

Ecotourism Society Pakistan (ESP) explains "Ecotourism is a travel activity that ensures direct financial support to local people where tourism activities are being generated and enjoyed. It teaches travellers to respect local cultures of destinations where travellers are visiting. It supports small stakeholders to ensure that money must not go out from the local economies. It discourage mass tourism, mass constructions of hotels, tourism resorts and mass activities in fragile areas". For many countries, ecotourism is not simply a marginal activity to finance protection of the environment, but is a major industry of the national economy. For example, in Costa Rica, Ecuador, Nepal, Kenya, Madagascar and territories such as Antarctica, ecotourism represents a significant portion of the gross domestic product and economic activity.

Ecotourism is often misinterpreted as any form of tourism that involves nature (see Jungle tourism). In reality, the latter activities often consist of placing a hotel in a splendid landscape, to the detriment of the ecosystem . According to them ecotourism must above all sensitize people to the beauty and the fragility of nature. They condemn some operators as greenwashing their operations: using the labels of "green" and "eco-friendly", while behaving in environmentally irresponsible ways.

Although academics disagree about who can be classified as an ecotourist and there is little statistical data, some estimate that more than five million ecotourists—the majority of the ecotourist population—come from the United States, with many others from Western Europe, Canada and Australia.

Currently, there are various moves to create national and international ecotourism accreditation programs, although the process is also controversial. National ecotourism certification programs have been put in place in countries such as Costa Rica, Australia, Kenya, Estonia, and Sweden.

Chapter 2

Regulation and Accreditation

Because the regulation of ecotourism may be poorly implemented or nonexistent, ecologically destructive green washed operations like underwater hotels, helicopter tours, and wildlife theme parks can be categorized as ecotourism along with canoeing, camping, photography, and wildlife observation. The failure to acknowledge responsible, low-impact ecotourism puts legitimate ecotourism companies at a competitive disadvantage.

Many environmentalists have argued for a global standard of accreditation, differentiating ecotourism companies based on their level of environmental commitment. A national or international regulatory board would enforce accreditation procedures, with representation from various groups including governments, hotels, tour operators, travel agents, guides, airlines, local authorities, conservation organizations, and non-governmental organizations. The decisions of the board would be sanctioned by governments, so that non-compliant companies would be legally required to disassociate themselves from the use of the ecotourism brand.

Crinion suggests a Green Stars System, based on criteria including a management plan, benefit for the local community, small group interaction, education value and staff training. Eco tourists who consider their choices would be confident of a genuine ecotourism experience when they see the higher star rating.

In addition, environmental impact assessments could be used as a form of accreditation. Feasibility is evaluated from a scientific basis, and recommendations could be made to optimally plan infrastructure, set tourist capacity, and manage the ecology. This form of accreditation is more sensitive to site specific conditions.

Some countries have their own certification programs for ecotourism. Costa Rica, for example, runs the Certification of Sustainable Tourism (CST) program, which is intended to balance the effect that business has on the local environment. The CST program focuses on a company's interaction with natural and cultural resources, the improvement of quality of life within local communities, and the economic contribution to other programs of national development. CST uses a rating system that categorizes a company based upon how sustainable its operations are.

CST evaluates the interaction between the company and the surrounding habitat; the management policies and operation systems within the company; how the company encourages its clients to become an active contributor towards sustainable policies; and the interaction between the company and local communities/the overall population. Based upon these criteria, the company is evaluated for the strength of its sustainability. The measurement index goes from 0 to 5, with 0 being the worst and 5 being the best.

An environmental impact assessment (EIA) is an assessment of the possible impacts that a proposed project may have on the environment, consisting of the environmental, social and economic aspects.

The purpose of the assessment is to ensure that decision makers consider the environmental impacts when deciding whether or not to proceed with a project. The International Association for Impact Assessment (IAIA) defines an environmental impact assessment as "the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made."EIAs are unique in that they do not require adherence to a predetermined environmental outcome, but rather they require decision ¬makers to account for environmental values in their decisions and to justify those decisions in light of detailed environmental studies and public comments on the potential environmental impacts.

History:

Environmental impact assessments commenced in the 1960s, as part of increasing environmental awareness.[notes 1] EIAs involved a technical evaluation intended to contribute to more objective decision making. In the United States, environmental impact assessments obtained formal status in 1969, with enactment of the National Environmental Policy Act. EIAs have been used increasingly around the world. The number of "Environmental Assessments" filed every year "has vastly overtaken the number of more rigorous Environmental Impact Statements (EIS)." An Environmental Assessment is a "mini-EIS designed to provide sufficient information to allow the agency to decide whether the preparation of a full-blown Environmental Impact Statement (EIS) is necessary."

Methods:

General and industry specific assessment methods are available including:

- Industrial products - Product environmental life cycle analysis (LCA) is used for identifying and measuring the impact of industrial products on the environment. These EIAs consider activities related to extraction of raw materials, ancillary materials, equipment; production, use, disposal and ancillary equipment.[6]

- Genetically modified plants - Specific methods available to perform EIAs of genetically modified organisms include GMP-RAM and INOVA.

- Fuzzy logic - EIA methods need measurement data to estimate values of impact indicators. However many of the environment impacts cannot be quantified, e.g. landscape quality, lifestyle quality and social acceptance. Instead information from similar EIAs, expert judgment and community sentiment are employed. Approximate reasoning methods known as fuzzy logic can be used.

Ocean Model of One Human Civilization:

Philosopher Nayef Al-Rodhan argues that previous concepts of civilizations, such as Samuel P. Huntington's arguments supporting a coming "clash of civilizations," are misconstrued. Human civilization should not be thought of as consisting of numerous separate and competing civilizations, but rather it should be thought of collectively as only one human civilization. Within this civilization are many geo-cultural domains that comprise sub-cultures. This concept presents human history as one fluid story and encourages a philosophy of history that encompasses the entire span of human time as opposed to thinking about civilization in terms of single time periods. Al-Rodhan envisions human civilization as an ocean into which the different geo-cultural domains flow like rivers. According to him, at points where geo-cultural domains first enter the ocean of human civilization, there is likely to be a concentration or dominance of that culture. However, over time, all the rivers of geo-cultural domains become one. Therefore, an equal mix of all cultures will exist at the middle of the ocean, although the mix might be weighted towards the dominant culture of the day. Al-Rodhan maintains that there is fluidity at the ocean's center and that cultures will have the opportunity to borrow between cultures,

especially when that culture's domain or "river" is in geographical proximity to the other's. However, Al-Rodhan warns that geographical proximity can also lead to friction and conflict.

Al-Rodhan maintains that sustainable civilisational triumph will occur when all components of the geo-cultural domains can flourish, even if they flourish in different degrees. Human civilization should indeed be considered as an ocean, where the various geo-cultural domains add depth whenever the conditions for the most advanced forms of human enterprise to thrive are met. This means it is necessary to focus on boundary marking practices and concrete situations. Moreover, civilisational triumph requires some degree of socio-economic equality as well as multilateral institutions that are premised on rules and practices perceived to be fair. Finally, Al-Rodhan notes that it demands conditions under which innovation and learning can thrive. He argues that there needs to be an emphasis on expanding the boundaries of geo-cultural identities and on encouraging greater acceptance of overlapping identities.

Cultural Vigor

"Cultural Vigor" is a concept proposed by philosopher Nayef Al-Rodhan. He defines cultural vigor as cultural resilience and strength that results from mixing and exchanges between various cultures and sub-cultures around the world. In his general theory of human nature, which he calls "emotional amoral egoism". Al-Rodhan argues that all humans are motivated amongst others by arrogance, injustice, exceptionalism, and exclusion. According to him, these particular motivating factors are unfounded, misguided, and hinder humankind's potential for synergistic progress and prosperity. In order to combat these tendencies, Al-Rodhan argues that cultural vigor and ethnic and cultural diversity must be actively promoted by governments and civil society. Al-Rodhan compares cultural vigor to the natural phenomenon of "hybrid vigor", arguing that in nature, molecular and genetic diversity produce stronger and more resilient organisms that are less susceptible to disease and mutational challenges. Similar resilience can be produced through fostering cultural and ethnic diversity. Ultimately, Al-Rodhan maintains that cultural vigor will ensure humanity's future and will improve humans' ability to survive and thrive.

Growth and development

Dependency theorists argue that poor countries have sometimes experienced economic growth with little or no economic development initiatives; for instance, in cases where they have functioned mainly as resource-providers to wealthy industrialized countries. There is an opposing argument, however, that growth causes development because some of the increase in income gets spent on human development such as education and health.

According to Ranis et al., economic growth and is a two-way relationship. Moreover, the first chain consists of economic growth benefiting human development with the rise in economic growth, families and individuals will likely increase expenditures with heightened incomes, which in turn leads to growth in human development. Further, with the increased consumption, health and education grow, also contributing to economic growth. In addition to increasing private incomes, economic growth also generate additional resources that can be used to improve social services (such as healthcare, safe drinking water, etc.). By generating additional resources for social services, unequal income distribution will be mitigated as such social services are distributed equally across each community, thereby benefiting each individual. Concisely, the relationship between human development and economic development can be explained in three ways. First, increase in average income leads to improvement in health and nutrition (known as Capability Expansion through Economic Growth). Second, it is believed that social outcomes can only be improved by reducing income poverty (known as Capability Expansion through Poverty Reduction). Lastly, social outcomes can also be improved with essential services such as education, healthcare, and clean drinking water (known as Capability Expansion through Social Services). John Joseph Puthenkalam's research aims at the process of economic growth theories that lead to economic development. After analyzing the existing capitalistic growth-development theoretical apparatus, he introduces the new model which integrates the variables of freedom, democracy and human rights into the existing models and argue that any future economic growth-development of any nation depends on this emerging model as we witness the third wave of unfolding demand for democracy in the Middle East. He develops the knowledge sector in growth theories with two new concepts of 'micro knowledge' and 'macro knowledge'. Micro knowledge is what an individual learns from school or from various existing knowledge and macro knowledge is the core philosophical thinking of a nation that all individuals inherently

receive. How to combine both these knowledge would determine further growth that leads to economic development of developing nations.

Yet others believe that a number of basic building blocks need to be in place for growth and development to take place. For instance, some economists believe that a fundamental first step toward development and growth is to address property rights issues, otherwise only a small part of the economic sector will be able to participate in growth. That is, without inclusive property rights in the equation, the informal sector will remain outside the mainstream economy, excluded and without the same opportunities.

Guidelines and education:

An environmental protection strategy must address the issue of ecotourists removed from the cause-and-effect of their actions on the environment. More initiatives should be carried out to improve their awareness, sensitize them to environmental issues, and care about the places they visit.

Tour guides are an obvious and direct medium to communicate awareness. With the confidence of ecotourists and intimate knowledge of the environment, they can actively discuss conservation issues. A tour guide training program in Costa Rica's Tortuguero National Park has helped mitigate negative environmental impacts by providing information and regulating tourists on the parks' beaches used by nesting endangered sea turtles.

Chapter 3

Cultural Diversity

Cultural diversity is the quality of diverse or different cultures, as opposed to monoculture, as in the global monoculture, or a homogenization of cultures, akin to cultural decay. The phrase cultural diversity can also refer to having different cultures respect each other's differences. The phrase "cultural diversity" is also sometimes used to mean the variety of human societies or cultures in a specific region, or in the world as a whole. The culturally destructive action of globalization is often said to have a negative effect on the world's cultural diversity.

Overview:

The many separate societies that emerged around the globe differed markedly from each other, and many of these differences persist to this day. As well as the more obvious cultural differences that exist between people, such as language, dress and traditions, there are also significant variations in the way societies organize themselves, in their shared conception of morality, and in the ways they interact with their environment. Cultural diversity can be seen as analogous to biodiversity.

Opposition and support:

By analogy with biodiversity, which is thought to be essential to the long-term survival of life on earth, it can be argued that cultural diversity may be vital for the long-term survival of humanity; and that the conservation of indigenous cultures may be as important to humankind as the conservation of species and ecosystems is to life in general. The General Conference of UNESCO took this position in 2001, asserting in Article 1 of the Universal Declaration on Cultural Diversity that "...cultural diversity is as necessary for humankind as biodiversity is for nature"

This position is rejected by some people, on several grounds. Firstly, like most evolutionary accounts of human nature, the importance of cultural diversity for survival may be an un-testable hypothesis, which can neither be proved nor disproved. Secondly, it can be argued that it is unethical deliberately to conserve "less developed" societies, because this will deny people

within those societies the benefits of technological and medical advances enjoyed by those of us in the "developed" world.

In the same manner that the promotion of poverty in underdeveloped nations as "cultural diversity" is unethical, it is similarly unethical to promote all religious practices simply because they are seen to contribute to cultural diversity. Particular religious practices are recognized by the WHO and UN as unethical, including female genital mutilation (FGM),sati (burning the widow on the husband's burial pyre), polygamy, child brides, and human sacrifice.

With the onset of globalization, traditional nation-states have been placed under enormous pressures. Today, with the development of technology, information and capital are transcending geographical boundaries and reshaping the relationships between the marketplace, states and citizens. In particular, the growth of the mass media industry has largely impacted on individuals and societies across the globe. Although beneficial in some ways, this increased accessibility has the capacity to negatively affect a society's individuality. With information being so easily distributed throughout the world, cultural meanings, values and tastes run the risk of becoming homogenized. As a result, the strength of identity of individuals and societies may begin to weaken.

Some individuals, particularly those with strong religious beliefs, maintain that it is in the best interests of individuals and of humanity as a whole that all people adhere to a specific model for society or specific aspects of such a model. For example, evangelical missionary organisations such as the New Tribes Mission actively work to support social changes that some observers would consider detrimental to cultural diversity by seeking out remote tribal societies to convert them to Christianity;

Nowadays, communication between different countries becomes more and more frequent. And more and more students choose to study overseas for experiencing culture diversity. Their goal is to broaden their horizons and develop themselves from learning overseas. For example, according to Fengling, Chen, Du Yanjun, and Yu Ma's paper "Academic Freedom in the People's Republic of China and the United States Of America.", they pointed out that Chinese education more focus on "traditionally, teaching has consisted of spoon feeding, and learning has been largely by rote. China's traditional system of education has sought to make students accept fixed

and ossified content." And "In the classroom, Chinese professors are the laws and authorities; Students in China show great respect to their teachers in general." On another hand, in United States of America education "American students treat college professors as equals." Also "American students' are encouraged to debate topics. The free open discussion on various topics is due to the academic freedom which most American colleges and universities enjoy." Discussion above gives us an overall idea about the differences between China and the United States on education. But we cannot simply judge which one is better, because each culture has its own advantages and features. Thanks to those difference forms the culture diversity and those make our world more colorful. For students who go abroad for education, if they can combine positive culture elements from two different cultures to their self-development, it would be a competitive advantage in their whole career. Especially, with current process of global economics, people who owned different perspectives on cultures stand at a more competitive position in current world.

Quantification

Cultural diversity is tricky to quantify, but a good indication is thought to be a count of the number of languages spoken in a region or in the world as a whole. By this measure we may be going through a period of precipitous decline in the world's cultural diversity. Research carried out in the 1990s by David Crystal (Honorary Professor of Linguistics at theUniversity of Wales, Bangor) suggested that at that time, on average, one language was falling into disuse every two weeks. He calculated that if that rate of the language deathwere to continue, then by the year 2100 more than 90% of the languages currently spoken in the world will have gone extinct.

Overpopulation, immigration and imperialism (of both the militaristic and cultural kind) are reasons that have been suggested to explain any such decline. However, it could also be argued that with the advent of globalism, a decline in cultural diversity is inevitable because information sharing often promotes homogeneity.

Cultural Heritage

Sydney's Chinatown:

The Universal Declaration on Cultural Diversity adopted by UNESCO in 2001 is a legal instrument that recognizes cultural diversity as "common heritage of humanity" and considers its safeguarding to be a concrete and ethical imperative inseparable from respect for human dignity.

Beyond the Declaration of Principles adopted in 2003 at the Geneva Phase of the World Summit on the information Society (WSIS), the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, adopted in October 2005, is also regarded[by whom?] as a legally binding instrument that recognizes

- The distinctive nature of cultural goods, services and activities as vehicles of identity, values and meaning;

- That while cultural goods, services and activities have important economic value, they are not mere commodities or consumer goods that can only be regarded as objects of trade.

It was adopted in response to "growing pressure exerted on countries to waive their right to enforce cultural policies and to put all aspects of the cultural sector on the table when negotiating international trade agreements". To date, 116 member states as well as the European Union have ratified the Convention, except the US, Australia and Israel.[8] It is instead a clear recognition of the specificity of cultural goods and services, as well as state sovereignty and public services in

this area. Thought for world trade, this soft law instrument (strength in not binding) clearly became a crucial reference to the definition of the European policy choice. In 2009, the European Court of Justice favoured a broad view of culture — beyond cultural values through the protection of film or the objective of promoting linguistic diversity yet previously recognized . On top of it, under this Convention, the EU and China have committed to fostering more balanced cultural exchanges, strengthening international cooperation and solidarity with business and trade opportunities in cultural and creative industries. The most motivating factor behind Beijing's willingness to work in partnership at business level might certainly be the access to creative talents and skills from foreign markets.

