



SEALOEarth
Serene Environment And Life On Earth

A world in which all people participate in the stewardship of planet Earth.

SEALOEarth in Special Consultative Status with the United Nations ECOSOC since 2017

NEWSLETTER

Earth Day 2022

*“The earth does not belong to man, man belongs to the earth.
All things are connected like the blood that unites one family.
Man did not weave the web of life, he is merely a strand in it.
Whatever he does to the web, he does to himself.”*

~ Chief Seattle

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Lion-tailed Macaque. Endangered species listed by International Union for Conservation of Nature (IUCN). Photo credit: Praveen Siddannavar

We hope that you will enjoy reading this newsletter!

10th Anniversary Wishes

Massachusetts, USA

Governor Charles D. Baker

Lieutenant Governor Karyn E. Polito

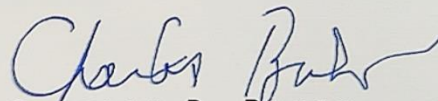
The Commonwealth of Massachusetts

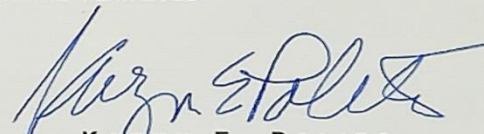


*SEALOE*arth

ON BEHALF OF THE CITIZENS OF THE COMMONWEALTH OF MASSACHUSETTS,
I CONGRATULATE YOUR ORGANIZATION ON THE JOYOUS OCCASION OF YOUR 10TH ANNIVERSARY AND WE
COMMEND YOUR INSPIRATIONAL DEVOTION TO THE PRESERVATION OF OUR PLANET AND YOUR TIRELESS EFFORTS
TO RAISE AWARENESS ABOUT THE IMPORTANCE OF SUSTAINABLE RESOURCE MANAGEMENT THROUGHOUT THE
COMMONWEALTH.

THIS TWENTIETH DAY OF MARCH IN THE YEAR 2022


CHARLES D. BAKER
Governor


KARYN E. POLITO
Lieutenant Governor

Harmony with Nature: United Nations

SEALOEarth participated in the 11th

Interactive Dialogue of the General Assembly

At United Nations Headquarters on

22 April 2022



Dr. Chaitanya Hiremath at the UN. Photo credit: UN Web TV

(Excerpts from the UN)

The solar system reminds us that, just as the Earth is not at the center of the Universe, neither are we humans the center of the Earth.

We, along with the rest of the natural world, are all interconnected within the larger web of life.

The Interactive Dialogues of the General Assembly on Harmony with Nature to commemorate International Mother Earth Day have brought to the forefront the need to move away from a human-centered worldview - or "anthropocentrism" - and establish a non-anthropocentric, or Earth-centered, relationship with the planet. Under this new paradigm, we recognize Nature as an equal partner with humankind.

The crisis of civilization which has endangered all forms of life, human and non-human, is rooted in an unjust and unethical economic system. A reversal of the current path of

destruction, exemplified in the steep loss of biodiversity from terrestrial and aquatic ecosystems and with the climate crisis approaching a point of no return, demands nothing less than a paradigm shift. Signs of a paradigm shift from human-centered to Earth-centered law, economics and education have been taking place for well over a decade as evidenced by the UN Harmony with Nature Programme.

Alternatives to gross domestic product (GDP) as a measure of well-being are entering policy arenas at various levels of government, and discussions around new approaches to ecological economies are being made in various countries. Developments in ecological economics linking planetary health and human well-being, gained visibility and momentum as result of the COVID-19 pandemic.

In parallel, Earth-centered law continues to be incorporated in national law in an increasing number of countries worldwide. In some instances, the judiciary has demanded State action affirming or restoring the rights of rivers, forests, or glaciers, while in other instances, municipal or local legislative bodies have recognized the rights of Nature or Mother Earth. The recognition of the legal personhood of Nature based on customary or indigenous law exemplifies the increasing acceptance of indigenous peoples' cosmogony into the body of Western positive law.

The values advanced by Ecological Economics and Earth centered law such as equity, cooperation, dialogue, inclusion, comprehension, agreement, respect and mutual inspiration complement each other in the journey to move beyond the Anthropocene epoch. Earth Jurisprudence calls on humanity to listen to, take inspiration from, and care for the planet that sustains us, and recognize that Nature is, and should be, the source of law, ethics and how we govern ourselves.

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Celebration of Earth

Westford & Littleton, Massachusetts, USA

On April 22nd, 2022, the Earth Flag was hoisted at the home of Dr. Chaitanya Hiremath.

Due to COVID-19, in-person celebration was moved by a week and was celebrated in Littleton, Massachusetts at Reuben Hoar Library on Saturday, May 7th, 2022 and was hosted by Dr. Hiremath. The participants shared ecological addresses for public places, such as the Bean in Chicago, Sensoji Temple in Tokyo, and Pearl Tower in Shanghai. Mrs. Shobha Hiremath facilitated the proceedings of the event. Nathan Qu and Vedanth Srivatsan of Westford Chamber Players presented Mozart Violin Duets, which was directed by their coach Dimitar Petkov and coordinated by Dongchun Wang. Invited contestants read their essays aloud. Dr. William Harman presented the essay contest awards. The certificates and prizes were mailed. Sadhika Hiremath took the pictures and Medha Hiremath live-streamed the event.

On the occasion of SEALOEarth 10th anniversary, several distinguished individuals were recognized for their many years of service. Dedication awards were presented along with a gift card as a token of our appreciation. SEALOEarth is what it is today because of such amazing people. It is our hope that they continue to help us in future.



Dedication Awards

Mrs. Marian and Dr. William Harman, USA

Serving 10 years

Mrs. Rebecca Shaw Ingerslev, USA

Serving 10 years

Dr. Robyn Henderson, Australia

Serving 5 years

Dr. Andrea Safford, USA

Serving 5 years





Global Environmental Distinction 2022

Inspiring environmental projects related to fostering biodiversity, strengthening ecosystems, and establishing sustainable practices were recognized.

Environmental Award

Reducing Our Carbon Footprint

James Jackson, 16 (VA, USA)

Global Essay Contest 2022



Around the World

In the early 2022 alone, SEALOEarth's global reach included countries such as, Australia, Brazil, Cambodia, Canada, Czech Republic, India, Indonesia, Ireland, Japan, Kazakhstan, Philippines, Republic of Korea, Singapore, Sri Lanka, Trinidad and Tobago, United Kingdom, United States among others.

This year's entries gave a glimpse of how the future generation is thinking about ecotourism. After prescreening, the essays were blind-scored by our international panel of judges from Australia and the United States. Teachers from several schools motivated their students to participate in the contest.

Essay Contest Awards

"How can local communities benefit from their location while positively contributing to conservation outcomes?"

Youth (ages 9-14)

Aashrith Ram, 13 (MA, USA) First place

Juniors (ages 15-18)

Samuel Bergeron, 16 (MA, USA) First place

Marzooq Jeje, 17 (MA, USA) Second place

Honorable Mention

Mahiro Jilesen, 13 (MA, USA)

Colby Murphy, 17 (MA, USA)

Nathan Mucci, 17 (MA, USA)

Zachary Ouellette, 17 (MA, USA)

Essay prompt for 2023

"How can an International Serene Day create a paradigm shift from human-centered to Earth-centered world to inspire harmony with nature?"

The deadline is March 1, 2023.

For more information, please visit:

<http://sealoeearth.org/essaycontest.html>



SEALOEarth Environmental Distinction 2022. Photo credit: James Jackson



SEALOEarth Global Essay Contest 2022. Photo credit: Marzooq Jeje

Nature in your Neighborhood



Adorable African Elephant calf. Photo credit: Praveen Siddannavar

Masai Mara national reserve, Kenya, Africa

Endangered Species of Our Planet!