There is also the Convention for the Safeguarding of the Intangible Cultural Heritage ratified on June 20, 2007 by 78 states which said:

The intangible cultural heritage, transmitted from generation to generation is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and gives them a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

Cultural diversity was also promoted by the Montreal Declaration of 2007, and by the European Union.[citation needed] The idea of a global multicultural heritage covers several ideas, which are not exclusive (see multiculturalism). In addition to language, diversity can also include religious or traditional practice.

On a local scale, Agenda 21 for culture, the first document of world scope that establishes the foundations for a commitment by cities and local governments to cultural development, supports local authorities committed to cultural diversity.

Defense:

The defense of cultural diversity can take several meanings:

- A balance to be achieved: thus, the idea of defense of cultural diversity through the promotion of actions in favor of "cultural minorities" said to be disadvantaged;
- Preservation of "cultural minorities" thought to be endangered;

- In other cases, one speaks of "cultural protection", which refers to the concept of "cultural exception". This makes the link between the social vision of culture and the vision inherent in its commercialisation. The cultural exception highlights the specificity of cultural products and services, including special recognition by the European Union in its Declaration on Cultural Diversity. In this context, the objective is to defend against what is seen as a "commodification" - considered harmful to a "disadvantaged" culture — supporting its development through grants, promotion operations, etc., also known as "cultural protectionism".

- This defense may also refer to incorporating "cultural rights" provisions, conducted unsuccessfully in the early 1990s in Europe, into a layer of human rights.

Economic development generally refers to the sustained, concerted actions of policy makers and communities that promote the standard of living and economic health of a specific area. Economic development can also be referred to as the quantitative and qualitative changes in the economy. Such actions can involve multiple areas including development of human capital, critical infrastructure, regional competitiveness, environmental sustainability, social inclusion, health, safety, literacy, and other initiatives. Economic development differs from economic growth. Whereas economic development is a policy intervention endeavor with aims of economic and social well-being of people, economic growth is a phenomenon of market productivity and rise in GDP. Consequently, as economist Amartya Sen points out: “economic growth is one aspect of the process of economic development.”

Development economics:

The scope of economic development includes the process and policies by which a nation improves the economic, political, and social well-being of its people.

The University of Iowa's Center for International Finance and Development states that:

'Economic development' is a term that economists, politicians, and others have used frequently in the 20th century. The concept, however, has been in existence in the West for centuries. Modernization, Westernisation, and especially Industrialisation are other terms people have used while discussing economic development. Economic development has a direct relationship with the environment.

Although nobody is certain when the concept originated, most people agree that development is closely bound up with the evolution of capitalism and the demise of feudalism.

Mansell and Wehn also state that economic development has been understood since the World War II to involve economic growth, namely the increases in per capita income, and (if currently absent) the attainment of a standard of living equivalent to that of industrialized countries.[Economic development can also be considered as a static theory that documents the state of an economy at a certain time. According to Schumpeter (2003), the changes in this equilibrium state to document in economic theory can only be caused by intervening factors coming from the outside.

History:

Economic development originated in the post war period of reconstruction initiated by the US. In 1949, during his inaugural speech, President Harry Truman identified the development of undeveloped areas as a priority for the west:

"More than half the people of the world are living in conditions approaching misery. Their food is inadequate, they are victims of disease. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas. For the first time in history humanity possesses the knowledge and the skill to relieve the suffering of these people ... I believe that we should make available to peace-loving peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life… What we envisage is a program of development based on the concepts of democratic fair dealing ... Greater production is the key to prosperity and peace. And the key to greater production is a wider and more vigorous application of modem scientific and technical knowledge."

There have been several major phases of development theory since 1945. From the 1940s to the 1960s the state played a large role in promoting industrialization in developing countries, following the idea of modernization theory. This period was followed by a brief period of basic needs development focusing on human capital development and redistribution in the 1970s. Neo-liberalism emerged in the 1980s pushing an agenda of free trade and Import Substitution Industrialization.

In economics, the study of economic development was borne out of an extension to traditional economics that focused entirely on national product, or the aggregate output of goods and services. Economic development was concerned in the expansion of people's entitlements and their corresponding capabilities, morbidity, nourishment, literacy, education, and other socio-economic indicators.[Borne out of the backdrop of Keynesian, advocating government intervention, and neoclassical economics, stressing reduced intervention, with rise of high-growth countries (Singapore, South Korea, Hong Kong) and planned governments (Argentina, Chile, Sudan, Uganda), economic development, more generally development economics, emerged amidst these mid-20th century theoretical interpretations of how economies prosper. Also, economist Albert O. Hirschman, a major contributor to development economics, asserted that economic development grew to concentrate on the poor regions of the world, primarily in Africa, Asia and Latin America yet on the outpouring of fundamental ideas and models.

It has also been argued, notably by Asian and European proponents of Infrastructure-based development, that systematic, long term government investments in transportation, housing, education and healthcare are necessary to ensure sustainable economic growth in emerging countries.

Chapter 4

Small Scale, Slow Growth and Local Control

The underdevelopment theory of tourism describes a new form of imperialism by multinational corporations that control ecotourism resources. These corporations finance and profit from the development of large scale ecotourism that causes excessive environmental degradation, loss of traditional culture and way of life, and exploitation of local labor. In Zimbabwe and Nepal's Annapurna region, where underdevelopment is taking place, more than 90 percent of ecotourism revenues are expatriated to the parent countries, and less than 5 percent go into local communities.

The lack of sustainability highlights the need for small scale, slow growth, and locally based ecotourism. Local peoples have a vested interest in the well being of their community, and are therefore more accountable to environmental protection than multinational corporations. The lack of control, westernization, adverse impacts to the environment, loss of culture and traditions outweigh the benefits of establishing large scale ecotourism.

The increased contributions of communities to locally managed ecotourism create viable economic opportunities, including high level management positions, and reduce environmental issues associated with poverty and unemployment. Because the ecotourism experience is marketed to a different lifestyle from large scale ecotourism, the development of facilities and infrastructure does not need to conform to corporate Western tourism standards, and can be much simpler and less expensive. There is a greater multiplier effect on the economy, because local products, materials, and labor are used. Profits accrue locally and import leakages are reduced. The Great Barrier Reef Park in Australia reported over half of a billion dollars of indirect income in the area and added thousands of indirect jobs between 2004 and 2005. However, even this form of tourism may require foreign investment for promotion or start up. When such investments are required, it is crucial for communities for find a company or non-governmental organization that reflects the philosophy of ecotourism; sensitive to their concerns and willing to cooperate at the expense of profit. The basic assumption of the multiplier effect is that the economy starts off with unused resources, for example, that many workers are cyclically unemployed and much of industrial capacity is sitting idle or incompletely utilized. By

increasing demand in the economy it is then possible to boost production. If the economy was already at full employment, with only structural, frictional, or other supply-side types of unemployment, any attempt to boost demand would only lead to inflation. For various laissez-faire schools of economics which embrace Say's Law and deny the possibility of Keynesian inefficiency and under-employment of resources, therefore, the multiplier concept is irrelevant or wrong-headed.

As an example, consider the government increasing its expenditure on roads by $1 million, without a corresponding increase in taxation. This sum would go to the road builders, who would hire more workers and distribute the money as wages and profits. The households receiving these incomes will save part of the money and spend the rest on consumer goods. These expenditures in turn will generate more jobs, wages, and profits, and so on with the income and spending circulating around the economy.

The multiplier effect arises because of the induced increases in consumer spending which occur due to the increased incomes — and because of the feedback into increasing business revenues, jobs, and income again. This process does not lead to an economic explosion not only because of the supply-side barriers at potential output (full employment) but because at each "round", the increase in consumer spending is less than the increase in consumer incomes. That is, the marginal propensity to consume (mpc) is less than one, so that each round some extra income goes into saving, leaking out of the cumulative process. Each increase in spending is thus smaller than that of the previous round, preventing an explosion.

In economics, underdevelopment is when resources are not used to their full socio-economic potential, with the result that local or regional development is slower in most cases than it should be. Furthermore, it results from the complex interplay of internal and external factors that allow less developed countries only a lop-sided development progression. Underdeveloped nations are characterized by a wide disparity between their rich and poor populations, and an unhealthy balance of trade.Symptoms of underdevelopment include lack of access to job opportunities, health care, drinkable water, food, education and housing.[History

The world consists of a group of rich nations and a large number of poor nations. It is usually held that economic development takes place in a series of capitalist stages and that today's underdeveloped countries are still in a stage of history through which the now developed countries passed long ago. The countries that are now fully developed have never been underdeveloped in the first place, though they might have been undeveloped.

1.Modernization Theory:

Modernization theory is a sociology-economic theory, also known as the Development theory. This highlights the positive role played by the developed world in modernizing and facilitating sustainable development in underdeveloped nations. It is often contrasted with Dependency theory.

The theory of modernization consists of three parts:

Identification of types of societies, and explanation of how those designated as modernized or relatively modernized differ from others;

Specification of how societies become modernized, comparing factors that are more or less conducive to transformation.

Generalizations about how the parts of a modernized society fit together, involving comparisons of stages of modernization and types of modernized societies with clarity about prospects for further modernization.

2.Dependency Theory:

Dependency theory is the body of theories by various intellectuals, both from the Third World and the First World, that suggest that the wealthy nations of the world need a peripheral group of poorer states in order to remain wealthy. Dependency theory states that the poverty of the countries in the periphery is not because they are not integrated into the world system, but because of how they are integrated into the system.

These poor nations provide natural resources, cheap labor, a destination for obsolete technology, and markets to the wealthy nations, without which they could not have the standard of living they enjoy. First world nations actively, but not necessarily consciously, perpetuate a state of

dependency through various policies and initiatives. This state of dependency is multifaceted, involving economics, media control, politics, banking and finance, education, sport and all aspects of human resource development. Any attempt by the dependent nations to resist the influences of dependency could result in economic sanctions and/or military invasion and control. This is rare, however, and dependency is enforced far more by the wealthy nations setting the rules of international trade and commerce.

Dependency theory first emerged in the 1950s, advocated by Raul Prebisch whose research found that the wealth of poor nations tended to decrease when the wealth of rich nations increased. The theory quickly divided into diverse schools. Some, most notably Andre Gunder Frank and Walter Rodney adapted it to Marxism. "Standard" dependency theory differs sharply from Marxism, however, arguing against internationalism and any hope of progress in less developed nations towards industrialization and a liberating revolution. Former Brazilian President Fernando Henrique Cardoso wrote extensively on dependency theory while in political exile. The American sociologist Immanuel Wallerstein refined the Marxist aspect of the theory, and called it the "world system."

According to Brazilian social scientist, Theotonio Dos Santos, dependence means a situation in which certain countries economies' are conditioned by the development & expansion of another to which the former is subject. He goes on to further clarify that the interdependence of two or more economies, and consequently world trade, assumes the form of dependence when dominant countries can create dependency only as a reflection of that expansion, which can have a negative effect on the subordinate's immediate economy.

Guyanese Marxist historian and political activist, Walter Rodney, contends in reference to Africa`s under developmemt, "The decisiveness of the short period of colonialism and its negative consequences for Africa spring mainly from the fact that Africa lost power. Power is the ultimate determinant in human society, being basic to the relations within any group and between groups. It implies the ability to defend one's interests and if necessary to impose one's will by any means available. In relations between peoples, the question of power determines maneuverability in bargaining, the extent to which a people survive as a physical and cultural entity. When one society finds itself forced to relinquish power entirely to another society, that in itself is a form of underdevelopment"

Here \Delta C= 50; \Delta Y= 60 Therefore, \mathit{MPC}=\Delta C/\Delta Y= 50/60= 0.83 or 83%. For example, suppose you receive a bonus with your paycheck, and it's $500 on top of your normal annual earnings. You suddenly have $500 more in income than you did before. If you decide to spend $400 of this marginal increase in income on a new business suit, your marginal propensity to consume will be 0.8 ($400/$500).

The above figure illustrates the consumption function. The slope of the consumption function tells us how much consumption increases when disposable income increases by one currency unit. That is, the slope of the consumption function is the MPC.

The marginal propensity to consume is measured as the ratio of the change in consumption to the change in income, thus giving us a figure between 0 and 1. The MPC can be more than one if the subject borrowed money or dissaved to finance expenditures higher than their income. The MPC can also be less than zero if an increase in income leads to a reduction in consumption (which might occur if, for example, the increase in income makes it worthwhile to save up for a particular purchase). One minus the MPC equals the marginal propensity to save (in a two sector closed economy), both of which are crucial to Keynesian economics and are key variables in determining the value of the multiplier.

In a standard Keynesian model, the MPC is less than the average propensity to consume (APC) because in the short-run some (autonomous) consumption does not change with income. Falls (increases) in income do not lead to reductions (increases) in consumption because people reduce (add to) savings to stabilize consumption. Over the long-run, as wealth and income rise, consumption also rises; the marginal propensity to consume out of long-run income is closer to the average propensity to consume.

The MPC is not strongly influenced by interest rates; consumption tends to be stable relative to income. In theory one might think that higher interest rates would induce more saving (the substitution effect) but higher interest rates also mean than people do not have to save as much for the future.

Economists often distinguish between the marginal propensity to consume out of permanent income, and the marginal propensity to consume out of temporary income, because if consumers expect a change in income to be permanent, then they have a greater incentive to increase their

consumption . This implies that the Keynesian multiplier should be larger in response to permanent changes in income than it is in response to temporary changes in income (though the earliest Keynesian analyses ignored these subtleties). However, the distinction between permanent and temporary changes in income is often subtle in practice, and it is often quite difficult to designate a particular change in income as being permanent or temporary. What is more, the marginal propensity to consume should also be affected by factors such as the prevailing interest rate and the general level of consumer surplus that can be derived from purchasing.

MPC and nature of country:

The MPC is higher in the case of poor than in case of rich people. The greater a person's income, the more of her or his basic human needs will have already been met, and the greater his or her tendency to save in order to provide for future will be. The marginal propensity to save of the richer classes is greater than that of the poorer classes. If, at any time, it is desired to increase aggregate consumption, then the purchasing power should be transferred from the richer classes (with low propensity to consume) to the poorer classes (with a higher propensity to consume). Likewise, if it is desired to reduce community consumption, the purchasing power must be taken away from the poorer classes by taxing consumption. The marginal propensity to consume is higher in a poor country and lower in the case of rich country. The reason is same as stated above. In the case of rich country, most of the basic needs of the people have already been satisfied, and all the additional increments of income are saved, resulting in a higher marginal propensity to save but in a lower marginal propensity to consume. In a poor country, on the other hand, most of the basic needs of the people remain unsatisfied so that additional increments of income go to increase consumption, resulting in a higher marginal propensity to consume and a lower marginal propensity to save. This is the reason MPC is higher in the underdeveloped countries of Asia and Africa, and lower in developed countries such as the United States, the United Kingdom, Singapore and Germany.

Fractional-reserve banking is the practice whereby a bank retains reserves in an amount equal to only a portion of the amount of its customers' deposits to satisfy potential demands for withdrawals. Reserves are held at the bank as currency, or as deposits in reflected in the bank's accounts at the central bank. The remainder of customer-deposited funds is used to fund

investments or loans that the bank makes to other customers.[citation needed] Most of these loaned funds are later redeposited into other banks, allowing further lending. Because bank deposits are usually considered money in their own right, fractional-reserve banking permits the money supply to grow to a multiple (called the money multiplier) of the underlying reserves of base money originally created by the central bank.

To mitigate the risks of bank runs (when a large proportion of depositors seek withdrawal of their demand deposits at the same time) or, when problems are extreme and widespread, systemic crises, the governments of most countries regulate and oversee commercial banks, provide deposit insurance and act as lender of last resort to commercial banks. In most countries, the central bank (or other monetary authority) regulates bank credit creation, imposing reserve requirements and other capital adequacy ratios. This limits the amount of money creation that occurs in the commercial banking system, and helps ensure that banks have enough funds to meet the demand for withdrawals.

History:

Fractional-reserve banking predates the existence of governmental monetary authorities and originated many centuries ago in bankers' realization that generally not all depositors demand payment at the same time.

Savers looking to keep their valuables in safekeeping depositories deposited gold and silver at goldsmiths, receiving in exchange a note for their deposit (see Bank of Amsterdam). These notes gained acceptance as a medium of exchange for commercial transactions and thus became as an early form of circulating paper money.

As the notes were used directly in trade, the goldsmiths observed that people would not usually redeem all their notes at the same time, and they saw the opportunity to invest their coin reserves in interest-bearing loans and bills. This generated income for the goldsmiths but left them with more notes on issue than reserves with which to pay them. A process was started that altered the role of the goldsmiths from passive guardians of bullion, charging fees for safe storage, to interest-paying and interest-earning banks. Thus fractional-reserve banking was born.

However, if creditors (note holders of gold originally deposited) lost faith in the ability of a bank to pay their notes, many would try to redeem their notes at the same time. If in response a bank could not raise enough funds by calling in loans or selling bills, it either went into insolvency or defaulted on its notes. Such a situation is called a bank run and caused the demise of many early banks.

Starting in the late 1600s nations began to establish central banks which were given the legal power to set reserve requirements and to issue the reserve assets, or monetary base, in which form such reserves are required to be held. The reciprocal of the reserve requirement, called the money multiplier, limits the size to which the transactions in money supply may grow for a given level of reserves in the banking system. In order to mitigate the impact of bank failures and financial crises, governments created central banks – public (or semi-public) institutions that have the authority to centralize the storage of precious metal bullion amongst private banks to allow transfer of gold in case of bank runs, regulate commercial banks, impose reserve requirements, and act as lender-of-last-resort if any bank faced a bank run. The emergence of central banks reduced the risk of bank runs inherent in fractional-reserve banking and allowed the practice to continue as it does today.

Over time, economists, central banks, and governments have changed their views as to the policy variables which should be targeted by monetary authorities. These have included interest rates, reserve requirements, and various measures of the money supply and monetary base.

How it works:

In most legal systems, a bank deposit is not a bailment. In other words, the funds deposited are no longer the property of the customer. The funds become the property of the bank, and the customer in turn receives an asset called a deposit account (a checking or savings account). That deposit account is a liability of the bank on the bank's books and on its balance sheet. Because the bank is authorized by law to create credit up to an amount equal to a multiple of the amount of its reserves, the bank's reserves on hand to satisfy payment of deposit liabilities amount to only a fraction of the total amount which the bank is obligated to pay in satisfaction of its demand deposits.

Fractional-reserve banking ordinarily functions smoothly. Relatively few depositors demand payment at any given time, and banks maintain a buffer of reserves to cover depositors' cash withdrawals and other demands for funds. However, during a bank run or a generalized financial crisis, demands for withdrawal can exceed the bank's funding buffer, and the bank will be forced to raise additional reserves to avoid defaulting on its obligations. A bank can raise funds from additional borrowings (e.g., by borrowing in the interbank lending market or from the central bank), by selling assets, or by calling in short-term loans. If creditors are afraid that the bank is running out of reserves or is insolvent, they have an incentive to redeem their deposits as soon as possible before other depositors access the remaining reserves. Thus the fear of a bank run can actually precipitate the crisis.

Many of the practices of contemporary bank regulation and central banking, including centralized clearing of payments, central bank lending to member banks, regulatory auditing, and government-administered deposit insurance, are designed to prevent the occurrence of such bank runs.

Economic function:

Fractional-reserve banking allows banks to create credit in the form of bank deposits, which represent immediate liquidity to depositors. The banks also provide longer-term loans to borrowers, and act as financial intermediaries for those funds. Less liquid forms of deposit (such as time deposits) or riskier classes of financial assets (such as equities or long-term bonds) may lock up a depositor's wealth for a period of time, making it unavailable for use on demand. This "borrowing short, lending long," or maturity transformation function of fractional-reserve banking is a role that many economists consider to be an important function of the commercial banking system.

Additionally, according to macroeconomic theory, a well-regulated fractional-reserve bank system also benefits the economy by providing regulators with powerful tools for influencing the money supply and interest rates. Many economists believe that these should be adjusted by the government to promote macroeconomic stability.

Modern central banking allows banks to practice fractional-reserve banking with inter-bank business transactions with a reduced risk of bankruptcy. The process of fractional-reserve

banking expands the money supply of the economy but also increases the risk that a bank cannot meet its depositor withdrawals.

Chapter 5

Criticism

Definition

In the continuum of tourism activities that stretch from conventional tourism to ecotourism proper, there has been a lot of contention to the limit at which biodiversity preservation, local social-economic benefits, and environmental impact can be considered "ecotourism". For this reason, environmentalists, special interest groups, and governments define ecotourism differently. Environmental organizations have generally insisted that ecotourism is nature-based, sustainably managed, conservation supporting, and environmentally educated. The tourist industry and governments, however, focus more on the product aspect, treating ecotourism as equivalent to any sort of tourism based in nature. As a further complication, many terms are used under the rubric of ecotourism. Nature tourism, low impact tourism, green tourism, bio-tourism, ecologically responsible tourism, and others have been used in literature and marketing, although they are not necessary synonymous with ecotourism.

The problems associated with defining ecotourism have often led to confusion among tourists and academics . Definitional problems are also subject of considerable public controversy and concern because of green washing, a trend towards the commercialization of tourism schemes disguised as sustainable, nature based, and environmentally friendly ecotourism. According to McLaren, these schemes are environmentally destructive, economically exploitative, and culturally insensitive at its worst. They are also morally disconcerting because they mislead tourists and manipulate their concerns for the environment. The development and success of such large scale, energy intensive, and ecologically unsustainable schemes are a testament to the tremendous profits associated with being labeled as ecotourism.

Greenwashing is a form of spin in which green PR or green marketing is deceptively used to promote the perception that an organization's products, aims and/or policies are environmentally friendly. Evidence that an organization is green washing often comes from pointing out the spending differences: when significantly more money or time has been spent advertising being "green" (that is, operating with consideration for the environment), than is actually spent on

environmentally sound practices Green washing efforts can range from changing the name or label of a product to evoke the natural environment on a product that contains harmful chemicals to multimillion dollar advertising campaigns portraying highly polluting energy companies as eco-friendly.

While green washing is not new, its use has increased over recent years to meet consumer demand for environmentally friendly goods and services. The problem is compounded by lax enforcement by regulatory agencies such as the Federal Trade Commission in the United States, the Competition Bureau in Canada, and the Committee of Advertising Practice and the Broadcast Committee of Advertising Practice in the United Kingdom. Critics of the practice suggest that the rise of green washing, paired with ineffective regulation, contributes to consumer skepticism of all green claims, and diminishes the power of the consumer in driving companies toward greener solutions for manufacturing processes and business operations.

Hotel "green washed" laundry card

The term green washing was coined by New York environmentalist Jay Westervelt in a 1986 essay regarding the hotel industry's practice of placing placards in each room promoting reuse of towels ostensibly to "save the environment." Westervelt noted that, in most cases, little or no effort toward reducing energy waste was being made by these institutions—as evidenced by the lack of cost reduction this practice effected. Westervelt opined that the actual objective of this "green campaign" on the part of many hoteliers was, in fact, increased profit. Westervelt thus labeled this and other outwardly environmentally conscientious acts with a greater, underlying purpose of profit increase as green washing.

In addition, the political term "linguistic detoxification" describes when, through legislation or other government action, the definitions of toxicity for certain substances are changed, or the name of the substance is changed, so that fewer things fall under a particular classification as toxic. The origin of this phrase has been attributed to environmental activist and author Barry Commoner.

Similarly, introduction of a Carbon Emission Trading Scheme may feel good, but may be counterproductive if the cost of carbon is priced too low, or if large emitters are given "free credits." For example, Bank of America subsidiary MBNA offers an Eco-Logique MasterCard

for Canadian consumers that rewards customers with carbon offsets as they continue using the card. Customers may feel that they are nullifying their carbon footprint by purchasing polluting goods with the card. However, only 0.5 percent of purchase price goes into purchasing carbon offsets, while the rest of the interchange fee still goes to the bank.

History

In the mid 1960s, the environmental movement gained momentum. This popularity prompted many companies to create a new green image through advertising. Jerry Mander, a former Madison advertising executive, called this new form of advertising "ecopornography."

The first Earth Day was held on April 22, 1970. This encouraged many industries to advertise themselves as being friendly to the environment. Public utilities spent 300 million dollars advertising themselves as clean green companies. This was eight times more than the money they spent on pollution reduction research.

In 1985, the Chevron Corporation launched one of the most famous greenwashing ad campaigns in history. Chevron's "People Do" advertisements were aimed at a "hostile audience" of "societally conscious" people. Two years after the launch of the campaign, surveys found people in California trusted Chevron more than other oil companies to protect the environment. In the late 1980s The American Chemistry Council started a program called Responsible Care, which shone light on the environmental performances and precautions of the group's members. The loose guidelines of responsible care caused industries to adopt self-regulation over government regulation.

In 1991, a study published in the Journal of Public Policy and Marketing (American Marketing Association) found that 58% of environmental ads had at least one deceptive claim. Another study found that 77% of people said the environmental reputation of company affected whether they would buy their products. One fourth of all household products marketed around Earth Day advertised themselves as being green and environmentally friendly. In 1998 the Federal Trade Commission created the "Green Guidelines," which defined terms used in environmental marketing. The following year the FTC found that the Nuclear Energy Institute claims of being environmentally clean were not true. The FTC did nothing about the ads because they were out of their jurisdiction. This caused the FTC to realize they needed new clear enforceable standards.

In 1999, according to environmental activist organizations, the word "greenwashing" was added to the Oxford English Dictionary.

In 2002, during the World Summit on Sustainable Development in Johannesburg, the Greenwashing Academy hosted the Greenwash Academy Awards. The ceremony awarded companies like BP, ExxonMobil, and even the US Government for their elaborate greenwashing ads and support for greenwashing.

More recently, social scientists have been investigating claims of and the impact of greenwashing. In 2005, Ramus and Monteil conducted secondary data analysis of two databases to uncover corporate commitment to implementation of environmental policies as opposed to greenwashing. They found while companies in the oil and gas are more likely to implement environmental policies than service industry companies, they are less likely to commit to fossil fuel reduction.

In 2010 a study was done showing that 4.5% of products tested were found to be truly green as opposed to 2% in 2009. In 2009 2,739 products claimed to be green while in 2010 the number rose to 4,744. The same study in 2010 found that 95% percent of the consumer products claiming to be green were not green at all.

Regulation:

Australia

The Australian Trade Practices Act has been modified to include punishment of companies that provide misleading environmental claims. Any organization found guilty of such could face up $1.1 million in fines. In addition, the guilty party must pay for all expenses incurred while setting the record straight about their product or company's actual environmental impact.

Canada

Canada's Competition Bureau along with the Canadian Standards Association are discouraging companies from making "vague claims" towards their products' environmental impact. Any claims must be backed up by "readily available data."

Norway

Norway's consumer ombudsman has targeted automakers who claim that their cars are "green," "clean" or "environmentally friendly" with some of the world's strictest advertising guidelines. Consumer Ombudsman official Bente Øverli said: "Cars cannot do anything good for the environment except less damage than others." Manufacturers risk fines if they fail to drop the words. Øverli said she did not know of other countries going so far in cracking down on cars and the environment.

USA

The Federal Trade Commission (FTC) provides voluntary guidelines for environmental marketing claims. These guidelines give the FTC the right to prosecute false and misleading advertisement claims. The green guidelines were not created to be used as an enforceable guideline but instead were intended to be followed voluntarily. Listed below are the green guidelines set by the FTC.

Qualifications and disclosures: The Commission traditionally has held that in order to be effective, any qualifications or disclosures such as those described in these guides should be sufficiently clear, prominent and understandable to prevent deception. Clarity of language, relative type size and proximity to the claim being qualified, and an absence of contrary claims that could undercut effectiveness, will maximize the likelihood that the qualifications and disclosures are appropriately clear and prominent.

Distinction between benefits of product, package and service: An environmental marketing claim should be presented in a way that makes clear whether the environmental attribute or benefit being asserted refers to the product, the product's packaging, a service or to a portion or component of the product, package or service. In general, if the environmental attribute or benefit applies to all but minor, incidental components of a product or package, the claim need not be qualified to identify that fact. There may be exceptions to this general principle. For example, if an unqualified "recyclable" claim is made and the presence of the incidental component significantly limits the ability to recycle the product, then the claim would be deceptive.

Overstatement of environmental attribute: An environmental marketing claim should not be presented in a manner that overstates the environmental attribute or benefit, expressly or by

implication. Marketers should avoid implications of significant environmental benefits if the benefit is in fact negligible.

Comparative claims: Environmental marketing claims that include a comparative statement should be presented in a manner that makes the basis for the comparison sufficiently clear to avoid consumer deception. In addition, the advertiser should be able to substantiate the comparison.

The FTC has said in 2010 that it will update its guidelines for environmental marketing claims in an attempt to reduce greenwashing. The revision to the FTC's Green Guides covers a wide range of public input, including hundreds of consumer and industry comments on previously proposed revisions. The updates and revision to the existing Guides include a new section of carbon offsets, "green" certifications and seals renewable energy and renewable materials claims. According to FTC Chairman Jon Leibowitz, "The introduction of environmentally friendly products into the marketplace is a win for consumers who want to purchase greener products and producers who wants to sell them." Leibowitz also says the win-win can only claim if marketers' claims are straightforward and proven.

Examples

The Airbus A380 described as "A better environment inside and out."

Environmentalists have argued that the Bush Administration's Clear Skies Initiative actually weakens air pollution laws.

Many food products have packaging that evokes an environmentally friendly imagery even though there has been no attempt made at lowering the environmental impact of its production.

In 2009, European McDonald's changed the colour of their logos from yellow and red to yellow and green; a spokesman for the company explained that the change was "to clarify [their] responsibility for the preservation of natural resources."

An article in Wired magazine alleges that slogans are used to suggest environmentally benign business activity: the Comcast Ecobill has the slogan of "Paper LESS is MORE" but Comcast uses large amounts of paper for direct marketing. The Poland Spring ecoshape bottle is touted as

"A little natural does a lot of good," although 80% of beverage containers go to the landfill. The Airbus A380 airliner is described as "A better environment inside and out" even though air travel has a high negative environment cost.

The Advertising Standards Authority in the UK upheld several complaints against major car manufacturers including Suzuki, SEAT, Toyota and Lexus who made erroneous claims about their vehicles.

Kimberly Clark's claim of "Pure and Natural" diapers in green packaging. The product uses organic cotton on the outside but keeps the same petrochemical gel on the inside. Pampers also claims that "Dry Max" diapers reduce landfill waste by reducing the amount of paper fluff in the diaper, which really is a way for Pampers to save money.

A 2010 advertising campaign by Chevron was described by the Rainforest Action Network, Amazon Watch and The Yes Men as greenwash. A spoof campaign was launched to pre-empt Chevron's greenwashing.

"Clean Coal," an initiative adopted by several platforms for the 2008 U.S presidential elections is an example of political greenwashing. The policy cited carbon capture as a means of reducing carbon emissions by capturing and injecting carbon dioxide produced by coal power plants into layers of porous rock below the ground. According to Fred Pearce's Greenwash column in The Guardian, "clean coal" is the "ultimate climate change oxymoron"—"pure and utter greenwash" he says.

The conversion of the term "Tar Sands" to "Oil Sands," (Alberta, Canada) in corporate and political language reflects an ongoing debate between the project's adherents and opponents. This semantic shift can be seen as a case of greenwashing in an attempt at countering growing public concern as to the environmental and health impacts of the industry. While advocates claim that the shift is scientifically derived to better reflect the usage of the sands as a precursor to oil, environmental groups are claiming that this is simply a means of cloaking the issue behind friendlier terminology.

Over the past years WALMART has proclaimed to "go green" with a sustainability campaign. However, according to the Institute For Local Reliance (ILRS), “Walmart’s sustainability

campaign has done more to improve the company's image than the environment." WALMART still only generates 2 percent of U.S. electricity from wind and solar resources. According to the ILRS, Walmart routinely donates money to political candidates who vote against the environment. The retail giant responded to these accusations by stating "that it is serious about its commitment to reduce 20 million tons of greenhouse gas emissions by 2015".

Opposition to greenwash

Organizations and individuals are making attempts to reduce the impact of greenwashing by exposing it to the public. The Greenwashing Index, created by the University of Oregon in partnership with EnviroMedia Social Marketing, allows examples of greenwashing to be uploaded and rated by the public.The British Code of Advertising, Sales Promotion and Direct Marketing has a specific section targeting environmental claims.

According to some organizations opposing green washing, there has been a significant increase in its use by companies over the last decade. Terra Choice Environmental Marketing, an advertising consultancy company issued a report denoting a 79% increase in the usage of corporate green washing between 2007 and 2009. Additionally, it has begun to manifest itself in new varied ways. Within the non-residential building products market in the United States, some companies are beginning to claim that their environmentally minded policy changes will allow them to earn points through the U.S. Green Building Council's Leadership in Energy and Environmental Design rating program. This point system has been held up as an example of the "gateway effect" that the drive to market products as environmentally friendly is having on company policies. Jim Nicolow, AIA, LEED Fellow, leader of architecture and planning firm Lord, Aeck & Sargent's sustainable design initiative has claimed that the green washing trend may be enough to eventually effect a genuine reduction in environmentally damaging practices. According to the Home and Family Edition, 95% consumer products claiming to be green were discovered to commit at least one of the "Sins of Green washing". The Seven Sins of Green washing are as follows:

Sin of the Hidden Trade-off, committed by suggesting a product is "green" based on an unreasonably narrow set of attributes without attention to other important environmental issues.