Praveen Siddannavar, India
Award winning
Natural history photographer
Wildlife conservationist

An endangered species is a type of organism that is threatened by extinction. Species become endangered for two main reasons – the first being the loss of habitat, which is most critical in the 21st century that we live in as we see so much deforestation, poaching, industrialization, cultivation and so on. The other reason is the loss of genetic variation. On the occasion of Earth Day, I am sharing my views & images of endangered and vulnerable species that I have managed to photograph over the past few years.

Tigers (*Panthera tigris*) are the most beautiful creations made by God on our Planet Earth. The tiger is largest living cat species and a member of genus *Panthera*. It is the national animal of India, Bangladesh, Malaysia & South Korea and approximately 4000 wild tigers exist in various tiger reserves. Unfortunately, tigers are listed as endangered species by the International Union for Conservation of Nature (IUCN) Red List. Tigers are victims of Human-Animal conflicts, especially in countries with a high population density like India. Poaching is another reason for tiger deaths since its organs, like bones and teeth, are used for medicinal purposes.



Panthera Tigris. Photo credit: Praveen Siddannavar

As rightly quoted by a former Indian tiger hunter and tiger conservationist, the late Billy Arjan Singh: “The air we breathe and the water we drink stem from the biodiversity of the universal environment and its economics. The tiger is at the center of this truth. If he goes, we go...”

This is true, as our forest ecosystem entirely depends on our animals, trees, and rivers. By protecting them, we are protecting ourselves. We can save our tigers by creating awareness within our society and initiating programs that educate the people living on forest fringes. Hence, International Tigers Day is celebrated each year on July 29th, as part of tiger conservation and awareness programs across the world.

Lion-tailed macaques, also called wanderoos, are old-world monkeys that are endemic to the Western Ghats of South India. I captured this image of the lion-tailed macaque in Valparai, Tamil Nadu. It was unfortunate to learn that there are

only a few groups of lion-tailed macaques left in the area. Lion-tailed macaques are rainforest dwellers. They are diurnal, which means that they are mostly active during the day. They are also excellent tree climbers and prefer to live on top on the upper canopy of tropical evergreen forests. Unlike other macaques, lion-tailed macaques mostly avoid humans. They mainly feed on fruits, leaves, and berries, and rarely prey on birds' eggs.



Lion-tailed Macaques. Photo credit: Praveen Siddannavar

Unfortunately, lion-tailed macaques are also listed as endangered species by the IUCN Red List. As per the recent assessment for IUCN reports, 3000-3500 of these animals are scattered over three states in India: Tamil Nadu, Kerala, and Karnataka. The loss of habitat is the primary reason for the decrease in their population.

Black Rhinos are listed as critically endangered as per the IUCN Red List. Black Rhinos are the smaller of the two Rhino species, and found only in Africa. Due to the huge demand of their horns for illegal wildlife trade, poaching is the main threat for this animal. In addition, habitat loss, deforestation, human activities such agriculture, settlements,

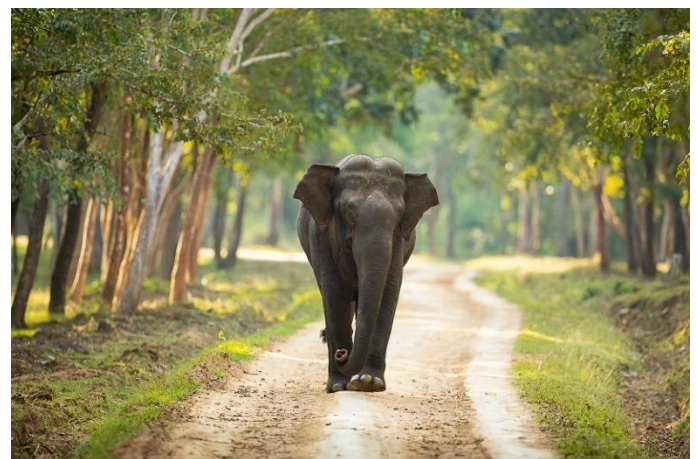
and infrastructure developments, all pose as threats to the species.



Black Rhino. Photo credit: Praveen Siddannavar

Black Rhinos are browsers rather than grazers, and their pointed lip helps them feed on leaves, bushes, and trees. Various NGOs provide ongoing efforts for Rhino Conservation. I captured a rare image of a courting couple at Masai Mara National Park in Kenya, Africa. This offered some hope that the population of black rhinos could increase in the future.

Asian Elephants, also known as the Asiatic Elephants, are scientifically known as *Elephas maximus*. This species is also considered an endangered species as per the IUCN Red List. The biggest threat to elephants is the illegal trade of its tusks for ivory, as well as habitat loss and fragmentation. Asia is the most populous continent on Earth, so the development and economic growth in different states have led to the encroachment of elephants' habitats, leading to human-animal conflict.



Asian Elephant. Photo credit: Praveen Siddannavar

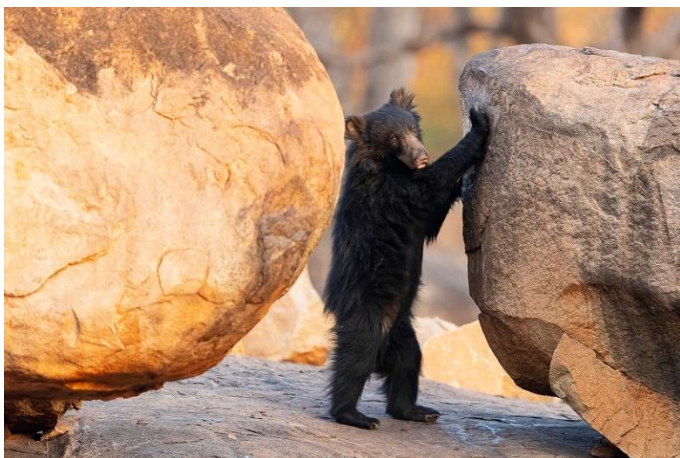
Elephant conservation is of prime importance and many NGOs are actively working towards this goal.

Jaguars, also known scientifically as *Panthera onca*, are the third largest living cats after tigers and lions. These cats are only found in Central and South America. I spotted these amazing felines in North Pantanal and captured this female jaguar very close to our houseboat at sunrise.



Jaguar. Photo credit: Praveen Siddannavar

Jaguars are listed as near threatened species as per the IUCN Red List. Hunting & habitat loss due to deforestation continue to threaten the survival of these marvelous cats. Jaguars are excellent swimmers and hunt mainly on caimans. Their bite is the most powerful in comparison to other cats.



Sloth Bear. Photo credit: Praveen Siddannavar

Sloth Bears (*Melurus ursinus*), are native to the Indian subcontinent. They feed on fruits, ants, and termites. They are listed as vulnerable species on the IUCN Red List, primarily due to poaching, habitat loss, degradation, and pet

trade. The IUCN estimates that less than 20,000 bears will survive in the wild on the Indian subcontinent and Sri Lanka. Educating the people living on forest fringes will once again raise awareness to the issue, which is the key to avoid human-bear conflicts. The government of India has banned the use of sloth bears for entertainment, which is also the objective of the Sloth Bear Welfare Project in the country.

Indian hog deer, known scientifically as *Axis porcinus*, are small deer native to the Indo-Gangetic Plain in northern India, Nepal, and Pakistan. These deer are normally hunted by tigers, leopards, wild dogs, and sometimes by Burmese pythons. The hog deer is listed as an endangered species on the IUCN Red list.



Indian Hog Deer. Photo credit: Praveen Siddannavar

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Praveen Siddannavar's images have also been exhibited both at national and international art galleries in London, New York, Portugal, Iraq, Dubai & India.