Sin of No Proof, committed by an environmental claim that cannot be substantiated by easily accessible supporting information or by a reliable third-party certification.

Sin of Vagueness, committed by every claim that is so poorly defined or broad that its real meaning is likely to be misunderstood by the consumer.

Sin of Worshiping False Labels is committed when a claim, communicated either through words or images, gives the impression of a third-party endorsement where no such endorsement exists.

Sin of Irrelevance, committed by making an environmental claim that may be truthful but which is unimportant or unhelpful for consumers seeking environmentally preferable products.

Sin of Lesser of Two Evils, committed by claims that may be true within the product category, but that risk distracting consumer from the greater environmental impacts of the category as a whole.

Sin of Fibbing, the least frequent Sin, is committed by making environmental claims that are simply false.

In 2008, Ed Gillespie identified "ten signs of green washing", which are similar to the Seven Sins listed above, but with three additional indicators.

Suggestive pictures - Images that imply a baseless green impact, such as flowers issuing from the exhaust pipe of a vehicle.

Just not credible - A claim that touts the environmentally friendly attributes of a dangerous product, such as cigarettes.

Chapter 6

Negative Impact

Ecotourism has become one of the fastest-growing sectors of the tourism industry, growing annually by 10–15% worldwide. One definition of ecotourism is "the practice of low-impact, educational, ecologically and culturally sensitive travel that benefits local communities and host countries" (Honey, 1999). Many of the ecotourism projects are not meeting these standards. Even if some of the guidelines are being executed, the local communities are still facing other negative impacts. South Africa is one of the countries that are reaping significant economic benefits from ecotourism, but negative effects—including forcing people to leave their homes, gross violations of fundamental rights, and environmental hazards—far outweigh the medium-term economic benefits.

A tremendous amount of money is being spent and human resources continue to be used for ecotourism despite unsuccessful outcomes, and even more money is put into public relation campaigns to dilute the effects of criticism. Ecotourism channels resources away from other projects that could contribute more sustainable and realistic solutions to pressing social and environmental problems. "The money tourism can generate often ties parks and managements to eco-tourism" (Walpole et al. 2001). But there is a tension in this relationship because ecotourism often causes conflict and changes in land-use rights, fails to deliver promises of community-level benefits, damages environments, and has plenty of other social impacts. Indeed many argue repeatedly that ecotourism is neither ecologically nor socially beneficial, yet it persists as a strategy for conservation and development (West, 2006). While several studies are being done on ways to improve the ecotourism structure, some argue that these examples provide rationale for stopping it altogether.

The ecotourism system exercises tremendous financial and political influence. The evidence above shows that a strong case exists for restraining such activities in certain locations. Funding could be used for field studies aimed at finding alternative solutions to tourism and the diverse problems Africa faces in result of urbanization, industrialization, and the over exploitation of agriculture (Kamuaro, 2007). At the local level, ecotourism has become a source of conflict over control of land, resources, and tourism profits. In this case, ecotourism has harmed the

environment and local people, and has led to conflicts over profit distribution. In a perfect world more efforts would be made towards educating tourists of the environmental and social effects of their travels. Very few regulations or laws stand in place as boundaries for the investors in ecotourism. These should be implemented to prohibit the promotion of unsustainable ecotourism projects and materials which project false images of destinations, demeaning local and indigenous cultures.

Though conservation efforts in East Africa are indisputably serving the interests of tourism in the region it is important to make the distinction between conservation acts and the tourism industry.Eastern African communities are not the only of developing regions to experience economic and social harms from conservation efforts. Conservation in the Northwest Yunnan Region of China has similarly brought drastic changes to traditional land use in the region. Prior to logging restrictions imposed by the Chinese Government the industry made up 80 percent of the regions revenue. Following a complete ban on commercial logging the indigenous people of the Yunnan region now see little opportunity for economic development. Ecotourism may provide solutions to the economic hardships suffered from the loss of industry to conservation in the Yunnan in the same way that it may serve to remedy the difficulties faced by the Maasai. As stated, the ecotourism structure must be improved to direct more money into host communities by reducing leakages for the industry to be successful in alleviating poverty in developing regions, but it provides a promising opportunity.

Overexploitation, also called overharvesting, refers to harvesting a renewable resource to the point of diminishing returns. Sustained overexploitation can lead to the destruction of the resource. The term applies to natural resources such as: wild medicinal plants, grazing pastures, game animals, fish stocks, forests, and water aquifers.

In ecology, overexploitation describes one of the five main activities threatening global biodiversity.Ecologists use the term to describe populations that are harvested at a rate that is unsustainable, given their natural rates of mortality and capacities for reproduction. This can result in extinction at the population level and even extinction of whole species. In conservation biology the term is usually used in the context of human economic activity that involves the taking of biological resources, or organisms, in larger numbers than their populations can

withstand. The term is also used and defined somewhat differently in fisheries, hydrology and natural resource management.

Overexploitation can lead to resource destruction, including extinctions. However it is also possible for overexploitation to be sustainable, as discussed below in the section on fisheries. In the context of fishing, the term overfishing can be used instead of overexploitation, as can overgrazing in stock management, overlogging in forest management, overdrafting in aquifer management, and endangered species in species monitoring. Overexploitation is not an activity limited to humans. Introduced predators and herbivores, for example, can overexploit native flora and fauna.

When the giant flightless birds called moa were overexploited to the point of extinction,the giant Haast's eagle that preyed on them also became extinct.

Concern about overexploitation is relatively recent, though overexploitation itself is not a new phenomenon. It has been observed for millennia. For example, ceremonial cloaks worn by the Hawaiian kings were made from the mamo bird; a single cloak used the feathers of 70,000 birds of this now-extinct species. The dodo, a flightless bird from Mauritius, is another well known example of overexploitation. As with many island species, it was naive about certain predators, allowing humans to approach and kill it with ease.

From the earliest of times, hunting has been an important human activity as a means of survival. There is a whole history of overexploitation in the form of overhunting. The overkill hypothesis (Quaternary extinction events) explains why the megafaunal extinctions occurred within a relatively short period of time. This can be traced with human migration. The most convincing evidence of this theory is that 80% of the North American large mammal species disappeared within 1000 years of the arrival of humans on the western hemisphere continents.The fastest ever recorded extinction of megafauna occurred in New Zealand, where by 1500 AD, just 200 years after settling the islands, ten species of the giant moa birds were hunted to extinction by the Māori. A second wave of extinctions occurred later with European settlement.

In more recent times, overexploitation has resulted in the gradual emergence of the concepts of sustainability and sustainable development, which has built on other concepts, such as sustainable yield, eco-development and deep ecology.

Overview

Overexploitation need not necessarily lead to the destruction of the resource, nor is it necessarily unsustainable. However, depleting the numbers or amount of the resource can change its quality. For example, footstool palm is a wild palm tree found in Southeast Asia. Its leaves are used for thatching and food wrapping, and overharvesting has resulted in its leaf size becoming smaller.

Tragedy of the commons:

Cows on Selsley Common. The tragedy of the commons is a useful parable for understanding how overexploitation can occur

The tragedy of the commons refers to a dilemma described in an article by that name written by Garrett Hardin and first published in the journal Science in 1968.

Central to Hardin's essay is an example which is a useful parable for understanding how overexploitation can occur. This example was first sketched in an 1833 pamphlet by William Forster Lloyd, as a hypothetical and simplified situation based on medieval land tenure in Europe, of herders sharing a common on which they are each entitled to let their cows graze. In Hardin's example, it is in each herder's interest to put each succeeding cow he acquires onto the land, even if the carrying capacity of the common is exceeded and it is temporarily or permanently damaged for all as a result. The herder receives all of the benefits from an additional cow, while the damage to the common is shared by the entire group. If all herders make this individually rational economic decision, the common will be overexploited or even destroyed to the detriment of all. However, since all herders reach the same rational conclusion, overexploitation in the form of overgrazing occurs, with immediate losses, and the pasture may be degraded to the point where it gives very little return.

"Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own interest in a society that believes in the freedom of the commons."

In the course of his essay, Hardin develops the theme, drawing in many examples of latter day commons, such as national parks, the atmosphere, oceans, rivers and fish stocks. The example of fish stocks had led some to call this the "tragedy of the fishers". A major theme running through

the essay is the growth of human populations, with the Earth's finite resources being the general common.

The tragedy of the commons has intellectual roots tracing back to Aristotle, who noted that "what is common to the greatest number has the least care bestowed upon it",as well as to Hobbes and his leviathan. The opposite situation to a tragedy of the commons is sometimes referred to as a tragedy of the anticommons: a situation in which rational individuals, acting separately, collectively waste a given resource by underutilizing it.

The tragedy of the commons can be avoided if it is appropriately regulated. Hardin's use of "commons" has frequently been misunderstood, leading Hardin to later remark that he should have titled his work "The tragedy of the unregulated commons".

Fisheries

The Atlantic bluefin tuna is currently seriously overexploited. Scientists say 7,500 tons annually is the sustainable limit, yet the fishing industry continue to harvest 60,000 tons.

In wild fisheries, overexploitation or overfishing occurs when a fish stock has been fished down "below the size that, on average, would support the long-term maximum sustainable yield of the fishery". However, overexploitation can be sustainable.

When a fishery starts harvesting fish from a previously unexploited stock, the biomass of the fish stock will decrease, since harvesting means fish are being removed. For sustainability, the rate at which the fish replenish biomass through reproduction must balance the rate at which the fish are being harvested. If the harvest rate is increased, then the stock biomass will further decrease. At a certain point, the maximum harvest yield that can be sustained will be reached, and further attempts to increase the harvest rate will result in the collapse of the fishery. This point is called the maximum sustainable yield, and in practice, usually occurs when the fishery has been fished down to about 30% of the biomass it had before harvesting started.

It is possible to fish the stock down further to, say, 15% of the pre-harvest biomass, and then adjust the harvest rate so the biomass remains at that level. In this case, the fishery is sustainable, but is now overexploited, because the stock has been run down to the point where the sustainable yield is less than it could be.

Fish stocks are said to "collapse" if their biomass declines by more than 95 percent of their maximum historical biomass. Atlantic cod stocks were severely overexploited in the 1970s and 1980s, leading to their abrupt collapse in 1992. Even though fishing has ceased, the cod stocks have failed to recover. The absence of cod as the apex predator in many areas has led to trophic cascades.

About 25% of world fisheries are now overexploited to the point where their current biomass is less than the level that maximizes their sustainable yield. These depleted fisheries can often recover if fishing pressure is reduced until the stock biomass returns to the optimal biomass. At this point, harvesting can be resumed near the maximum sustainable yield.

The tragedy of the commons can be avoided within the context of fisheries if fishing effort and practices are regulated appropriately by fisheries management. One effective approach may be assigning some measure of ownership in the form of individual transferable quotas (ITQs) to fishermen. In 2008, a large scale study of fisheries that used ITQs, and ones that didn't, provided strong evidence that ITQs help prevent collapses and restore fisheries that appear to be in decline.

Water resources:

Overexploitation of groundwater from an aquifer can result in a peak water curve.

Water resources, such as lakes and aquifers, are usually renewable resources which naturally recharge (the term fossil water is sometimes used to describe aquifers which don't recharge). Overexploitation occurs if a water resource, such as the Ogallala Aquifer, is mined or extracted at a rate that exceeds the recharge rate, that is, at a rate that exceeds the practical sustained yield. Recharge usually comes from area streams, rivers and lakes. An aquifer which has been overexploited is said to be overdrafted or depleted. Forests enhance the recharge of aquifers in some locales, although generally forests are a major source of aquifer depletion. Depleted aquifers can become polluted with contaminants such as nitrates, or permanently damaged through subsidence or through saline intrusion from the ocean.

This turns much of the world's underground water and lakes into finite resources with peak usage debates similar to oil. These debates usually centre around agriculture and suburban water usage

but generation of electricity from nuclear energy or coal and tar sands mining is also water resource intensive. A modified Hubbert curve applies to any resource that can be harvested faster than it can be replaced. Though Hubbert's original analysis did not apply to renewable resources, their overexploitation can result in a Hubbert-like peak. This has led to the concept of peak water.

Forest resources:

Beech forest – Grib Skov, Denmark

Forests are overexploited when they are logged at a rate faster than reforestation takes place. Reforestation competes with other land uses such as food production, livestock grazing, and living space for further economic growth. Historically utilization of forest products, including timber and fuel wood, have played a key role in human societies, comparable to the roles of water and cultivable land. Today, developed countries continue to utilize timber for building houses, and wood pulp for paper. In developing countries almost three billion people rely on wood for heating and cooking.[29] Short-term economic gains made by conversion of forest to agriculture, or overexploitation of wood products, typically leads to loss of long-term income and long term biological productivity. West Africa, Madagascar, Southeast Asia and many other regions have experienced lower revenue because of overexploitation and the consequent declining timber harvests.

Biodiversity

The rich diversity of marine life inhabiting coral reefs attracts bio prospectors. Many coral reefs are overexploited; threats include coral mining, cyanide and blast fishing, and overfishing in general.

Overexploitation is one of the five main activities threatening global bio-diversity. The other four activities are pollution, introduced species, habitat fragmentation and habitat destruction.

One of the key health issues associated with biodiversity is drug discovery and the availability of medicinal resources. A significant proportion of drugs are natural products derived, directly or indirectly, from biological sources. Marine ecosystems are of particular interest in this regard. However unregulated and inappropriate bio-prospecting could potentially lead to

overexploitation, ecosystem degradation and loss of biodiversity, as well as impact on the rights of the communities and states from which the resources are taken.

Endangered species

It is not just humans that overexploit their resources. Overgrazing can occur naturally, caused by native fauna, as shown in the upper right.

Overexploitation threatens one-third of endangered vertebrates, as well as other groups. Excluding edible fish, the illegal trade in wildlife is valued at $10 billion per year. Industries responsible for this include the trade in bush meat, the trade in Chinese medicine, and the fur trade. The Convention for International Trade in Endangered Species of Wild Fauna and Flora, or CITES was set up in order to control and regulate the trade in endangered animals. It currently protects, to a varying degree, some 33,000 species of animals and plants. It is estimated that a quarter of the endangered vertebrates in the United States of America and half of the endangered mammals is attributed to overexploitation.

All living organisms require resources to survive. Overexploitation of these resources for protracted periods can deplete natural stocks to the point where they are unable to recover within a short time frame. Humans have always harvested food and other resources they have needed to survive. Human populations, historically, were small, and methods of collection limited to small quantities. With an exponential increase in human population, expanding markets and increasing demand, combined with improved access and techniques for capture, are causing the exploitation of many species beyond sustainable levels. In practical terms, if continued, it reduces valuable resources to such low levels that their exploitation is no longer sustainable and can lead to the extinction of a species, in addition to having dramatic, unforeseen effects, on the ecosystem. Overexploitation often occurs rapidly as markets open, utilising previously untapped resources, or locally used species.

Today, overexploitation and misuse of natural resources is an ever present threat for species richness. This is more prevalent when looking at island ecology and the species that inhabit them, as islands can be viewed as the world in miniature. Island endemic populations are more prone to extinction from overexploitation, as they often exist at low densities with reduced reproductive rates.[A good example of this are island snails, such as the Hawaiian Achatinella

and the French Polynesian Partula. Achatinelline snails have 15 species listed as extinct and 24 critically endangered while 60 species of partulidae are considered extinct with 14 listed as critically endangered.The WCMC have attributed over-collecting and very low lifetime fecundity for the extreme vulnerability exhibited among these species.

As another example, when the humble hedgehog was introduced to the Scottish island of Uist, the population greatly expanded and took to consuming and overexploiting shorebird eggs, with drastic consequences for their breeding success. Twelve species of avifauna are affected, with some species numbers being reduced by 39%.

Where there is substantial human migration, civil unrest, or war, controls may no longer exist. With civil unrest, for example in the Congo and Rwanda, firearms have become common and the breakdown of food distribution networks in such countries leaves the resources of the natural environment vulnerable.Animals are even killed as target practice, or simply to spite the government. Populations of large primates, such as gorillas and chimpanzees, ungulates and other mammals, may be reduced by 80% or more by hunting and certain species may be eliminated all together.This decline has been called the bushmeat crisis.

Cascade effects

Overexploiting sea otters resulted in cascade effects which destroyed kelp forest ecosystems

Overexploitation of species can result in knock-on or cascade effects. This can particularly apply if, through overexploitation, a habitat loses its apex predator. Because of the loss of the top predator, a dramatic increase in their prey species can occur. In turn, the unchecked prey can then overexploit their own food resources until population numbers dwindle, possibly to the point of extinction.

A classic example of cascade effects occurred with sea otters. Starting before the 17th century and not phased out until 1911, sea otters were hunted aggressively for their exceptionally warm and valuable pelts, which could fetch up to $2500 US. This caused cascade effects through the kelp forest ecosystems along the Pacific Coast of North America.