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<https://www.facebook.com/PraveenSiddannavarPhotography?ref=hl>

<https://www.instagram.com/praveensiddannavar/?hl=en>

Reducing Our Carbon Footprint



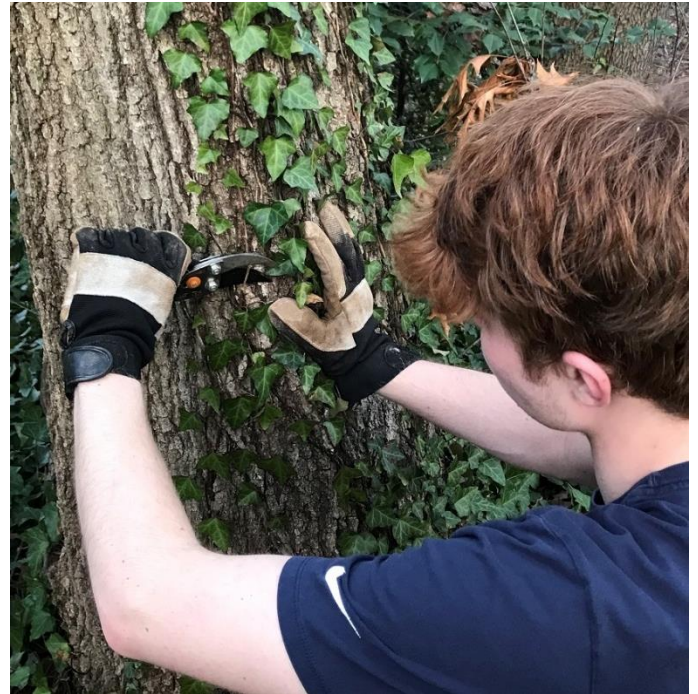
James Jackson (16)

Virginia, USA

Inspired by my grandfather, who was one of the environmental pioneers in the 1970s who helped ban DDT (Dr. Charles Wurster), I decided in 8th grade that I also wanted to have a positive impact on our earth. Climate change is what worries me the most, because it effects every living thing on earth, especially people who are less likely to have the advantages to deal with it, oceans, animals, plants, insects, and so much more. I decided that trying to reduce our carbon footprint were the most impactful projects I could do to help our planet.

I started my efforts by adopting Bon Air Nature Park in Arlington, Virginia, where I removed several acres of English Ivy (Inaturalist) on mature Oak trees to save them from dying from this invasive species, since trees are so important for carbon capture. I also participated in a tree planting project, where we planted over 400 native trees in protected reserves throughout Fairfax, Virginia. I was proud of the beautiful areas I had helped to restore and create, and knew that it would help the ecosystems in those areas to flourish. However, after dedicating about 70 hours to saving and planting trees, and calculating (carbon calculator) that I had

saved about 20,000 pounds of carbon that year, I realized this project did not even outweigh the carbon produced by two average cars driving for a year. Since improving climate change was my ultimate goal, I decided I wanted to do something that saves more carbon.



Clipping Ivy. Photo credit: James Jackson

I researched activities that produce the most carbon, but that I, as a 15- and 16-year-old, could also do something about. Most of the things I wanted to do, such as transitioning my school's buses to all electric, I realized after many meetings with school leaders, would unfortunately cost too much. Then my grandfather told me about a renewable energy program that can be purchased through the electric company. In Virginia, almost all electricity is produced by fossil fuels—natural gas, nuclear power, and coal. But if a renewable energy program (Dominion Energy) is purchased, the electricity is all produced by wind, solar, biomass, and hydropower. When I calculated that my school, which has 1,100 students, uses 1.7 million kilowatt-hours per year, and that that in turn produces 2.7 million pounds of carbon per year, I knew I had found my next carbon project! If I could accomplish transitioning my school to a 100% renewable energy program, it would be the carbon savings equivalent to planting 20,000 trees and growing them for 10 years, something my first projects could not touch.

Switching our electricity source also creates demand for creating more renewable energy facilities, so it helps the electric company to provide more renewable energy to others. Even better, once the funds were raised, all we would have to do is make a phone call to the electric company to have them switch our electricity subscription, so I knew we could be successful.



Planting trees. Photo credit: James Jackson

Involving my school Environmental Club was very important for success, since this would take a team effort. I am Vice President of our club, and we have 38 members. Fortunately, the cost for renewable energy was declining, but the cost to switch our entire school for one year would be \$7,000. We began fundraising efforts immediately, trying to figure out what the school would allow us to do, and starting a GoFundMe campaign. I also started working at my part-time soccer referring job more so that I could contribute to our savings goals. So far, we have raised almost \$2,000, which is enough to convert one of our three school buildings to all renewable energy, saving 900,000 pounds of carbon, and the same as taking 90 cars off the road. We are not done yet, but we will not stop until our entire school runs on renewable energy.

My plans for the next year are now to also start reaching out to other Environmental Clubs at other schools, to see if they would like to do the same project at their schools, and I can share what I have learned to help them. This would

be a great way to make my project have an even bigger carbon savings impact.



Planting trees. Photo credit: James Jackson



Earth Day 2022. Photo credit: James Jackson

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Ecotourism Provides Hope for the Future



Marzooq Jeje (17)
Massachusetts, USA

In 2021 we have heard countless warnings that the environment must be protected, this is our one shot, and once it's gone, it's gone. There's wildlife going extinct, global warming is a real problem caused by the emission of greenhouse gasses, and continuing to cut down trees in the name of making space and obtaining lumber without plans to replant those trees are all contributing factors to the current destruction of our planet. People need to change; we cannot continue this way and hope to have a safe future for future generations. There are many ways this can be achieved while also benefiting our surrounding communities. For example, ecotourism is "used to describe travel to areas where active steps are taken to conserve and protect the environment and improve the economic and social well-being of local people" ("Subject Knowledge" 00:00:01 - 00:00:14). Local communities can access the natural resources they have, whether that be amazing mountain views, great cultural heritage, and architecture, or rare wildlife that is indigenous to their region. By protecting these areas and creating safe ways for tourists to interact with these natural resources they can benefit themselves through the jobs created to maintain

ecotourism, and the preservation of their local culture while also keeping the environment safe.



Chon-Kemin National Park. Photo credit: Remote Lands

Local communities can help themselves and protect the environment through the preservation of their own culture. The Kyrgyz have an ecotourism effort that allows tourists to come from various countries and ride horses through the Kyrgyzstan countryside, specifically the Chon-Kemin valley while protecting the land ("The Future" 00:05:25). While on this guided tour on horseback some tourists are able to participate in an ancient game from the Kyrgyz culture Kok Boru ("The Future" 00:05:31 - 00:05:46). The goal of Kok Boru is similar to capture the flag but in this case, the two opposing teams must capture a goat and take the goat to their side ("The Future" 00:05:31 - 00:05:46). Giving tourists the ability to participate in cultural activities helps to ensure that those activities are never forgotten or lost to time. The Kyrgyzstan people perform their ancient culture for tourists and this action forces them to remember and continue them in the future. Tourists can also take in the culture, return to their home, and share what they have done with their family members or other people, further immortalizing the culture. This same idea of preserving local culture while protecting the environment is also apparent in Romania. Dan Dimancescu runs a couple of lodges in the Carpathians where tourists can come and experience Romanian culture ("The Most" 00:22:40). These lodges were constructed by craftsmen from a Romanian community using more eco-friendly materials like wood, instead of cement detracts from the history of peasant homes in the countryside ("The Most" 00:24:00). Within these lodges, tourists can experience local cuisine, and live traditional Romanian music ("The Most" 00:24:39 - 00:24:54).