One of the sea otters' primary food sources is the sea urchin. When hunters caused sea otter populations to decline, an ecological release of sea urchin populations occurred. The sea urchins

then overexploited their main food source, kelp, creating urchin barrens, areas of seabed denuded of kelp, but carpeted with urchins. No longer having food to eat, the sea urchin became locally extinct as well. Also, since kelp forest ecosystems are homes to many other species, the loss of the kelp caused other cascade effects of secondary extinctions.

Chapter 7

Direct environmental impacts

Ecotourism operations occasionally fail to live up to conservation ideals. It is sometimes overlooked that ecotourism is a highly consumer-centered activity, and that environmental conservation is a means to further economic growth.

Although ecotourism is intended for small groups, even a modest increase in population, however temporary, puts extra pressure on the local environment and necessitates the development of additional infrastructure and amenities. The construction of water treatment plants, sanitation facilities, and lodges come with the exploitation of non-renewable energy sources and the utilization of already limited local resources. The conversion of natural land to such tourist infrastructure is implicated in deforestation and habitat deterioration of butterflies in Mexico and squirrel monkeys in Costa Rica. In other cases, the environment suffers because local communities are unable to meet the infrastructure demands of ecotourism. The lack of adequate sanitation facilities in many East African parks results in the disposal of campsite sewage in rivers, contaminating the wildlife, livestock, and people who draw drinking water from it.

Aside from environmental degradation with tourist infrastructure, population pressures from ecotourism also leaves behind garbage and pollution associated with the Western lifestyle. Although ecotourists claim to be educationally sophisticated and environmentally concerned, they rarely understand the ecological consequences of their visits and how their day-to-day activities append physical impacts on the environment. As one scientist observes, they "rarely acknowledge how the meals they eat, the toilets they flush, the water they drink, and so on, are all part of broader regional economic and ecological systems they are helping to reconfigure with their very activities." Nor do ecotourists recognize the great consumption of non-renewable energy required to arrive at their destination, which is typically more remote than conventional tourism destinations. For instance, an exotic journey to a place 10,000 kilometers away consumes about 700 liters of fuel per person.

Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable. As indicated by the I=PAT equation, environmental impact (I) or degradation is caused by the combination of an already very large and increasing human population (P), continually increasing economic growth or per capita affluence (A), and the application of resource depleting and polluting technology (T).

Environmental degradation is one of the Ten Threats officially cautioned by the High Level Threat Panel of the United Nations. The United Nations International Strategy for Disaster Reduction defines environmental degradation as "The reduction of the capacity of the environment to meet social and ecological objectives, and needs". Environmental degradation is of many types. When natural habitats are destroyed or natural resources are depleted, the environment is degraded. Efforts to counteract this problem include environmental protection and environmental resources management.

Water deterioration

One major component of environmental degradation is the depletion of the resource of fresh water on Earth. Approximately only 2.5% of all of the water on Earth is fresh water, with the rest being salt water. 69% of the fresh water is frozen in ice caps located on Antarctica and Greenland, so only 30% of the 2.5% of fresh water is available for consumption. Fresh water is an exceptionally important resource, since life on Earth is ultimately dependent on it. Water transports nutrients and chemicals within the biosphere to all forms of life, sustains both plants and animals, and moulds the surface of the Earth with transportation and deposition of materials.

The current top three uses of fresh water account for 95% of its consumption; approximately 85% is used for irrigation of farmland, golf courses, and parks, 6% is used for domestic purposes such as indoor bathing uses and outdoor garden and lawn use, and 4% is used for industrial purposes such as processing, washing, and cooling in manufacturing centers. It is estimated that one in three people over the entire globe are already facing water shortages, almost one-fifth of the world's population live in areas of physical water scarcity, and almost one quarter of the world's population live in a developing country that lacks the necessary infrastructure to use

water from available rivers and aquifers. Water scarcity is an increasing problem due to many foreseen issues in the future, including population growth, increased urbanization, higher standards of living, and climate change.

Climate change and temperature

Climate change affects the Earth's water supply in a large number of ways. It is predicted that the mean global temperature will rise in the coming years due to a number of forces affecting the climate, the amount of atmospheric CO2 will rise, and both of these will influence water resources; evaporation depends strongly on temperature and moisture availability, which can ultimately affect the amount of water available to replenish groundwater supplies.

Transpiration from plants can be affected by a rise in atmospheric CO2, which can decrease their use of water, but can also raise their use of water from possible increases of leaf area. Temperature increase can decrease the length of the snow season in the winter and increase the intensity of snowmelt in warmer seasons, leading to peak runoff of snowmelt earlier in the season, affecting soil moisture, flood and drought risks, and storage capacities depending on the area.

Warmer winter temperatures cause a decrease in snowpack, which can result in diminished water resources during summer. This is especially important at mid-latitudes and in mountain regions that depend on glacial runoff to replenish their river systems and groundwater supplies, making these areas increasingly vulnerable to water shortages over time; an increase in temperature will initially result in a rapid rise in water melting from glaciers in the summer, followed by a retreat in glaciers and a decrease in the melt and consequently the water supply every year as the size of these glaciers get smaller and smaller.

Thermal expansion of water and increased melting of oceanic glaciers from an increase in temperature gives way to a rise in sea level, which can affect the fresh water supply of coastal areas as well; as river mouths and deltas with higher salinity get pushed further inland, an intrusion of saltwater results in an increase of salinity in reservoirs and aquifers.Sea-level rise may also consequently be caused by a depletion of groundwater,as climate change can affect the hydrologic cycle in a number of ways. Uneven distributions of increased temperatures and increased precipitation around the globe results in water surpluses and deficits, but a global

decrease in groundwater suggests a rise in sea level, even after meltwater and thermal expansion were accounted for, which can provide a positive feedback to the problems sea-level rise causes to fresh-water supply.

A rise in air temperature results in a rise in water temperature, which is also very significant in water degradation, as the water would become more susceptible to bacterial growth. An increase in water temperature can also affect ecosystems greatly because of a species' sensitivity to temperature, and also by inducing changes in a body of water's self-purification system from decreased amounts of dissolved oxygen in the water due to rises in temperature.

Climate change and precipitation

A rise in global temperatures is also predicted to correlate with an increase in global precipitation, but because of increased runoff, floods, increased rates of soil erosion, and mass movement of land, a decline in water quality is probable, while water will carry more nutrients, it will also carry more contaminants.While most of the attention about climate change is directed towards global warming and greenhouse effect, some of the most severe effects of climate change are likely to be from changes in precipitation, evapotranspiration, runoff, and soil moisture. It is generally expected that, on average, global precipitation will increase, with some areas receiving increases and some decreases.

Climate models show that while some regions should expect an increase in precipitation,such as in the tropics and higher latitudes, other areas are expected to see a decrease, such as in the subtropics; this will ultimately cause a latitudinal variation in water distribution.The areas receiving more precipitation are also expected to receive this increase during their winter and actually become drier during their summer,creating even more of a variation of precipitation distribution. Naturally, the distribution of precipitation across the planet is very uneven, causing constant variations in water availability in respective locations.

Changes in precipitation affect the timing and magnitude of floods and droughts, shift runoff processes, and alter groundwater recharge rates. Vegetation patterns and growth rates will be directly affected by shifts in precipitation amount and distribution, which will in turn affect agriculture as well as natural ecosystems. Decreased precipitation will deprive areas of water, causing water tables to fall and reservoirs and wetlands, rivers, and lakes to empty,and possibly

an increase in evaporation and evapotranspiration, depending on the accompanied rise in temperature. Groundwater reserves will be depleted, and the remaining water has a greater chance of being of poor quality from saline or contaminants on the land surface.

Population growth

The available fresh water being affected by climate is also being stretched across an ever-increasing global population. It is estimated that almost a quarter of the global population is living in an area that is using more than 20% of their renewable water supply; water use will rise with population while the water is also being aggravated by decreases in streamflow and groundwater caused by climate change. Even though some areas may see an increase in freshwater supply from an uneven distribution of precipitation increase, an increased use of water supply is expected.

An increased population means increased withdrawals from the water supply for domestic, agricultural, and industrial uses, the largest of these being agriculture, believed to be the major non-climate driver of environmental change and water deterioration. The next 50 years will likely be the last period of rapid agricultural expansion, but the larger and wealthier population over this time will demand more agriculture.

Population increase over the last two decades, at least in the United States, has also been accompanied by a shift to an increase in urban areas from rural areas,which concentrates the demand for water into certain areas, and puts stress on the fresh water supply from industrial and human contaminants. Urbanization causes overcrowding and increasingly unsanitary living conditions, especially in developing countries, which in turn exposes an increasingly number of people to disease. About 79% of the world's population is in developing countries, which lack access to sanitary water and sewer systems, giving rises to disease and deaths from contaminated water and increased numbers of disease-carrying insects.

Agriculture

Agriculture is dependent on available soil moisture, which is directly affected by climate dynamics, with precipitation being the input in this system and various processes being the output, such as evapo transpiration, surface runoff, drainage, and percolation into groundwater.

Changes in climate, especially the changes in precipitation and evapo transpiration predicted by climate models, will directly affect soil moisture, surface runoff, and groundwater recharge.

In areas with decreasing precipitation as predicted by the climate models, soil moisture may be substantially reduced. With this in mind, agriculture in most areas needs irrigation already, which depletes fresh water supplies both by the physical use of the water and the degradation agriculture causes to the water. Irrigation increases salt and nutrient content in areas that wouldn't normally be affected, and damages streams and rivers from damming and removal of water. Fertilizer enters both human and livestock waste streams that eventually enter groundwater, while nitrogen, phosphorus, and other chemicals from fertilizer can acidify both soils and water. Certain agricultural demands may increase more than others with an increasingly wealthier global population, and meat is one commodity expected to double global food demand by 2050, which directly affects the global supply of fresh water. Cows need water to drink, more if the temperature is high and humidity is low, and more if the production system the cow is in is extensive, since finding food takes more effort. Water is needed in processing of the meat, and also in the production of feed for the livestock. Manure can contaminate bodies of freshwater, and slaughterhouses, depending on how well they are managed, contribute waste such as blood, fat, hair, and other bodily contents to supplies of fresh water.

The transfer of water from agricultural to urban and suburban use raises concerns about agricultural sustainability, rural socioeconomic decline, food security, an increased carbon footprint from imported food, and decreased foreign trade balance. The depletion of fresh water, as applied to more specific and populated areas, increases fresh water scarcity among the population and also makes populations susceptible to economic, social, and political conflict in a number of ways; rising sea levels forces migration from coastal areas to other areas farther inland, pushing populations closer together breaching borders and other geographical patterns, and agricultural surpluses and deficits from the availability of water induce trade problems and economies of certain areas. Climate change is an important cause of involuntary migration and forced displacement.

Water management

The issue of the depletion of fresh water can be met by increased efforts in water management. While water management systems are often flexible, adaptation to new hydrologic conditions may be very costly. Preventative approaches are necessary to avoid high costs of inefficiency and the need for rehabilitation of water supplies, and innovations to decrease overall demand may be important in planning water sustainability.

Water supply systems, as they exist now, were based on the assumptions of the current climate, and built to accommodate existing river flows and flood frequencies. Reservoirs are operated based on past hydrologic records, and irrigation systems on historical temperature, water availability, and crop water requirements; these may not be a reliable guide to the future. Re-examining engineering designs, operations, optimizations, and planning, as well as re-evaluating legal, technical, and economic approaches to manage water resources are very important for the future of water management in response to water degradation. Another approach is water privatization; despite its economic and cultural effects, service quality and overall quality of the water can be more easily controlled and distributed. Rationality and sustainability is appropriate, and requires limits to overexploitation and pollution, and efforts in conservation.

Environmental protection is a practice of protecting the natural environment on individual, organizational or governmental levels, for the benefit of both the natural environment and humans. Due to the pressures of population and technology, the biophysical environment is being degraded, sometimes permanently. This has been recognized, and governments have begun placing restraints on activities that cause environmental degradation. Since the 1960s, activity of environmental movements has created awareness of the various environmental issues. There is no agreement on the extent of the environmental impact of human activity, and protection measures are occasionally criticized.

Academic institutions now offer courses, such as environmental studies, environmental management and environmental engineering, that teach the history and methods of environment protection. Protection of the environment is needed due to various human activities. Waste production, air pollution, and loss of biodiversity (resulting from the introduction of invasive species and species extinction) are some of the issues related to environmental protection.

Environmental protection is influenced by three interwoven factors: environmental legislation, ethics and education. Each of these factors plays its part in influencing national-level environmental decisions and personal-level environmental values and behaviors. For environmental protection to become a reality, it is important for societies to develop each of these areas that, together, will inform and drive environmental decisions.

Ecotourism activities are, in and of themselves, issues in environmental impact because they may disturb fauna and flora. Eco tourists believe that because they are only taking pictures and leaving footprints, they keep ecotourism sites pristine, but even harmless-sounding activities such as nature hikes can be ecologically destructive. In the Annapurna Circuit in Nepal, eco tourists have worn down the marked trails and created alternate routes, contributing to soil impaction, erosion, and plant damage. Where the ecotourism activity involves wildlife viewing, it can scare away animals, disrupt their feeding and nesting sites, or acclimate them to the presence of people. In Kenya, wildlife-observer disruption drives cheetahs off their reserves, increasing the risk of inbreeding and further endangering the species.

Chapter 8

Mismanagement

While governments are typically entrusted with the administration and enforcement of environmental protection, they often lack the commitment or capability to manage ecotourism sites effectively. The regulations for environmental protection may be vaguely defined, costly to implement, hard to enforce, and uncertain in effectiveness. Government regulatory agencies, as political bodies, are susceptible to making decisions that spend budget on politically beneficial but environmentally unproductive projects. Because of prestige and conspicuousness, the construction of an attractive visitor's center at an ecotourism site may take precedence over more pressing environmental concerns like acquiring habitat, protecting endemic species, and removing invasive ones. Finally, influential groups can pressure and sway the interests of the government to their favor. The government and its regulators can become vested in the benefits of the ecotourism industry which they are supposed to regulate, causing restrictive environmental regulations and enforcement to become more lenient.

Management of ecotourism sites by private ecotourism companies offers an alternative to the cost of regulation and deficiency of government agencies. It is believed that these companies have a self-interest in limited environmental degradation, because tourists will pay more for pristine environments, which translates to higher profit. However, theory indicates that this practice is not economically feasible and will fail to manage the environment.

The model of monopolistic competition states that distinctiveness will entail profits, but profits will promote imitation. A company that protects its ecotourism sites is able to charge a premium for the novel experience and pristine environment. But when other companies view the success of this approach, they also enter the market with similar practices, increasing competition and reducing demand. Eventually, the demand will be reduced until the economic profit is zero. A cost-benefit analysis shows that the company bears the cost of environmental protection without receiving the gains. Without economic incentive, the whole premise of self-interest through environmental protection is quashed; instead, ecotourism companies will minimize environment related expenses and maximize tourism demand.

The tragedy of the commons offers another model for economic un sustainability from environmental protection, in ecotourism sites utilized by many companies. Although there is a communal incentive to protect the environment, maximizing the benefits in the long run, a company will conclude that it is in their best interest to utilize the ecotourism site beyond its sustainable level. By increasing the number of ecotourists, for instance, a company gains all the economic benefit while paying only a part of the environmental cost. In the same way, a company recognizes that there is no incentive to actively protect the environment; they bear all the costs, while the benefits are shared by all other companies. The result, again, is mismanagement.

Taken together, the mobility of foreign investment and lack of economic incentive for environmental protection means that ecotourism companies are disposed to establishing themselves in new sites once their existing one is sufficiently degraded.

Lobbying (also lobby) is the act of attempting to influence decisions made by officials in the government, most often legislators or members of regulatory agencies. Lobbying is done by many different types of people and organized groups, including individuals in the private sector, corporations, fellow legislators or government officials, or advocacy groups (interest groups). Lobbyists may be among a legislator's constituencies, meaning a voter or bloc of voters within his or her electoral district, or not; they may engage in lobbying as a business, or not. Professional lobbyists are people whose business is trying to influence legislation on behalf of a group or individual who hires them. Individuals and nonprofit organizations can also lobby as an act of volunteering or as a small part of their normal job (for instance, a CEO meeting with a representative about a project important to his/her company, or an activist meeting with his/her legislator in an unpaid capacity). Governments often define and regulate organized group lobbying that has become influential.

The ethics and morality of lobbying are dual-edged. Lobbying is often spoken of with contempt, when the implication is that people with inordinate socioeconomic power are corrupting the law (twisting it away from fairness) in order to serve their own conflict of interest. But another side of lobbying is making sure that others' interests are duly defended against others' corruption, or even simply making sure that minority interests are fairly defended against mere tyranny of the majority. For example, a medical association, or a trade association of health insurance

companies, may lobby a legislature in order to counteract the influence of tobacco companies, in which case the lobbying would be viewed by most people as justified (duly defending against others' corruption). The difficulty in drawing objective lines between which lobbyists are "good lobbyists" and which ones are "bad ones" is compounded by the cleverness with which lobbyists or their clients can speciously argue that their own lobbying is of the "good" kind. At heart, the effort to influence legislation is a power struggle. As in other forms of power struggle, such as war or law enforcement, motives range from predation to self-defense to fighting for justice, and the dividing line between predation and justice is subject to rationalization.