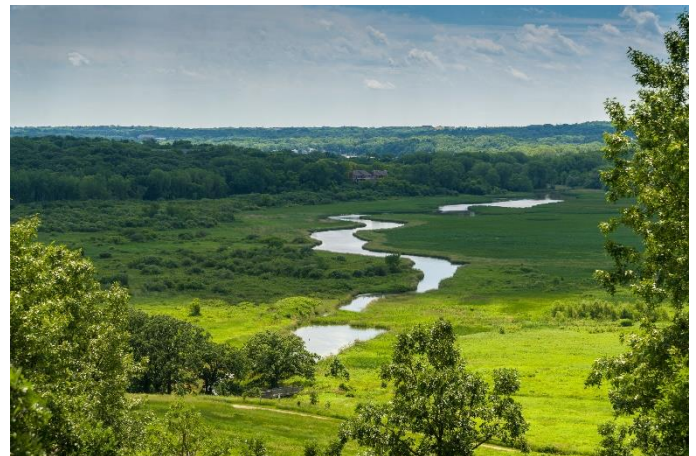
Culture is something that is very easy to share, and can be learned about by anyone. Things as simple as playing games and just enjoying the food from another culture can help preserve the culture for generations to come. Ecotourism just increases the effectiveness of the spread and preservation of culture by bringing in people from all other the world to have amazing experiences with new cultures while also protecting the environment.



Kok boru, traditional horse game. Photo credit: National Commission for UNESCO of the Kyrgyz Republic

When communities practice ecotourism jobs are created in the name of protecting the environment. There are a multitude of jobs that can be created through ecotourism including but not limited to tour guides, construction, and rangers. These jobs help the local communities, because they are non-extractive, and are able to be performed infinitely without fear of the work coming to an end. For example, poachers, and people who fish or hunt to survive, go out and kill animals without a thought of preservation using extreme tactics that can cause animals to go extinct. Instead, these people can work in ecotourism and have a constant income without destroying animal species. This system has been proven to work through the Ecotourism industry in Misool Eco Resort in the Batbitim Islands ("Can Eco-tourism" 00:02:33). The resort employs local people who rely on fishing from the ocean to work at the resort or as rangers that stop poachers in the protected marine area ("Can Eco-tourism" 00:03:51). Through their efforts "The fish biomass has increased in some areas by 600% and there are now 25 times more sharks inside

the reserve than just outside" ("Can Eco-tourism" 00:06:19 - 00:06:40). Ecotourism creates jobs that can both benefit the community and their surrounding environment. In Madagascar, there is an indigenous rare species of Lemurs that have blue eyes in fact "there are only 60 blue-eyed black lemurs in zoos" ("Lemur Conservation" 00:00:40). Due to this rare species being endangered and close to extinction, this community has decided to practice ecotourism to help save blue-eyed lemurs. There is a committee of local people who patrol, and control the local parks ("Lemur Conservation" 00:04:40 - 00:05:14). These people can protect the lemurs from poachers so that tourists can continue to come to Madagascar and experience viewing the Blue-eyed black lemurs ("Lemur Conservation" 00:05:18). There are also guides, porters, and people who wash the clothes of tourists that generate income for the Local people ("Lemur Conservation" 00:07:14). The types of Jobs created by ecotourism are almost endless, there are so many different types of work that the community can participate in, so there is always something for somebody.



The Pheasant Branch Watershed. Photo credit: The Friends of Pheasant Branch Conservancy

My final example of Ecotourism creating jobs while protecting the environment comes from my hometown of Middleton Wisconsin. In Wisconsin lies the Pheasant Branch Conservancy is a natural watershed with beautiful views of marshlands, natural springs, that also has trails that connect a majority of the city of Middleton Wisconsin, including the elementary, middle school, and High School. This area contains many species of animals, and plants, that invite people

from all over the state to come and visit. The Friends of the Pheasant Branch Conservancy is an organization that works “To restore, protect and promote the Pheasant Branch Conservancy and watershed for today and tomorrow” (“Mission, Purpose”). The organization is able to protect the Conservancy, by gathering volunteers to help maintain the lands and make sure they grow in healthy ways. Every couple of years I was able to witness The Friends of the Pheasant Branch Conservancy burn the prairie lands. This is extremely important for the environment because the burning of the prairie lands allows for the dead plants to be released, and provides nutrients for the prairie plants (Simmons). The Friends of the Pheasant Branch Conservancy hires naturalists to provide education programs, field trips, and tours to K-12 students in the nearby area (“Recruiting Naturalist”). Hiring people to teach about the Pheasant Branch Conservancy, works to maintain a culture of protecting the environment around oneself. The Misool Eco Resort, the lemur conservation efforts in Madagascar, and The Pheasant Branch Conservancy all practice ecotourism, and through ecotourism they are able to protect their surrounding environments, in differing ways.



Saving Raja Ampat's marine biodiversity. Photo credit: Papua Paradise Eco Resort

All over the world ecotourism is being put into practice to improve and save our environment—our world. All it takes for a community to recognize what resources they have such as culture, interesting wildlife, or access to interesting natural formations, then these communities can work to save these resources and benefit themselves through the process.

This has been proven to work in Kyrgyzstan by sharing their local culture, in Romania by building lodges using eco-friendly materials, and sharing their culture, at the Misool Eco Resort by creating jobs and protecting wildlife, in Madagascar by protecting the endangered lemur species and hiring local people, and lastly in Middleton Wisconsin and the Pheasant Branch Conservancy, hiring people to teach about protecting their local environment. There is still so much that must be done though, the environment isn't being treated the same everywhere, but now there is a glimmer of hope through ecotourism, that future generations will be able to experience natural wonders just like us now.

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Travel into a Greener Future through Ecotourism



Aashrith Ram (13)
Massachusetts, USA

INTRODUCTION

Let's face it - all the species on earth are not in a good situation right now. Problems such as climate change, deforestation, and pollution have caused a sudden decline of species, which also decreases the amount of biodiversity. According to publicly available statistics, there has been a 68% decline in the number of species in the last 36 years. But fortunately, this appalling situation can be reversed if we humans can take active steps to preserve and conserve our nature. One of the most beneficial ideas is Ecotourism, which promotes responsible travel that benefits local communities from their location while positively contributing to conservation outcomes.

WHAT IS ECOTOURISM?

Ecotourism comes from the words ecological and tourism. Ecotourism is when you travel to areas where active steps can be taken to conserve and protect the environment, thereby improving the economy and welfare of people [Subject knowledge animation: What is Ecotourism?]. According to the

publicly available statistics, only 20% of all tourism qualifies as Ecotourism. Additionally, the World Tourism Organisation says that the industry had about 592 million travelers last year alone, and they spent about 432 billion dollars [The Economist]! Furthermore, there will be around 1.8 billion more travelers by 2030, which is a new record. According to the New York Times, the most popular destinations for ecotourism are Australia, the rainforests of the Amazon Basin, the Galapagos Islands, and Costa Rica [Weiner]. There are three important aspects to ecotourism— environmental integrity, economic vitality, and social equity. This is also known as the triangle of sustainability [Keuten].



Amazon Basin. Photo credit: Google Earth

The first aspect is environmental integrity. Environmental integrity is when the tourists create a low negative impact on the environment. As humans, we should respect and protect the environment by planting trees to create more oxygen, recycle, reuse and reduce the amount of waste that goes into the atmosphere. Also, each tourist has to follow all of the rules regarding wildlife. For instance, they can't go out into the wild or tamper with any of the animals. Since there are many safe and protected areas for the animals, this will increase the levels of biodiversity. "Ecotourism can definitely contribute to nature conservation. It provides employment for the local communities, so they become less dependent on the forest and when they see the tourists come from all over the world to see their blue-eyed black lemurs they will be less inclined to hunt them." - Lemur Conservation, AECL (Madagascar)

The second aspect is economical vitality. Many countries really rely on money through the income sources

from tourism, and ecotourism is a great opportunity for that. Ecotourism can create numerous jobs locally, such as being a tourist guide, selling food and/or accessories, and providing accommodations. Luckily, money from tourism projects are shared by everyone, and they are going to be invested in the communities who are hosting tourists. This can produce new infrastructure for the community, like building schools for kids, building new roads, facilities and accommodations for tourism. This will be very beneficial for the community's future. According to The Economist, the coral reef diving tourism project invested about 36 billion dollars annually [The Economist]! Also, Brazil has developed a very large business of ecotourism, making it boom with about 7 billion dollars per year! Furthermore, according to the New York Times, Rwanda, a country in Africa, earns 9 million dollars in revenue from tourists, and a million dollars in national park fees every year [Weiner].