Etymology

In a report carried by the BBC, an OED lexicographer has shown that "lobbying" finds its roots in the gathering of Members of Parliament and peers in the hallways ("lobbies") of the UK Houses of Parliament before and after parliamentary debates.

One now-debunked story held that the term originated at the Willard Hotel in Washington, DC, where it was supposedly used by Ulysses S. Grant to describe the political wheelers and dealers who frequented the hotel's lobby to access Grant—who was often there to enjoy a cigar and brandy—and then try to buy the president drinks in an attempt to influence his political decisions. However, the OED cites numerous documented uses of the word well before Grant's administration, including in Pennsylvania (1808).

Overview

Governments often define and regulate organized group lobbying as part of laws to prevent political corruption and by establishing transparency about possible influences by public lobby registers.

Lobby groups may concentrate their efforts on the legislatures, where laws are created, but may also use the judicial branch to advance their causes. The National Association for the Advancement of Colored People, for example, filed suits in state and federal courts in the 1950s to challenge segregation laws. Their efforts resulted in the Supreme Court declaring such laws unconstitutional.

They may use a legal device known as amicus curiae, literally "friend of the court," briefs to try to influence court cases. Briefs are written documents filed with a court, typically by parties to a lawsuit. Amines curiae briefs are briefs filed by people or groups who are not parties to a suit. These briefs are entered into the court records, and give additional background on the matter being decided upon. Advocacy groups use these briefs both to share their expertise and to promote their positions.

Monopolistic competition is a type of imperfect competition such that many producers sell products that are differentiated from one another as goods but not perfect substitutes (such as from branding, quality, or location). In monopolistic competition, a firm takes the prices charged by its rivals as given and ignores the impact of its own prices on the prices of other firms. In the presence of coercive government, monopolistic competition will fall into government-granted monopoly. Unlike perfect competition, the firm maintains spare capacity. Models of monopolistic competition are often used to model industries. Textbook examples of industries with market structures similar to monopolistic competition include restaurants, cereal, clothing, shoes, and service industries in large cities. The "founding father" of the theory of monopolistic competition is Edward Hastings Chamberlin, who wrote a pioneering book on the subject, Theory of Monopolistic Competition (1933). Joan Robinson published a book The Economics of Imperfect Competition with a comparable theme of distinguishing perfect from imperfect competition.

The long-run characteristics of a monopolistically competitive market are almost the same as a perfectly competitive market. Two differences between the two are that monopolistic competition produces heterogeneous products and that monopolistic competition involves a great deal of non-price competition, which is based on subtle product differentiation. A firm making profits in the short run will nonetheless only break even in the long run because demand will decrease and average total cost will increase. This means in the long run, a monopolistically competitive firm will make zero economic profit. This illustrates the amount of influence the firm has over the market; because of brand loyalty, it can raise its prices without losing all of its customers. This means that an individual firm's demand curve is downward sloping, in contrast to perfect competition, which has a perfectly elastic demand schedule.

Major characteristics

There are six characteristics of monopolistic competition (MC):

Product differentiation

Many firms

Free entry and exit in the long run

Independent decision making

Some degree of market power

Buyers and Sellers do not have perfect information (Imperfect Information)

Product differentiation

MC firms sell products that have real or perceived non-price differences. However, the differences are not so great as to eliminate other goods as substitutes. Technically, the cross price elasticity of demand between goods in such a market is positive. In fact, the XED would be high. MC goods are best described as close but imperfect substitutes. The goods perform the same basic functions but have differences in qualities such as type, style, quality, reputation, appearance, and location that tend to distinguish them from each other. For example, the basic function of motor vehicles is basically the same—to move people and objects from point A to B in reasonable comfort and safety. Yet there are many different types of motor vehicles such as motor scooters, motor cycles, trucks, cars and SUVs and many variations even within these categories.

Many firms

There are many firms in each MC product group and many firms on the side lines prepared to enter the market. A product group is a "collection of similar products".[8] The fact that there are "many firms" gives each MC firm the freedom to set prices without engaging in strategic decision making regarding the prices of other firms and each firm's actions have a negligible impact on the market. For example, a firm could cut prices and increase sales without fear that its actions will prompt retaliatory responses from competitors.

How many firms will an MC market structure support at market equilibrium? The answer depends on factors such as fixed costs, economies of scale and the degree of product differentiation. For example, the higher the fixed costs, the fewer firms the market will support. Also the greater the degree of product differentiation—the more the firm can separate itself from the pack—the fewer firms there will be at market equilibrium.

Free entry and exit

In the long run there is free entry and exit. There are numerous firms waiting to enter the market each with its own "unique" product or in pursuit of positive profits and any firm unable to cover its costs can leave the market without incurring liquidation costs. This assumption implies that there are low start up costs, no sunk costs and no exit costs. The cost of entering and exit is

Independent decision making

Each MC firm independently sets the terms of exchange for its product.[10] The firm gives no consideration to what effect its decision may have on competitors.[10] The theory is that any action will have such a negligible effect on the overall market demand that an MC firm can act without fear of prompting heightened competition. In other words each firm feels free to set prices as if it were a monopoly rather than an oligopoly.

Market power

MC firms have some degree of market power. Market power means that the firm has control over the terms and conditions of exchange. An MC firm can raise its prices without losing all its customers. The firm can also lower prices without triggering a potentially ruinous price war with competitors. The source of an MC firm's market power is not barriers to entry since they are low. Rather, an MC firm has market power because it has relatively few competitors, those competitors do not engage in strategic decision making and the firms sells differentiated product. Market power also means that an MC firm faces a downward sloping demand curve. The demand curve is highly elastic although not "flat".

Problems

While monopolistically competitive firms are inefficient, it is usually the case that the costs of regulating prices for every product that is sold in monopolistic competition far exceed the benefits of such regulation.[citation needed] However, it would not have to regulate every product and every firm just the most important ones. That alone would be an improvement on the current situation. A monopolistically competitive firm might be said to be marginally inefficient because the firm produces at an output where average total cost is not a minimum. A monopolistically competitive market is productively inefficient market structure because marginal cost is less than price in the long run. Monopolistically competitive markets are also allocatively inefficient, as the price given is higher than Marginal cost. Product differentiation increases total utility by better meeting people's wants than homogenous products in a perfectly competitive market.

Another concern is that monopolistic competition fosters advertising and the creation of brand names. Advertising induces customers into spending more on products because of the name associated with them rather than because of rational factors. Defenders of advertising dispute this, arguing that brand names can represent a guarantee of quality and that advertising helps reduce the cost to consumers of weighing the tradeoffs of numerous competing brands. There are unique information and information processing costs associated with selecting a brand in a monopolistically competitive environment. In a monopoly market, the consumer is faced with a single brand, making information gathering relatively inexpensive. In a perfectly competitive industry, the consumer is faced with many brands, but because the brands are virtually identical information gathering is also relatively inexpensive. In a monopolistically competitive market, the consumer must collect and process information on a large number of different brands to be able to select the best of them. In many cases, the cost of gathering information necessary to selecting the best brand can exceed the benefit of consuming the best brand instead of a randomly selected brand. The result is that the consumer is confused. Some brands gain prestige value and can extract an additional price for that.

Evidence suggests that consumers use information obtained from advertising not only to assess the single brand advertised, but also to infer the possible existence of brands that the consumer

has, heretofore, not observed, as well as to infer consumer satisfaction with brands similar to the advertised brand.

Chapter 9

Natural Resource Management

Natural resource management can be utilized as a specialized tool for the development of ecotourism. There are several places throughout the world where the amount of natural resources are abundant. But, with human encroachment and habitats these resources are depleting. Without knowing the proper utilization of certain resources they are destroyed and floral and faunal species are becoming extinct. Ecotourism programmes can be introduced for the conservation of these resources. Several plans and proper management programmes can be introduced so that these resources remain untouched. Several organizations, NGO's, scientists are working on this field.

Natural resources of hill areas like Kurseong in West Bengal are plenty in number with various flora and fauna, but tourism for business purpose poised the situation. Researcher from Jadavpur University presently working in this area for the development of ecotourism which can be utilized as a tool for natural resource management.

In Southeast Asia government and nongovernmental organisations are working together with academics and industry operators to spread the economic benefits of tourism into the kampungs and villages of the region. A recently formed alliance, the South-East Asian Tourism Organisation (SEATO), is bringing together these diverse players to allay resource management concerns.

A 2002 summit held in Quebec led to the 2008 Global Sustainable Tourism Criteria, a collaborative effort between the UN Foundation and other advocacy groups. The criteria, which are voluntary, involve the following standards: "effective sustainability planning, maximum social and economic benefits for local communities, minimum negative impacts on cultural heritage, and minimum negative impacts on the environment."

Natural resources occur naturally within environments that exist relatively undisturbed by humanity, in a natural form. A natural resource is often characterized by amounts of biodiversity and geodiversity existent in various ecosystems.

Natural resources are derived from the environment. Some of them are essential for our survival while most are used for satisfying our wants. Natural resources may be further classified in different ways.

Natural resources are materials and components (something that can be used) that can be found within the environment. Every man-made product is composed of natural resources (at its fundamental level). A natural resource may exist as a separate entity such as fresh water, and air, as well as a living organism such as a fish, or it may exist in an alternate form which must be processed to obtain the resource such as metal ores, oil, and most forms of energy.

There is much debate worldwide over natural resource allocations, this is partly due to increasing scarcity (depletion of resources) but also because the exportation of natural resources is the basis for many economies (particularly for developed nations such as Australia).

Some natural resources such as sunlight and air can be found everywhere, and are known as ubiquitous resources. However, most resources only occur in small sporadic areas, and are referred to as localized resources. There are very few resources that are considered inexhaustible (will not run out in foreseeable future) – these are solar radiation, geothermal energy, and air (though access to clean air may not be). The vast majority of resources are exhaustible, which means they have a finite quantity, and can be depleted if managed improperly.

Classification

There are various methods of categorizing natural resources, these include source of origin, stage of development, and by their renewability. These classifications are described below. On the basis of origin, resources may be divided into:

Biotic – Biotic resources are obtained from the biosphere (living and organic material), such as forests and animals, and the materials that can be obtained from them. Fossil fuels such as coal and petroleum are also included in this category because they are formed from decayed organic matter.

Abiotic – Abiotic resources are those that come from non-living, non-organic material. Examples of abiotic resources include land, fresh water, air and heavy metals including ores such as gold, iron, copper, silver, etc.

Considering their stage of development, natural resources may be referred to in the following ways:

Potential Resources – Potential resources are those that exist in a region and may be used in the future. For example, petroleum may exist in many parts of India, having sedimentary rocks but until the time it is actually drilled out and put into use, it remains a potential resource.

Actual Resources – Actual resources are those that have been surveyed, their quantity and quality determined and are being used in present times. The development of an actual resource, such as wood processing depends upon the technology available and the cost involved.

Reserve Resources – The part of an actual resource which can be developed profitably in the future is called a reserve resource.

Stock Resources – Stock resources are those that have been surveyed but cannot be used by organisms due to lack of technology. For example: hydrogen.

Renewability is a very popular topic and many natural resources can be categorized as either renewable or non-renewable:

Renewable resources are ones that can be replenished naturally. Some of these resources, like sunlight, air, wind, etc., are continuously available and their quantity is not noticeably affected by human consumption. Though many renewable resources do not have such a rapid recovery rate, these resources are susceptible to depletion by over-use. Resources from a human use perspective are classified as renewable only so long as the rate of replenishment/recovery exceeds that of the rate of consumption.

Non-renewable resources are resources that form extremely slowly and those that do not naturally form in the environment. Minerals are the most common resource included in this category. By the human perspective, resources are non-renewable when their rate of consumption exceeds the rate of replenishment/recovery; a good example of this are fossil fuels,

which are in this category because their rate of formation is extremely slow (potentially millions of years), meaning they are considered non-renewable. Some resources actually naturally deplete in amount without human interference, the most notable of these being radio-active elements such as uranium, which naturally decay into heavy metals. Of these, the metallic minerals can be re-used by recycling them, but coal and petroleum cannot be recycled.

Extraction

Resource extraction involves any activity that withdraws resources from nature. This can range in scale from the traditional use of preindustrial societies, to global industry. Extractive industries are, along with agriculture, the basis of the primary sector of the economy. Extraction produces raw material which is then processed to add value. Examples of extractive industries are hunting and trapping, mining, oil and gas drilling, and forestry. Natural resources can add substantial's to a country's wealth, however a sudden inflow of money caused by a resource boom can create social problems including inflation harming other industries ("Dutch disease") and corruption, leading to inequality and underdevelopment, this is known as the "resource curse".

Depletion

Wind is a natural resource that can be used to generate electricity, as with these 5MW wind turbines in Thorntonbank Wind Farm 28 km (17 mi) off the coast of Belgium

Exploitation of natural resources

In recent years, the depletion of natural resources has become a major focus of governments and organizations such as the United Nations (UN). This is evident in the UN's Agenda 21 Section Two, which outlines the necessary steps to be taken by countries to sustain their natural resources.The depletion of natural resources is considered to be a sustainable development issue. The term sustainable development has many interpretations, most notably the Brundtland Commission's 'to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs', however in broad terms it is balancing the needs of the planet's people and species now and in the future. In regards to natural resources, depletion

is of concern for sustainable development as it has the ability to degrade current environmentsand potential to impact the needs of future generations.

The conservation of natural resources is the fundamental problem. Unless we solve that problem, it will avail us little to solve all others.

Theodore Roosevelt

Depletion of Natural Resources is associated with social inequity. Considering most biodiversity are located in developing countries, depletion of this resource could result in losses of ecosystem services for these countries.Some view this depletion as a major source of social unrest and conflicts in developing nations.

At present, with it being the year of the forest, there is particular concern for rainforest regions which hold most of the Earth's biodiversity. According to Nelson deforestation and degradation affect 8.5% of the world's forests with 30% of the Earth's surface already cropped. If we consider that 80% of people rely on medicines obtained from plants and ¾ of the world's prescription medicines have ingredients taken from plants loss of the world's rainforests could result in a loss of finding more potential life saving medicines.

The depletion of natural resources is caused by 'direct drivers of change' such as Mining, petroleum extraction, fishing and forestry as well as 'indirect drivers of change' such as demography, economy, society, politics and technology. The current practice of Agriculture is another factor causing depletion of natural resources. For example the depletion of nutrients in the soil due to excessive use of nitrogen and desertification The depletion of natural resources is a continuing concern for society. This is seen in the cited quote given by Theodore Roosevelt, a well-known conservationist and former United States president, was opposed to unregulated natural resource extraction.

Protection

Environmental protection

In 1982 the UN developed the World Charter for Nature in which it recognised the need to protect nature from further depletion due to human activity. They state the measures needed to be

taken at all societal levels, from international right down to individual, to protect nature. They outline the need for sustainable use of natural resources and suggest that the protection of resources should be incorporated into the law system at state and international level. To look at the importance of protecting natural resources further. The World Ethic of Sustainability, developed by the IUCN, WWF and the UNEP in 1990which set out eight values for sustainability, include the need to protect natural resources from depletion. Since these documents, there have been many measures taken to protect natural resources, some of these ways include Conservation biology and Habitat Conservation.

Conservation biology is the scientific study of the nature and status of Earth's biodiversity with the aim of protecting species, their habitats, and ecosystems from excessive rates of extinction. It is an interdisciplinary subject drawing on sciences, economics, and the practice of natural resource management. The term conservation biology was introduced as the title of a conference held University of California at San Diego in La Jolla, California in 1978 organized by biologists Bruce Wilcox and Michael Soulé.

Habitat conservation is a land management practice that seeks to conserve, protect and restore, habitat areas for wild plants and animals, especially conservation reliant species, and prevent their extinction, fragmentation or reduction in range.

Management

Natural resource management

Natural resource management is a discipline in the management of natural resources such as land, water, soil, plants and animals, with a particular focus on how management affects the quality of life for both present and future generations.

Management of natural resources involves identifying who has the right to use the resources and who does not for defining the boundaries of the resource.The resources are managed by the users according to the rules governing of when and how the resource is used depending on local condition.

A successful management of natural resources should[neutrality is disputed] engage the community because of the nature of the shared resources the individuals who are affected by the

rules can participate in setting or changing them. The users have the rights to device their own management institutions and plans under the recognition by the government. The right to resources includes land, water, fisheries and pastoral rights. The users or parties accountable to the users have to actively monitor and ensure the utilisation of the resource compliance with the rules and to impose penalty on those peoples who violates the rules.

Chapter 10

Renewable Resource

A renewable resource is a natural resource which can replenish with the passage of time, either through biological reproduction or other naturally recurring processes. Renewable resources are a part of Earth's natural environment and the largest components of its ecosphere. A positive life cycle assessment is a key indicator of a resource's sustainability. In 1962, Paul Alfred Weiss defined Renewable Resources as: "The total range of living organisms providing man with food, fibers, drugs, etc."