Stunning treehouse retreat in Rwanda sets a new standard for ecotourism. Photo credit: Nicole Jewell, InHabitat

Last but not the least aspect is social equity. Social equity is when every tourist has to respect the rights of the local people. The tourists have to respect their local cultures and expand their awareness of conservation. The tour guides have to educate each and every tourist about the values and importance of conservation and wildlife. By being knowledgeable about the region, you can spread the word around to other people, thereby, increasing the awareness. This will result in future generations being more responsible to conserve their communities.

HOW TO MAKE TOURISM MORE SUSTAINABLE

There are many ways we can make tourism more sustainable for everybody. The conventional tourism is inadequate in conserving and protecting nature. For example, if you live in a hotel for one night when you are traveling, it will produce about 30 kilograms of carbon dioxide, which is very detrimental for the environment. But instead, if you use an eco-friendly lodge rather than a hotel, it produces a lesser amount of carbon dioxide that could reduce global warming. Another reason why conventional tourism is very bad is that the tourism industry is the fourth largest source of pollution in Europe. Also, some resorts or tour operations have less than 10% of profit that is left to benefit all the local people. Alternatively, the profit that is left for types of tourism that involve ecotourism will go to a good cause, such as helping biodiversity levels come up to normal levels.

Other actions that humans can do to make tourism sustainable is that whenever you travel, go by train that is powered by electricity instead of going by an airplane that uses fossil fuel. This will reduce the amount of carbon dioxide that goes into the atmosphere, and it will help with reducing the adverse effects of climate change. When you are traveling to a local place, you should only buy local and organic food products because they have more antioxidants, and it creates healthy soil which is very beneficial for the environment. We should educate the general public about the benefits of ecotourism to raise awareness.



The dogs that protect little penguins – Don Donnison. Photo credit: Global Screen, BBC

I would like to quote a creative idea from the movie ‘OddBall’ which could be extended to promote ecotourism. The chicken farmer in the movie trains his dog to protect and save a penguin island from fox attacks. The farmer and his dog prevent the penguin population from becoming extinct. This could be a best example to publish on social media/website which will attract many people to visit this place to watch this unique relationship between the dog and the penguins.

Another way to create more job opportunities for the local community people in their own hometown is to build more educational workshops, learning activities and tourist attractions such as animal centers, botanical gardens, zoos, aquariums and museums. This will be mutually beneficial to both the local people and the ecosystem.

In conclusion, ecotourism is one of the most effective ways to stop the problems we are facing right now in the world. According to The Economist, "We need private entrepreneurs doing conservation work and protecting natural resources as the central asset of their business." - Andrew and Marit Miners (Indonesia). As mentioned earlier in the second paragraph, only 20% of all tourism is Ecotourism and that needs to go up very promptly. The problem of climate change is getting way worse than ever before. So, by making Ecotourism much more popular and accessible, the impact of climate change will not only decline, but will also make people more responsible. If we want to become more kinder, greener tourists, we must act NOW!

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Earth Day Cleanup

Forge Pond Westford, Massachusetts, USA



Aashrith Ram, Earth Day 2022. Photo credit: Thripura Venkataramani

Ecotourism Around the World



Zachary Ouellette (17)
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Humans have done some amazing things advancing science and technology through innovation. Scientists like Thomas Edison invented the light bulb and Albert Einstein discovered that nuclear reactions could be used for generating electricity. Inventors like Karl Benz invented the automobile and the Wright brothers built and flew the first airplane. While these scientific inventions and discoveries have improved our lives, they have come at a huge cost. A higher consumption of coal and gasoline to generate power and a rise in automobile and plane travel have resulted in increased pollution of the atmosphere and global warming (“Responding to Climate Change”). Deforestation, which occurs during urbanization, is destroying a vast population of plant species and animals that live on trees; in fact, humans have cut over three trillion trees (“How to Save Our Planet”). In addition to habitat loss, hunting is another reason why many animals are endangered. The rapid pace of human technology advancements has had a huge negative impact on nature by depleting Earth’s natural resources and endangering many species of wildlife. Therefore, we need to create a future in which the balance between humans and nature on earth is even. To create a better future where humans and nature thrive together, we need to control climate change and global warming, end deforestation, and protect endangered animal species. In addition to these

mitigating strategies, we also need to accept the unavoidable effects of climate change and adapt accordingly.



A network of access roads on former orangutan habitat that is now a palm oil concession in Indonesia. Photo credit: Ulet Ifansasti / Greenpeace

We need to control and limit global warming, deforestation and hunting as mitigations to increase the longevity of Earth. Global warming is caused by increased greenhouse gas (such as carbon dioxide) emission from burning fossil fuels like coal, gasoline, and oil. Global warming is believed to be a leading cause for climate change and is one of the biggest threats to life on earth today. “The Earth’s global average temperature has increased by 1.9 degrees F since 1880” (“Temperature: Why is Earth’s”). Though this may seem insignificant, these few extra degrees are melting the polar ice caps, causing sea levels to rise. When sea levels rise, coastal cities and towns may get flooded, destroying life and property. Melting polar ice caps also results in habitat loss for polar bears and other animals, causing them to become endangered species. Deforestation also leads to increased carbon dioxide, since plants take in carbon dioxide and give out oxygen (Schwartz). Another severe outcome of deforestation is the destruction of many animal habitats. If we cut down all the trees, these animals have nowhere to go, causing some species to go endangered, and even extinct. In addition, animals are also becoming endangered and extinct from hunting. Humans hunt animals not just for food, but for other resources. For example, tigers and leopards are hunted for the patterns on their fur that people use as clothing to wear. Therefore, we need to act with urgency and take measures to

regulate global warming, eliminate deforestation, and limit hunting to protect the future of our planet.



Tusks from over 6,000 illegally killed elephants will be set alight in Nairobi national park to highlight the poaching crisis. Photo credit: Ben Curtis/AP

There are some critics that do not believe in global warming and climate change and many who believe that hunting is necessary for food and survival. People often say, “how can global warming be real if it is so cold outside?” This is a misperception, because the temperature on a certain day is not reflective of the Earth’s global temperature. Others might argue that fossil fuels are essential for most people in the world to have access to electricity. While that may be true, there are alternate renewable sources of energy such as solar, wind, and hydroelectric power that can supplement fossil fuels and reduce the carbon in the atmosphere. Electric cars are another recent innovation that can reduce the consumption of fossil fuels. Transitioning to renewable sources of energy could save the global economy 160 trillion dollars in climate change costs by 2050 (Ellsmoor). Another claim is that deforestation is not as important as climate change; however, they are connected. If we had no trees, we would eventually die because there would be no way to ‘recycle’ the carbon dioxide we breathe out. With the increased global population, humans do need to consume plants and animals for food. However, destroying animal habitats to build roads and cities, driving grizzly bears to extinction or poaching elephants for their tusks is not required for human survival. Despite what critics say, climate change, global warming, deforestation, and the growing list of endangered animal species are serious concerns and must be dealt with immediately.



Composting the food waste. Photo credit: Google images

We need to implement mitigation strategies to bring back the balance between people and nature. We can start by creating awareness of the damage we are causing to Earth. “Despite increasing awareness of climate change, our emissions of greenhouse gases continue on a relentless rise” (“Responding to Climate Change”). Reducing dependence on fossil fuels and planting more trees can reduce the carbon dioxide levels in the atmosphere. We can also help by conserving natural resources. Simple acts such as conserving water and electricity, recycling paper and plastics, and reducing food wastage can go a long way in protecting the Earth. Composting foods can help reduce the amount of waste that ends up in landfills. Adopting a few manageable acts to mitigate the risk of climate change can save our environment.



11 facts about global warming. Photo credit: Dosomething.org

In addition to mitigation strategies, we also need to have an adaptation strategy where we prepare ourselves for the future harmful effects of climate change. “Since 1870, the sea levels have risen by about 8 inches” (“11 Facts”). Coastal towns and cities need to plan for potential flooding from rising sea levels. Some other adaptation strategies include managing risks from severe disasters, planning for reduced water

availability, and developing crops resistant to extreme climates (“Responding to Climate Change”). Finally, we need to take more steps to protect endangered birds and animals by preserving their natural habitat. In order to safeguard the future of the Earth, people need to not only find ways to limit future damage to the environment, but also prepare for future adverse impacts of climate change.



Animals that went extinct in recent times thanks to humans (Reddit). Photo credit: Art by Gabriel Ugeto

Scientific innovations over the past several decades have improved the overall quality of life for people. However, these discoveries have also damaged the environment and created an imbalance between people and nature. Global warming caused by fossil fuels and deforestation, as well as extinction of various plant and animal species through the destruction of their natural habitats are examples of how people have affected the environment. Further, human acts such as hunting have endangered several species of animals. We can reverse these trends by taking simple steps to conserve and protect the environment. In addition, we need to plan for a future where we can survive the harmful effects of climate change. It is highly important we accept the reality of climate change and take immediate action to create a future where humans and nature can thrive.

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Species. Habitats. Success. **Home.**

“All species need a healthy habitat to thrive. Humans can create their own habitats and have a potential to thrive only if we believe all habitats need to thrive.”

- DR. HIREMATH



Profits on of Rich Nature



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For decades, traveling to rich, nature filled areas has been a popular activity for a family to enjoy. But now, the world's natural environments are hurting, animals are going extinct, coral reefs are being destroyed and natural areas aren't being preserved. Now that the world is suffering is more obvious now, more and more nature conservation organizations are coming forth to protect what we were destroying. They follow the ideal of ecotourism, Ecotourism is described as being a responsible way of travel that continues to preserve the protected area and animals that inhabit the area. Many companies and resorts found really efficient ways to preserve the environment while creating a living off of it. Three key ideas that companies can apply to their communities is they can conserve and protect the area around them, use the local community to spread awareness, and that their priority is always the land first, people second.

Many organizations are fighting for our planet. They create government protected areas from illegal hunters, they create awareness of the problems that surround us all. What some organizations found is that there is profit to be made all the while protecting their beloved land and ecosystem. The narrator of the documentary Can Tourism help save the oceans says a very important idea that many companies should follow. The narrator states, "If every private enterprise cared about the backyard the world would be a better place" (Can Tourism

Help Save the Oceans, 00:01:01). This is a prime example of how tourism can help organizations preserve their land. The tourists bring in money while spreading awareness of the delicate ecosystem they are visiting. A prime example of tourism money being used to protect areas is the lemur conservation team in Africa. Because of the attention from tourism, this area is now protected by not only the organization, but is now a protected government area where it is illegal to kill the animals living in the area. The blue-eyed lemur is a very endangered creature, on the brink of extinction that inhabits the land. Ever since tourism has created awareness, the lemur population grew from a 1000 on the land to 4000 (Lemur Conservation and Ecotourism in Madagascar 00:05:40). Because of the tourism in the area, the lemur population was able to increase, although the number of lemurs is still significantly small, as long as the conservation team continues to take care of their backyard, the blue-eyed lemur population will grow and thrive.



Misool Eco Resort. Photo credit: Tobias Zimmer

Although protecting the environment can bring profit, there is another way to make more money also while protecting the environment. A very clever idea was created by the Misool resort co-founder, Marit Miners. She came up with the ingenious idea of hiring the locals to help preserve the resort while also preserving the ocean's ecosystems. The most common job title given to the locals is the game wardens, their job is to protect the no fishing zones from illegal poachers and fishermen. One of the locals named Ahmad "has gone from catching fish to catching fisherman" ("Can Tourism Help Save Our Ocean" 00:03:50). The people of the lemur conservation team also followed the same ideas. They hired locals to join

their organization and help protect the delicate ecosystem that the lemurs inhabit. This is a really clever idea because they supply for the locals and provide for them all the while creating an alertness and awareness for the locals that live in the area.



Solar panels. Photo credit: Richard Komp

The final way of creating a profit and spreading awareness of the area is putting the delicate ecosystem first then the tourist afterwards. Although tourism is very important for many big organizations that earn money off the land, the land is their main priority. Some things companies can do for tourists while also keeping the environment safe is using eco-friendly power (Ecotourism, a Sustainable Way to Travel, 00:03:40). Power techniques such using solar powers and wind energy. These are power efficient methods that are friendly to the environment while not disturbing the environment. Solar energy is efficient because it doesn't rely on any power source that would interfere with the environment, it converts the sun's UV rays into energy through flat screens called solar panels, the earth actually intercepts one hundred and seventy-three thousand terawatts which is plenty easily enough to power a resort (How do solar panels work? - Richard Komp, 00:00:13). Another method to not disturb the environment is also preserving the local culture and religion. This is just as important as preserving the ecosystem. The locals are considered parts of the area, they are just as important to the area as the animals that inhabit the land. If the locals are preserved and their lives aren't negatively affected by tourism, they too can help preserve their lands while continuing with their lifestyle.

There is no denying that our earth is suffering. Global warming is not only affecting humans, it affects all the delicate ecosystems that thrive on our planet. Species are going extinct, animals are losing homes to deforestation, animals are being illegally hunted etc. But many organizations are coming forward to attempt to fix the problems without the world. Many organizations and companies are creating eco-friendly resorts where they devised a clever way to not only benefit from the preservation of the land, but also make a profit off of the ecosystems of the land. Many techniques were created and used to their benefit like hiring locals to help preserve their land, creating eco-friendly energy that can only positively impact the environment and making their main priority protecting the land first before the tourists that come to visit the organizations home. Forget about the profits, if all companies protected their backyards and protected the animals and inhabitants, the world would be a better place full and rich of life.

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The Environment, Behind the Scenes

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The great film director Martin Scorsese once said, “Movies touch our hearts, awaken our vision, and change the way we see things. They take us to other places. They open doors and minds. Movies are the memories of our lifetime.” There’s a lot to dissect from this brilliant formation of words, but one message is clear, film has a way of sending messages to a broad audience. But what’s an important message to send? The Earth is dying due to those who inhabit it, and the cause of saving it is going to need all the support it can get, that’s the message that films can send. While spreading the word about protecting nature and wildlife through cinematic themes as well as practicing environmentally conscious filmmaking strategies, movies can also help muster economic support and simple lifestyle changes to various communities across the globe by inspiring viewers to visit different locations across the planet and appreciate the beauty in nature all around the world.

Every film has a message, some may not seem like it, but there is always a statement that the director is trying to make, even if they don’t know it themselves, and an important argument found in some films that is very much necessary in today’s world is the conservation of nature and wildlife. If one were to think about a film that teaches the importance of preserving nature there is a high likelihood that they will picture the hit Pixar film, Wall-E. The movie is set in the distant future and follows the journey of the trash picking robot coincidentally named, Wall-E. What sets this future apart from the present world is that humans have abandoned the Earth following the death of all plants due to the unhealthy business practices of the large corporation known as Buy N Large. Wall-E’s job is to clean up the garbage left behind by the humans as they themselves cruise through space on a large spaceship stuffing their faces and growing unhealthier as they are waited on every day by advanced technology and robots. The spaceship is meant to orbit space until there is proof that Earth can sustain life, and Wall-E has discovered a plant on

Earth. After the humans discover that there is plant life on Earth, the captain of the ship realizes that the culture and life of Earth is important and that they shall return to Earth and preserve nature (“WALL-E”). The film depicts a bleak future for the world, one that is definitely possible. The portrayal of this decimated planet along with the unconformably looking “comfortable” life of the humans in space is not simply meant to scare audiences, but rather provide them with a warning, one that is telling them to be careful with their actions of today in order to prevent this kind of future tomorrow.