Renewable resources may be the source of power for renewable energy. However, if the rate at which the renewable resource is consumed exceeds its renewal rate, renewal and sustainability will not be ensured.

The term renewable resource also describes systems like sustainable agriculture and water resources. Sustainable harvesting of renewable resources (i.e., maintaining a positive renewal rate) can reduce air pollution, soil contamination, habitat destruction and land degradation.

Gasoline, coal, natural gas, diesel and other commodities derived from fossil fuels, as well as minerals like copper and others, are non-renewable resources without a sustainable yield.

Renewable resources endangered by the industrial world

Overfishing

"Ocean overfishing is simply the taking of wildlife from the sea at rates too high for fished species to replace themselves."

Tuna meat is driving overfishing as to endanger some species like the bluefin tuna. The European Community and other organisations are trying to regulate fishery as to protect species and to prevent their extinctions. Examples of overfishing exist in areas such as the North Sea of Europe, the Grand Banks of North America and the East China Sea of Asia. The decline of penguin population is caused in part by overfishing, caused by human competition over the same renewable resources

Sustainable agriculture

The phrase sustainable agriculture was coined by Australian agricultural scientist Gordon McClymont.[9] It has been defined as "an integrated system of plant and animal production practices having a site-specific application that will last over the long term". Expansion of agricultural land has an impact on biodiversity and contributes to deforestation. The Food and Agriculture Organisation of the United Nations estimates that in coming decades, cropland will continue to be lost to industrial and urban development, along with reclamation of wetlands, and conversion of forest to cultivation, resulting in the loss of biodiversity and increased soil erosion.

Polyculture practices in Andhra Pradesh

Although air and sunlight are available everywhere on Earth, crops also depend on soil nutrients and the availability of water. Monoculture is a method of growing only one crop at a time in a given field, which can damage land and cause it to become either unusable or suffer from reduced yields. Monoculture can also cause the build-up of pathogens and pests that target one specific species. The Great Irish Famine (1845–1849) is a well-known example of the dangers of monoculture.

Crop rotation and long-term crop rotations confer the replenishment of nitrogen through the use of green manure in sequence with cereals and other crops, and can improve soil structure and fertility by alternating deep-rooted and shallow-rooted plants. Other methods to combat lost soil nutrients are returning to natural cycles that annually flood cultivated lands (returning lost nutrients indefinitely) such as the Flooding of the Nile, the long-term use of biochar, and use of crop and livestock landraces that are adapted to less than ideal conditions such as pests, drought, or lack of nutrients.

Agricultural practices are the single greatest contributor to the global increase in soil erosion rates. It is estimated that "more than a thousand million tonnes of southern Africa's soil are eroded every year. Experts predict that crop yields will be halved within thirty to fifty years if erosion continues at present rates."The Dust Bowl phenomenon in the 1930s was caused by severe drought combined with farming methods that did not include crop rotation, fallow fields, cover crops, soil terracing and wind-breaking trees to prevent wind erosion.

The tillage of agricultural lands is one of the primary contributing factors to erosion, due to mechanized agricultural equipment that allows for deep plowing, which severely increases the amount of soil that is available for transport by water erosion.The phenomenon called Peak Soil describes how large-scale factory farming techniques are jeopardizing humanity's ability to grow food in the present and in the future. Without efforts to improve soil management practices, the availability of arable soil will become increasingly problematic.

Methods to combat erosion include no-till farming, using a keyline design, growing wind breaks to hold the soil, and widespread use of compost. Chemical fertilizer and pesticides can also have an effect of soil erosion, which can contribute to soil salinity and prevent other species from growing. Phosphate is a primary component in the chemical fertilizer applied most commonly in modern agricultural production. However, scientists estimate that rock phosphate reserves will be depleted in 50–100 years and that Peak Phosphate will occur in about 2030.

Industrial processing and logistics also have an effect on agriculture's sustainability. The way and locations crops are sold requires energy for transportation, as well as the energy cost for materials, labour, and transport. Food sold at a local location, such a farmers' market, have reduced energy overheads.

Deforestation

As well as being a renewable resource for fuel and building material, trees protect the environment by absorbing carbon dioxide and by creating oxygen. The destruction of rain forests is one of the critical causes of climate change. Deforestation causes carbon dioxide to linger in the atmosphere. As carbon dioxide accrues, it produces a layer in the atmosphere that traps radiation from the sun. The radiation converts to heat which causes global warming, which is better known as the greenhouse effect.

Deforestation also affects the water cycle. It reduces the content of water in the soil and groundwater as well as atmospheric moisture. Deforestation reduces soil cohesion, so that erosion, flooding and landslides ensue.

Rain forest shelter many species and organisms providing local populations with food and other commodities. In this way biofuels may well be unsustainable if their production contributes to deforestation.

Endangered species

Some renewable resources, species and organisms are facing a very high risk of extinction caused by growing human population and over-consumption. It has been estimated that over 40% of all living species on Earth are at risk of going extinct. Many nations have laws to protect hunted species and to restrict the practice of hunting. Other conservation methods includes restricting land development or creating preserves. The IUCN Red List of Threatened Species is the best-known worldwide conservation status listing and ranking system. Internationally, 199 countries have signed an accord agreeing to create Biodiversity Action Plans to protect endangered and other threatened species.

Water resources

Water can be considered a renewable material when carefully controlled usage, treatment, and release are followed. If not, it would become a non-renewable resource at that location. For example, groundwater is usually removed from an aquifer at a rate much greater than its very slow natural recharge, and so groundwater is considered non-renewable. Removal of water from the pore spaces may cause permanent compaction (subsidence) that cannot be renewed. 97% of the water on the Earth is salt water, and 3% is fresh water; slightly over two thirds of this is frozen in glaciers and polar ice caps.The remaining unfrozen freshwater is found mainly as groundwater, with only a small fraction (0,008%) present above ground or in the air.

Water pollution is one of the main concerns regarding water resources. It is estimated that 22% of worldwide water is used in industry. Major industrial users include hydroelectric dams, thermoelectric power plants, which use water for cooling, ore and oil refineries, which use water in chemical processes, and manufacturing plants, which use water as a solvent.

Renewable energy

Renewable energy is energy from natural resources such as sunlight, wind, rain, tides, waves and geothermal heat. Common applications of renewable energies are electricity generation and motor fuels.

The reported problem with these renewable resources is that it is difficult and expensive to harness enough power from them to match the effectiveness of non-renewable resources.

Solar Energy

Solar energy is the most abundant and easily available renewable resource, and has been harnessed by humans since ancient times. The solar energy not used by man is used by plants and other organisms in photosynthesis. In one year, the Sun delivers more than 10,000 times the energy that humans currently use, and almost twice the amount of energy that will ever be obtained from all of the planet's non-renewable resources.

Solar power is the conversion of sunlight into electricity, either directly using photovoltaics (PV), or indirectly using concentrated solar power (CSP). Concentrated solar power systems use lenses or mirrors and tracking systems to focus a large area of sunlight into a small beam.Photovoltaics convert light into electric current using the photoelectric effect.

There are many domestic applications of solar power including solar cookers, solar stills, solar water heating, solar heating and air conditioning.

Wind power

Wind power is the conversion of wind energy into a useful form of energy. Most modern electrical wind power is generated by converting the rotation of turbine blades into electrical currents by means of an electrical generator.

Windmills provide mechanical power, and were originally developed for milling grain for food production. Other industrial uses of windmill machinery are windpumps, used for water pumping or drainage.

Wind power is also used to propel ships using sails.The Three Gorges Dam is the largest operating hydroelectric power station, at 22,500 MW.

Hydropower

Hydropower is energy derived from the movement of water in rivers and oceans, originally used for irrigation and the operation of various mechanical devices. Since the early 20th century, the term is used almost exclusively in conjunction with the modern development of hydro-electric power. Conventional hydroelectric power involves creating a dam, and using the resulting water force to turn a water turbine and generator. Other electricity generating methods are run-of-the-river hydroelectricity, which captures the kinetic energy in rivers or streams, without the use of dams, and pumped-storage hydroelectricity, which stores water pumped during periods of low demand to be released for generation when demand is high.

Geothermal Energy

Geothermal energy comes from the Earth's crust and originates from the original formation of the planet (20%) and from radioactive decay of minerals (80%).The available energy from the Earth's crust and mantle is approximately equal to that of incoming solar energy.

Geothermal heating is the direct use of geothermal energy for heating applications. Since paleolithic times, naturally occurring Hot springs have been used for bathing.

Geothermal electricity is electricity generated from geothermal energy using technologies like superheaters, flash steam power plants and binary cycle power plants. The first geothermal power station was built at Landrello, Italy. Other countries that have geothermal power stations are Japan, Iceland, the Philippines and the United States. In Iceland, geothermal energy is used for electricity and heat.

Brazil has bioethanol made from sugarcane available throughout the country. Shown a typical Petrobras gas station at São Paulo with dual fuel service, marked A for alcohol (ethanol) and G for gasoline.

Biofuel

A biofuel is a type of fuel whose energy is derived from biological carbon fixation. Biofuels include fuels derived from biomass conversion, as well as solid biomass, liquid fuels and various biogases.Bioethanol is an alcohol made by fermentation, mostly from carbohydrates produced in sugar or starch crops such as corn, sugarcane or switchgrass.Biodiesel is made from vegetable oils and animal fats. Biodiesel is **produced from oils or fats using transesterification and is the most common biofuel in Europe.**

Renewable materials

Biomass

Biomass is biological material from living, or recently living organisms, most often referring to plants or plant-derived materials. As a renewable energy source, biomass can either be used directly, or indirectly—once or converted into another type of energy product such as biofuel. The use of biomass helps to sustain climate change, increase energy efficiency, and decrease greenhouse gas emission.

Biomass is all biologically produced matter based in carbon, hydrogen and oxygen. The estimated biomass production in the world is 146 billion tons a year, consisting of mostly wild plant growth.Biomass energy is derived from six distinct energy sources: garbage, wood, plants, waste, landfill gases, and alcohol fuels. Historically, humans have harnessed biomass derived energy since the advent of burning wood to make fire, and wood remains the largest biomass energy source today.

The biomass used for electricity generation varies by region. Forest by-products, such as wood residues, are common in the United States. Agricultural waste is common in Mauritius (sugar cane residue) and Southeast Asia (rice husks). Animal husbandry residues, such as poultry litter, are common in the UK.The biomass power generating industry in the United States, which consists of approximately 11,000 MW of summer operating capacity actively supplying power to the grid, produces about 1.4 percent of the U.S. electricity supply.

Bioplastics

Bioplastics are a form of plastics derived from renewable biomass sources, such as vegetable fats and oils, corn starch, pea starch or microbiota.The most common form of bioplastic is thermoplastic starch. Other forms include Cellulose bioplastics, biopolyester, Polylactic acid, and bio-derived polyethylene.

The production and use of bioplastics is generally regarded as a more sustainable activity when compared with plastic production from petroleum (petroplastic), however manufacturing of bioplastic materials is often still reliant upon petroleum as an energy and materials source. Because of the fragmentation in the market and ambiguous definitions it is difficult to describe the total market size for bioplastics, but estimates put global production capacity at 327,000 tonnes. In contrast, global consumption of all flexible packaging is estimated at around 12.3 million tones.

Bioasphalt

Bioasphalt is an asphalt alternative made from non-petroleum based renewable resources. Manufacturing sources of bioasphalt include sugar, molasses and rice, corn and potato starches, and vegetable oil based waste. Asphalt made with vegetable oil based binders was patented by Colas SA in France in 2004.

Chapter 11

Habitat Conservation

This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Un-sourced material may be challenged and removed. (April 2009)Tree planting is an aspect of habitat conservation. In each plastic tube a hardwood tree has been planted. There are significant ecological benefits associated with selective cutting. Pictured is an area with Ponderosa Pine trees that were selectively harvested.

Habitat conservation is a land management practice that seeks to conserve, protect and restore habitat areas for wild plants and animals, especially conservation reliant species, and prevent their extinction, fragmentation or reduction in range.[1] It is a priority of many groups that cannot be easily characterized in terms of any one ideology.

History of the conservation movement

For much of human history, nature had been seen as a resource, one that could be controlled and used for personal and economic gain. The idea was that plants only existed to feed animals and animals only existed to feed man. The land itself had limited value only extending to the resources it could provide such as minerals and oil.

Throughout the 18th and 19th centuries social views started to change and scientific conservation principles were first practically applied to the forests of British India. The conservation ethic that began to evolve included three core principles: that human activity damaged the environment, that there was a civic duty to maintain the environment for future generations, and that scientific, empirically based methods should be applied to ensure this duty was carried out. Sir James Ranald Martin was prominent in promoting this ideology, publishing many medico-topographical reports that demonstrated the scale of damage wrought through large-scale deforestation and desiccation, and lobbying extensively for the institutionalization of forest conservation activities in British India through the establishment of Forest Departments.

The Madras Board of Revenue started local conservation efforts in 1842, headed by Alexander Gibson, a professional botanist who systematically adopted a forest conservation program based on scientific principles. This was the first case of state conservation management of forests in the world. Governor-General Lord Dalhousie introduced the first permanent and large-scale forest conservation program in the world in 1855, a model that soon spread to other colonies, as well the United States, where Yellowstone National Park was opened in 1872 as the world's first national park.

Rather than focusing on the economic or material benefits associated with nature, humans began to appreciate the value of nature itself and the need to protect pristine wilderness. By the middle of the 20th century countries such as the United States, Canada, and Britain understood this appreciation and instigated laws and legislation in order to ensure that the most fragile and beautiful environments would be protected for generations to come. Today with the help of NGO's, not-for profit organizations and governments world-wide there is a stronger movement taking place, with a deeper understanding of habitat conservation with the aim of protecting delicate habitats and preserving biodiversity on a global scale. The commitment and actions of small volunteering association in villages and towns, that endeavour to emulate the work done by well known Conservation Organizations, is paramount in ensuring generations that follow understand the importance of conserving natural resources. A village conservation group with the mission statement "We are committed to protecting and enhancing the natural environment in and around the adjoining villages of Ouston and Urpeth." may one day inspire a child who becomes the employee of a worldwide conservation organisation.

Values of natural habitat

Environmental Economics:

The natural environment is a source for a wide range of resources that can be exploited for economic profit, for example timber is harvested from forests and clean water is obtained from natural streams. However, land development from anthropogenic economic growth often causes a decline in the ecological integrity of nearby natural habitat. For instance, this was an issue in the northern rocky mountains of the USA.

However, there is also economic value in conserving natural habitat. Financial profit can be made from tourist revenue, particularly in the tropics where species diversity is high. The cost of repairing damaged ecosystems is considered to be much higher than the cost of conserving natural ecosystems.

Measuring the worth of conserving different habitat areas is often criticized as being too utilitarian from a philosophical point of view.

Biodiversity

Habitat conservation is important in maintaining biodiversity, an essential part of global food security. There is evidence to support a trend of accelerating erosion of the genetic resources of agricultural plants and animals. An increase in genetic similarity of agricultural plants and animals means an increased risk of food loss from major epidemics. Wild species of agricultural plants have been found to be more resistant to disease, for example the wild corn species Teosinte is resistant to 4 corn diseases that affect human grown crops. A combination of seed banking and habitat conservation has been proposed to maintain plant diversity for food security purposes.

Classifying environmental values

Pearce and Moran outlined the following method for classifying environmental uses:

Direct extractive uses: e.g. timber from forests, food from plants and animals

Indirect uses: e.g. ecosystem services like flood control, pest control, erosion protection

Optional uses: future possibilities e.g. unknown but potential use of plants in chemistry/medicine

Non-use values:

Bequest value (benefit of an individual who knows that others may benefit from it in future)

Passive use value (sympathy for natural environment, enjoyment of the mere existence of a particular species)

Impacts

Natural causes

Habitat loss and destruction can occur both naturally and through anthropogenic causes. Events leading to natural habitat loss include climate change, catastrophic events such as volcanic explosions and through the interactions of invasive and non-invasive species. Natural climate change, events have previously been the cause of many widespread and large scale losses in habitat. For example, some of the mass extinction events generally referred to as the "Big Five" have coincided with large scale such as the Earth entering an ice age, or alternate warming events.Other events in the big five also have their roots in natural causes, such as volcanic explosions and meteor collisions.The Chicxulub impact is one such example, which has previously caused widespread losses in habitat as the Earth either received less sunlight or grew colder, causing certain fauna and flora to flourish whilst others perished. Previously known warm areas in the tropics, the most sensitive habitats on Earth, grew colder, and areas such as Australia developed radically different flora and fauna to those seen today. The big five mass extinction events have also been linked to sea level changes, indicating that large scale marine species loss was strongly influenced by loss in marine habitats, particularly shelf habitats.Methane-driven oceanic eruptions have also been shown to have caused smaller mass extinction events.