If a lonely robot saved the planet. Photo credit: WALL-E

There is no doubt that the filmmaking industry is one of the largest money makers in the world, and when numerous corporations are involved in the production of various movies, one can see that this could lead to problems for the environment, so companies are working towards environmentally safe practices. In the past the process of making a movie has not been environmentally friendly. Millions of dollars are sunk into the production and it goes towards unhealthy habits such as wasting materials to build sets that will be destroyed after filming or the ludicrous amount of gas used up while filming a chase scene or simply getting from one set to the next. Luckily for the environment a group of the largest corporations in the industry have come together to create the Green Production Guide, a database meant to promote environmentally conscious filming practices. The partnership is made up of Disney, FOX, Amazon, Netflix, and many others. The main tools they provide are the Production Environmental Accounting Report and the

Production Environmental Actions Checklist. The former focuses on calculating a production's carbon footprint and the latter details the best practices for each department of a film production ("About the Green"). One example of these kinds of eco-friendly practices being used in actual film production is with *The Amazing Spider-Man 2*. With this project Sony and the filmmakers aimed to make it as eco-friendly as possible and they succeeded, even as far as getting Hannah Minghella, the President of Production at Sony Pictures to say, "The Amazing Spider-Man 2 is the most eco-friendly blockbuster in the history of the studio" ("The Amazing" 00:00:05). They implemented many new procedures in order to accomplish this feat. To start they reused past sets and rented out new ones in order to prevent the unnecessary waste of materials that would be used to build then destroy a new set. In addition to reusing sets, they carefully designed the backdrops for any of the city shots to feature billboards that promoted eco-centric messages. Finally in terms of set design, for one scene they filmed on location at East River Pond which had previously been damaged by Hurricane Sandy. Following their shoot, they replanted trees and cleaned up the place in order to leave it better than how they had found it ("The Amazing" 00:00:36 - 00:01:12). Nowadays special effects play a large part in the making of a blockbuster, and when CGI is not involved filmmakers have to use practical effects, for this movie they were able to in an environmentally safe way. All of the fake snow that was used in the shooting was biodegradable and all of the fake smoke was water based which means that no oil was involved ("The Amazing" 00:01:19 - 00:01:32). By implementing these environmentally safe film practices, large corporations are able to simultaneously entertain millions of people while also saving the Earth.



Spider-Man Filming at East River Park. Photo credit: Google images

While saving the planet and the environment are both important and demanding tasks, helping out local communities is also a job that filmmaking is capable of accomplishing. Before discussing major motion pictures and their impacts on local communities, let's dive into a field similar to filmmaking and see how photography can help local communities. Kyrgyzstan is home to a variety of unique and distinct animals and plants found exclusively in the country. In the past, locals have hunted these innocent creatures for game and other purposes, but in recent years due to conservation efforts, some locals have made the switch from harming to photographing these special animals. Mark Bogan is a director of photography and has been working with locals in Kyrgyzstan to photograph and document wildlife ("The Future" 00:13:00). By taking pictures of these animals the photographers are able to earn money and set up future ways of accruing money, much more than poaching could have gotten them. For starters they could simply sell the photographs online to be used for a number of purposes from posters to advertising. Speaking of advertising, by posting these pictures across the internet various users from around the world are able to experience the beauty of these creatures, some may be so impressed that they'll want to travel to Kyrgyzstan and observe the wildlife first hand. A tour guide working in the nation even recalls a message that one tourist told him, "You have a beautiful land and I hope and beg you to protect it and keep it the same as now, and pass it on to future generations" ("The Future" 00:14:41). Now, back to the main

focus of this essay, filmmaking. The industry is recognized worldwide and as such, no matter where a film is produced it can easily garner critical acclaim from the masses across the globe. Because of this, when a movie does well viewers may be inclined to visit key landmarks from the film, and there is no greater example than Peter Jackson's, The Lord of the Rings Trilogy. The film franchise has made well over billions in sales and coincidentally features a massive and dedicated fanbase. All three films were shot in New Zealand and took full advantage of the nation's beautiful landscape to bring Tolkien's writings from the original books to life. Following the releases of the films, fans were ecstatic over the idea of visiting New Zealand to check out the major landmarks from the films such as Mount Doom and even walk the path to Mordor like Frodo and Sam. As a matter of fact, following the films' debuts New Zealand saw a 40% growth in the annual influx of tourists from 1.7 million in 2000 to 2.4 million in 2006 ("Tolkien Tourism"). Bruce Lahood the US and Canada regional manager for Tourism New Zealand has even been quoted as saying, "You can argue that Lord of the Rings was the best unpaid advertisement that New Zealand has ever had" ("Tolkien Tourism"). This is just one example of films being able to promote the beauty in nature of various countries all around the world.



If a lonely robot saved the planet. Photo credit: WALL-E

Without a doubt the film industry is mainly used to make money, while at the same time entertaining millions upon millions of people. Because of this the practices that go into making films can sometimes be harmful to the

environment or wildlife, but there are steps taken in the right direction. Corporations are now realizing that the nature of the world is important and are implementing the right procedures in order to protect that beauty. And while they're educating and practicing environmentally friendly production, they are also helping spread the wealth to possibly smaller and lesser-known communities, one's that could also learn from the environmentally conscious initiatives. In the end, watching a movie is obviously a fun time, but it's also important to take something away from them, see the message that the director is trying to tell and implement that into one's own life.

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Keeping Stratton Hill Wild



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Stratton Hill. Photo credit: Colby Murphy

Conserving land and preserving wildlife can help local communities as well as the Earth as a whole. Recently there have been plans put in place to build a new neighborhood in Ayer, Massachusetts. This neighborhood is supposed to reside right on top of Stratton Hill. Stratton Hill is a substantial amount of land in a wooded area in Ayer that is home to many endangered species. One of those species is the bald eagle which is the national bird and a widely known symbol for the United States. If this habitat is made into a neighborhood then a lot of species will lose their home and source of food and will have to migrate to other areas. If local people understand the benefits of ecotourism then they might see why Stratton Hill should remain wild, how they can preserve the land on Stratton Hill, and how maintaining this land can benefit the community and surrounding communities altogether.



Bald Eagles at Stratton Hill. Photo credit: Colby Murphy

Stratton Hill should continue to stay wild seeing as one of the endangered species that live in that area is the bald eagle. Not only is the bald eagle the national bird and a well-known symbol for the United States, but the bald eagle also helps the ecosystem it is living in a great deal. They eat dead animal matter and help with nature's clean-up process. They also keep the animal population steady by eating the slow and weak animals and leaving the healthiest and strongest to survive ("Bald Eagle"). If all of the animals living on Stratton Hill had to migrate it would not just mess up their environment but also the environment around them. There might be more predators in one area or more prey in another area. That could throw off the balance of what was already in place in a certain habitat. The workers who are planning on terraforming the land know that there are endangered species living in those woods. In the environmental notification form for the layout of the neighborhood, when asked: "Does this project site include estimated habitat of rare species?" ("Environmental Notification"). They answer yes, yet people still choose to ruin this land. When also asked: "Is this project in or adjacent to an area of critical environmental concern?" ("Environmental Notification"). They answer yes again. Two serious reasons why this land should not be altered. But people will still fail to see the obvious of how this new neighborhood could be unfavorable to the environment and its endangered species.

Once the local community learns why this land should be preserved then they can start to think about how to conserve the land. One way people can learn how to conserve and

protect is by taking a look at how other communities preserve their land. Kyrgyzstan in central Asia has been thriving off of ecotourism. Ecotourism has kept many ecosystems alive because people will stop fishing or hunting and start helping to preserve the land for researchers or even tourists (“The Future” 00:18:55). Fishing and hunting in illegal areas can befoul the food chain and can contribute to the extinction or expansion of an entire species. Right now the road that is set to be in place is a dirt path that travels along the curve seen on the plans for the neighborhood (“Environmental Notification”). Right next to that dirt path is a nature trail with signs and hiking posts. If they made this area part of the hiking trail it would give locals more to see and learn about. This trail stretches into other towns and could be expanded twofold. Many researchers and photographers could have more land to test or take pictures of with new sights and wildlife to see. Along the road right now, there is also trash that people could help to pick up and make clean again. There will always be more ways to help make this area suitable for wildlife.