Human impacts

Humans have been the cause of many species' extinction. Due to humans' changing and modifying their environment, the habitat of other species often become altered or destroyed as a result of human actions. Even before the modern industrial era, humans were having widespread, and major effects on the environment. A good example of this is found in Aboriginal Australians and Australian mega fauna. Aboriginal hunting practices, which included burning large sections of forest at a time, eventually altered and changed Australia's vegetation so much that many herbivorous megafauna species were left with no habitat and were driven into extinction. Once herbivorous megafauna species became extinct, carnivorous megafauna species soon followed. In the recent past, humans have been responsible for causing more extinctions within a given period of time than ever before. Deforestation, pollution, anthropogenic climate change and human settlements have all been driving forces in altering or destroying habitats.The destruction of ecosystems such as rainforests has resulted in countless habitats being destroyed. These

biodiversity hotspots are home to millions of habitat specialists, which do not exist beyond a tiny area. Once their habitat is destroyed, they cease to exist.This destruction has a follow-on effect, as species which coexist or depend upon the existence of other species also become extinct, eventually resulting in the collapse of an entire ecosystem. These time-delayed extinctions are referred to as the extinction debt, which is the result of destroying and fragmenting habitats. As a result of anthropogenic modification of the environment, the extinction rate has climbed to the point where the Earth is now within a sixth mass extinction event, as commonly agreed by biologists.This has been particularly evident, for example, in the rapid decline in the number of amphibian species worldwide.

Approaches and methods of habitat conservation

Determining the size, type and location of habitat to conserve is a complex area of conservation biology. Although difficult to measure and predict, the conservation value of a habitat is often a reflection of the quality (e.g. species abundance and diversity), endangerment of encompassing ecosystems, and spatial distribution of that habitat.

Identifying priority habitats for conservation

Habitat conservation is vital for protecting species and ecological processes. It is important to conserve and protect the space/ area in which that species occupies. Therefore, areas classified as ‘biodiversity hotspots’, or those in which a flagship, umbrella, or endangered species inhabits are often the habitats that are given precedence over others. Species that possess an elevated risk of extinction are given the highest priority and as a result of conserving their habitat, other species in that community are protected thus serving as an element of gap analysis. In the United States of America, a Habitat Conservation Plan (HCP) is often developed to conserve the environment in which a specific species inhabits. Under the U.S. Endangered Species Act (ESA) the habitat that requires protection in an HCP is referred to as the ‘critical habitat’. Multiple-species HCPs are becoming more favourable then single-species HCPs as they can potentially protect an array of species before they warrant listing under the ESA, as well as being able to conserve broad ecosystem components and processes . As of January 2007, 484 HCPs were permitted across the United States, 40 of which covered 10 or more species.The San Diego Multiple Species Conservation Plan (MSCP) encompasses 85 species in a total area of 26,000-km2. Its aim is to

protect the habitats of multiple species and overall biodiversity by minimizing development in sensitive areas.

HCPs require clearly defined goals and objectives, efficient monitoring programs, as well as successful communication and collaboration with stakeholders and land owners in the area. Reserve design is also important and requires a high level of planning and management in order to achieve the goals of the HCP. Successful reserve design often takes the form of a hierarchical system with the most valued habitats requiring high protection being surrounded by buffer habitats that have a lower protection status. Like HCPs, hierarchical reserve design is a method most often used to protect a single species, and as a result habitat corridors are maintained, edge effects are reduced and a broader suite of species are protected.

How much habitat is enough

A range of methods and models currently exist that can be used to determine how much habitat is to be conserved in order to sustain a viable population. Modelling tools often rely on the spatial scale of the area as an indicator of conservation value. There has been an increase in emphasis on conserving few large areas of habitat as opposed to many small areas. This idea is often referred to as the "single large or several small", SLOSS debate, and is a highly controversial area among conservation biologists and ecologists. The reasons behind the argument that "larger is better" include the reduction in the negative impacts of patch edge effects, the general idea that species richness increases with habitat area and the ability of larger habitats to support greater populations with lower extinction probabilities. Noss & Cooperrider support the "larger is better" claim and developed a model that implies areas of habitat less than 1000ha are "tiny" and of low conservation value.However, Shwartz suggests that although "larger is better", this does not imply that "small is bad". Shwartz argues that human induced habitat loss leaves no alternative to conserving small areas. Furthermore, he suggests many endangered species which are of high conservation value, may only be restricted to small isolated patches of habitat, and thus would be overlooked if larger areas were given a higher priority. The shift to conserving larger areas is somewhat justified in society by placing more value on larger vertebrate species, which naturally have larger habitat requirements.

Examples of current conservation organizations

The Nature Conservancy

Since its formation in 1951 The Nature Conservancy has slowly developed into one of the world's largest conservation organizations. Currently operating in over 30 countries, across 5 continents world-wide, The Nature Conservancy aims to protect nature and its assets for future generations.The organization purchases land or accepts land donations with the intension of conserving its natural resources. In 1955 The Nature Conservancy purchased its first 60-acre plot near the New York/Connecticut border in the United States of America. Today the Conservancy has expanded to protect over 119 million acres of land, 5,000 river miles as well as participating in over 1000 marine protection programs across the globe . Since its beginnings The Nature Conservancy has understood the benefit in taking a scientific approach towards habitat conservation. For the last decade the organization has been using a collaborative, scientific method known as 'Conservation by Design'. By collecting and analyzing scientific data The Conservancy is able to holistically approach the protection of various ecosystems. This process determines the habitats that need protection, specific elements that should be conserved as well as monitoring progress so more efficient practices can be developed for the future.

The Nature Conservancy currently has a large number of diverse projects in operation. They work with countries around the world to protect forests, river systems, oceans, deserts and grasslands. In all cases the aim is to provide a sustainable environment for both the plant and animal life forms that depend on them as well as all future generations to come.

World Wildlife Fund (WWF)

The World Wildlife Fund (WWF) was first formed in after a group of passionate conservationists signed what is now referred to as the Morges Manifesto., WWF is currently operating in over 100 countries across 5 continents with a current listing of over 5 million supporters. One of the first projects of WWF was assisting in the creation of the Charles Darwin Research Foundation which aided in the protection of diverse range of unique species existing on the Galápagos' Islands, Ecuador. It was also a WWF grant that helped with the formation of the College of African Wildlife Management in Tanzania which today focuses on teaching a wide range of protected area management skills in areas such as ecology, range management and law enforcement.The WWF has since gone on to aid in the protection of land in Spain, creating the

Coto Doñana National Park in order to conserve migratory birds and The Democratic Republic of Congo, home to the world's largest protected wetlands. The WWF also initiated a debt-for-nature concept which allows the country to put funds normally allocated to paying off national debt, into conservation programs that protect its natural landscapes. Countries currently participating include Madagascar, the first country to participate which since 1989 has generated over $US50 million towards preservation, Bolivia, Costa Rica, Ecuador, Gabon, the Philippines and Zambia.

Rare Conservation

Rare has been in operation since 1973 with current global partners in over 50 countries and offices in the United States of America, Mexico, the Philippines, China and Indonesia. Rare focuses on the human activity that threatens biodiversity and habitats such as overfishing and unsustainable agriculture. By engaging local communities and changing behaviour Rare has been able to launch campaigns to protect areas in most need of conservation.The key aspect of Rare's methodology is their "Pride Campaign's".

Chapter 12

Case Studies

The purpose of ecotourism is to engage tourists in low impact, non-consumptive and locally oriented environments in order to maintain species and habitats - especially in underdeveloped regions. While some ecotourism projects, including some found in the United States, can support such claims, many projects have failed to address some of the fundamental issues that nations face in the first place. Consequently, ecotourism may not generate the very benefits it is intended to provide to these regions and their people, and in some cases leaving economies in a state worse than before.

The following case studies illustrate the rising complexity of ecotourism and its impacts, both positive and negative, on the environment and economies of various regions in the world.

Ecotourism in the United States

Northeast

Environment and wildlife:

Much of the vegetation found in the Southeastern United States is also found up the coastline of the Northeast. The Appalachian Mountain range and the Smokey Mountain range separates the Northeast region into three different areas: the Appalachian Plateaus west of the mountain range, the Mountain ranges themselves, and the Piedmont Plateau and coastal plains. The entire region is known to have cold winters and warm summers, leading to a winter deciduous forest dominated by tall broadleaf species. The vegetation is separated into three distinct associations: Appalachian oak, pine-oak, and mixed mesophytic. The mixed mesophytic is found on the Appalachian Plateaus and has a great diversity of vegetative species, including American beech, tuliptree (or yellow-poplar), several basswoods, sugar maple, sweet buckeye, red oak, white oak, and eastern hemlock. The pine-oak forests are found along the sandy Coastal Plains and have a think shrub understory. The Appalachian oak forests are found east of the mountains and in mid-range elevations and are dominated by white oak and northern red oak. The upper elevations of the mountains also have a distinct northeastern hardwood forest where species such as birch,

beech, maple, elm, red oak, and basswood, hemlock and white pine can all be found. The highest elevation points are vegetated mainly by spruce-fir forest and meadows. The Adirondack Mountains in the far northeast of the United States are part of the Eastern forest-boreal transition zone between the boreal forests of the north and the deciduous forests of the south. Here a mixture of red spruce, fir, birch, maple, and beech are found.

Ecotourism opportunities

The three different mountain ranges (Appalachian, Smokey, and Adirondack), ample coastlines, and the diversity of wildlife species, especially bird species, allow for many opportunities in ecotourism to develop.

Southeast

The Southeastern United States is dominated by a humid subtropical climate, with the exception of South Florida, which is designated as a tropical savannah.

South Florida's climate has a wet season controlled by moist, warm maritime tropical air masses at times of high sun, and a dry season controlled by continental tropical air masses at times of low sun. The rest of the Southeast is characterized as having high humidity and an absence of very cold winters.

The typical vegetation in the Southeast is forests, with much of the sandy coastal regions dominated by old growth forests of loblolly pine, longleaf pine, shortleaf pine and slash pine, and inland areas have deciduous forests usually consisting of various pine species along with oak, hickory, sweetgum, blackgum, red maple and winged elm. The main grasses found in the Southeast are bluestem, panicums, and longleaf uniola, with dogwood, viburnum, haw, blueberry, American beautyberry, youpon, and numerous woody vines being common as well.

The Gulf Coast area is bordered by salt marshes dominated by the marsh grass Spartina. In southern Florida the habitat is strongly influences by the fluctuating water levels which cause distinctive vegetation known as tropical savannah to grow, which is why it has historically been called the River of Grass. This is region characterized as having open expanses of tall grasses, such as sawgrass and three-awns, interspersed with hardy, drought-resistant trees and shrubs.

Cypress forests are extensive in this region, along with mangroves along the coastal areas. Off the coast of southern Florida and the Florida Keys there are many coral reefs present.

Whitetail deer are the only large indigenous mammals found in the Southeast, with the exception of small, isolated populations of black bear and the endangered Florida panther. Many small mammals inhabit this region including raccoons, fox squirrels, eastern gray squirrels, foxes, cottontail rabbits, armadillos and opossums. Bobwhite and wild turkey are the main game bird that can be found in the region. Other very common birds found in the Southeast are mourning doves, pine warbler, cardinal, summer tanager, Carolina wren, ruby-throated hummingbird, blue jay, hooded warbler, eastern towhee, and tufted titmouse. Many non-game migratory birds and migratory waterfowl are common as well. The endangered red-cockaded woodpecker is also native to the region. Numerous species of reptiles and amphibians can be found here as well, such as the American alligator, common and alligator snapping turtles, fench and glass lizards, and salamanders. The forest snake species found include cottonmouth moccasin, copperhead, rough green snake, rat snake, coachwhip, and speckled kingsnake. Manatees are found in estuaries and channels throughout the state. Coral reefs serve as habitat for many tropical fish species.

Midwest

Environment and wildlife

The Midwestern United States is central and located inland. The area was once covered in glaciers. It is varied in geography and environment, from the Appalachian Mountains to the Great Lakes and the Great Plains, farther west. The Great Lakes states (Indiana, Illinois, Michigan, Minnesota, Ohio, and Wisconsin) form a large drainage basin that feed into the lakes. The Great Plains states (Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota) are mainly prairies. Much of the land is used for farming. Forest zones in the region are a mix of pine trees, yellow birches, sugar maples, and American beech trees. The oak-hickory forests fade into prairie, but trees are still found near water sources. Soil is extremely varied, including peat, clay, silt, and sand. Many of the birds such as ptarmigan, migrate south for the winter. Other mammals in the region include gray squirrels, who feed on the acorns from the oak-hickory trees, fox squirrels, chipmunks,and prairie dogs.

Ecotourism opportunities

To protect the Great Plains wildlife, the American Prairie Foundation has established the American Prairie Reserve in Montana. It aims to restore bison, prairie dogs, and ferrets in the area. By restoring the prairies, the Foundation aims to improve enjoyment of the land and incur economic benefits through tourism to the area.

Northwest

The Northwest of the United States is dominated by the Cascade Mountain range and is characterized by mild temperatures averaging 35 to 50 degrees Fahrenheit all year with heavy rainfall ranging from 30 to 150 inches per year. These heavy rains have led to the growth of coniferous forests that include Douglas-fir, western redcedar, western hemlock, grand fir, silver fir, subalpine fir, whitebark pine, Sitka spruce, and Alaska-cedar, along with an abundance of thick shrub understory. Along the coastal regions, however, glaciers and rivers dominate, leading to riparian forests that have broadleaf species such as black cottonwood and red alder. Common mammals include deer, elk, mountain lion, black bear, Douglas squirrels, red tree vols, and Townsend chipmunks. Important game birds are ruffed grouse and blue grouse. Other non-game bird species found in this region are winter wren, Townsend's warbler, chestnut-backed chickadee, red-breasted nuthatch, and Spotted owl and marbled murrelet which rely on the old growth forests found in this region. The Pacific treefrog, Pacific giant salamander, Alligator lizard, and rubber boa can also be found here.

Organizations in the Northwest

Oregon is home to several organizations that support businesses who follow ecologically sustainable practices. Some of these organization are Salmon-Safe (http://www.salmonsafe.org/), Oregon Environment Council (http://www.oeconline.org/), and SkiGreen (http://skigreen.org/). These organizations consult with businesses and communities in the Northwest to help promote such practices. Organizations such as Salmon-Safe, support businesses that use ecologically sustainable practices and will certify companies that comply to these standards.

Southwest

The southwest of the United States is the most arid region of the nation and this allows for a very different set of ecosystems and natural habitats to exist. Ecotourism in the southwest of the United States focuses around the natural areas of the Grand Canyon, Colorado River, desert areas and the Pacific Ocean. This part of the country has numerous herds of wild horses and burros which roam the wild lands of Nevada.

Alaska

Alaska's Boreal forest contains many varieties of tree, primarily black and white spruce but also including balsam poplar, aspen, and paper birch. It is the coldest terrestrial ecosystem on Earth. Fire is common and is often caused by lightning or humans. Burnt organic materials enrich the soil, and the regrowth of vegetation allows for biodiversity. It is home to arctic ground squirrels and northern flying squirrels, marmots, woodchucks, and birds such as gray jays, boreal chickadees, northern flickers, red-tailed hawks, and boreal owls. The climate in this region is very extreme, with exceptionally cold winters and hot summers. The Arctic tundra is flat and treeless, with extensive marshes and lakes. Winters are long and cold and the short summers also remain cool. A layer of permafrost, or frozen soil, lies beneath the tundra's surface. Permafrost limits plant growth since their roots are unable to reach very deep. Cottongrass-tussock is the most widespread type of vegetation in the region. Global warming poses a threat to this region and its permafrost. Alaska is home to a large brown bear population, including grizzly bears and Kodiak bears. Black bears and moose live throughout the state. Polar bears live along the coast in the Arctic tundra region; caribou are also concentrated in the tundra.

Hawaii

Being a chain of individually formed volcanic islands, the ecosystems of Hawaii are extremely numerous and diverse, including deserts, beaches, coral reefs, and rainforests. Hawaiian tropical rainforests are found on windward mountain slopes. Coral reefs are located close to the shore of the islands. The coastlines are rough and the climate is tropical and remains fairly steady due to the ocean and trade winds. Shrubs are found in the coastal lowlands. They are topped by forests sloping up the mountains. There are four major types of forest, varying with level of moisture. There are dry forests, wet forests, and those composed of ohia and treelike ferns and the koa tree.

Bogs are found near the mountain tops. Hawaiian wildlife is unique in that the majority of it is endemic, or found only in that specific region. This is due to Hawaii's geographic isolation. Species arrived via wind, water, or flight. As a result of small populations and environmental and climatic variation within small areas, many endemic species are considered vulnerable or endangered. The Hawaiian goose, nene, is classified as vulnerable. The yellow hibiscus flower and the Hawaiian honeycreeper, po'ouli, are endangered. There are many seabirds such as boobies and petrels. There are a few introduced mammals, such as the Hawaiian wild boar, and very few reptiles, including no native snakes.

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