Another big question is how does this all benefit the people? Preserving wildlife has been the main focus of why Stratton Hill should stay wild but this should benefit both sides. One way that the community can benefit from this is through a version of ecotourism. In no way is Ayer a big city or vacation spot but many communities surrounding it come to this area because of nature trails here. Many people can come to take their dog on a walk or just go on a peaceful jog by themselves. Also, researchers and photographers can come to take pictures and study animals there like the bald eagle that was previously mentioned. One very insightful quote was from Mr. Baatyrbek Akmatov speaking about Kyrgyzstan; “This was beautiful land, it needed to be preserved so that the next generation can enjoy what we have” (“The Future” 00:14:40). While he is talking about Kyrgyzstan this could be applied anywhere. If the land is not preserved there will be so many more generations that will not have this luxury. Everyone needs to do their part. If they connected this path to the trail right next to it, it would make it more easily accessible for the community. There are many art pieces scattered along the local trail right next to the planned neighborhood. So if people

wanted to display more art that can sustain any weather and does not hurt the environment they could put it on this dirt path already in place and it would give more people a reason to go there. This could also create jobs just like the ecotourism in Kyrgyzstan (“The Future” 00:00:00-00:20:08). The town of Ayer can hire people to help conserve the land and maybe even commission some art or pave a more concrete path for pedestrians. With a little effort, there can be humongous benefits just from these few acres of land.



Stratton Hill. Photo credit: Colby Murphy

Any local community can do their part from big to small to help the environment and their own communities in the same ways. Citizens can address the problems in their ecosystem so they know where to start this journey. Then comes the research stage where they can take a look at other communities with similar problems and see how they benefit from their solutions. After that, they just have to put those plans into action. The benefits will come sooner rather than later and will keep benefiting people for years to come. It is not over yet, conserving and preserving this earth has only just begun.

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How Small Communities can Benefit from Environmental Preservation



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The environment is one of the most important things to our world, and our society. However, in our modern world, it feels as if it has been cast to the wayside. Every year 15.3 billion trees are cut down (Mongabay), and millions of animals are illegally poached (Animal Matters). If no action is taken to stop these tragedies, then one day there won't be any environment for us to call home. However, if the people of our planet work together, there is hope for nature. There are numerous ways in which small communities can take action to save their homes, while also benefiting from the process. Some of these methods include, using renewable energy sources, working to patrol and protect environments that are endangered, as well as practicing ecotourism.



Pittsfield State Forest in Massachusetts (Mongabay). Photo credit: Rhett A. Butler

One-way small communities can help the environment while benefiting from the process is switching to renewable energy sources. Some examples of renewable sources include hydroelectricity, solar power, wind power, as well as numerous other methods. In our modern day, fossil fuels are the leading energy source for a large majority of the population, however it comes with numerous disadvantages. Burning fossil fuels sends a large amount of greenhouse gases into our atmosphere, which are a major cause of global warming. If communities were able to switch to renewable energy sources, this would cease to be an issue. (Tang, Xianqiang) On top of preserving nature, renewable energy sources also are much more long term, and have benefits for the communities that adopt them. For instance, hydroelectric power carries the added benefit of being able to boost water supply, helping with flood control, and assisting with irrigation (Tang, Xianqiang). A specific example of a community benefiting from renewables can be found in the state of California. Thanks to California's Multifamily Affordable Solar Housing, numerous owners and tenants were able to switch to solar energy. "Together, the rebate and virtual net metering allow both owners and tenants to benefit from solar energy by reducing the high up-front capital costs incurred by building owners and giving direct financial benefits to renters in the form of lower energy bills, addressing two common challenges faced by low-income multifamily renewable energy projects" (United States Environmental Protection Agency). Because of MASH, many low-income families who struggled to afford electricity bills no longer had to worry about the expenses. Renewable energy sources are much safer, and can help their local communities in many helpful ways.

Another way communities can benefit from helping their environments is by hiring people to patrol and protect it. A great example of a protection effort similar to this can be found in northwestern Madagascar. Here lives a rare animal known as the Blue-Eyed Black Lemur. This lemur is exclusive to this part of Madagascar, and unfortunately is expected to go extinct in around 10 years, due to its decreasing range. (Lemur Conservation and Ecotourism in Madagascar | 0:00:20 - 0:00:37). However, a new conservation effort has appeared to



Blue-Eyed Black Lemur. Photo credit: WorldAtlas

help remedy this problem. A local group known as the “Park Local Committee” has been working to protect their environment from poachers, fire, and other things that threaten their environment (Lemur Conservation and Ecotourism in Madagascar | 0:04:44 - 0:05:31) However, much of these problems' origins can be traced back to the lack of work in the area. The people in the area poach and cut down trees, selling what they are able to get due to the fact that they aren't able to find work in the area. Luckily the solution to this problem can be found in the very people working to protect the blue-eyed black lemurs. Research groups in the area that have traveled to madagascar with the purpose of learning more about the animals in an effort to protect them. The research group has been able to hire locals to assist them in their research in a multitude of ways. Some of these include navigation, collecting data, and translating the local language (Lemur Conservation and Ecotourism in Madagascar | 0:05:56 - 0:06:32). Thanks to the efforts of the Park Local Committee, and the local researchers, the locals now have more work, and the blue-eyed black lemur population can be protected, and hopefully can flourish in the future.

One final way a community can benefit from protecting their environment is ecotourism. Ecotourism is a form of tourism where an individual travels to threatened environments in an effort to help protect them. One large example of an ecotourism effort can be found in northern Brazil, along the Rio Negro River. Here, many environmentally friendly sites and activities for tourists can be found. For instance, a hotel completely devoid of all electrical



Pink dolphin in the Rio Negro. Photo credit: Tripadvisor

appliances, such as televisions, or phones can be found in a relatively remote location along the river. The hotel also has a complete 360-degree view of the river and amazon forest, which shows how this trip truly is about immersing oneself in the local nature. (Eco-tourism a \$7 billion per year boon for Brazil | 0:00:50 - 0:01:28) This sense of care for the environment also reflects in the activities you can do while on this trip. Many of these activities involve exploring, and experiencing the local environment and wildlife. The Amazon rainforest is home to countless exotic animals, some of which can be found with the people local to the area. During the trip, visitors get to see animals that the locals have captured, such as giant anacondas, caimans, and sloths. (Eco-tourism a \$7 billion per year boon for Brazil | 0:02:23 - 0:03:47). Families that previously gained money by poaching, or cutting trees, now instead can gain profit through tourism. More of the country's wildlife can be found in its waters, such as the famed pink dolphin. Originally these dolphins were a bit of a nuisance in the area, as they scare away fish making it harder to fish, but thanks to ecotourism they can now benefit from them. (Eco-tourism a \$7 billion per year boon for Brazil | 0:04:41 - 0:05:28) Thanks to ecotourism, people can visit the country and experience its vast natural beauty, in a completely environmentally friendly way. It also helps the locals in raising more money for their community.

In conclusion, there are multiple ways in which a small community can protect their environments while also

being able to benefit from it to help their community grow and prosper. This can be achieved through the use of renewable energy sources, local protection and patrolling efforts, as well as ecotourism. While it seems today, we don't hear much good news related to our environment, hope for nature can be found. If everyone can play their part, and help the world be more eco-friendly, the environment is sure to prosper for countless generations more.

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Ecosystems. Benefits. Balance. Home.

“Earth is blessed with a super-ecosystem, an ecosystem of ecosystems, woven with fibers of abundant benefits, dynamic balance, and implicit pact.”

- DR. HIREMATH



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