

**Chapter 1 : Amazon Riverboat Exploration**

*Food for Thought (Earthwatch) by Gillian Standing. A & C Black Childrens books, This book has hardback covers. Ex-library, With usual stamps and markings, In fair condition, suitable as a study copy.*

So, I was doing a little reading online today about finding peace and came across this interesting perspective on the various kinds of peace. The first is inner peace. Peace with yourself through the health of your body, the clarity of your mind, the pleasure of your work, the reciprocity of your loves. Without peace with yourself, you are not at peace. The second is directed upward. Peace with the spirits of your ancestors, with the will of God. If you are not at peace with the supernatural, spiritual world, with the metaphysics of your existence, your peace is incomplete. The third is directed forward: The arrogant Western culture puts the past behind it. The Aymara put the past in front of them because it is the known, the seen, the lived. If you are remorseful, have unpaid debts, guilt, regret, you are not totally at peace. The fourth is directed backward: Anyone who is afraid of what is to come, is frightened of debts to pay, of uncertain employment, or is expecting bad news is not at peace. The fifth is directed towards the left: Without peace in the family, there is no peace. Domestic quarrels, discontent with family members and close friends, take away the feeling of peace. The sixth is directed towards the right: Peace at home serves no purpose if, on the other side of the street, there is menace, malediction, discontent. The final peace is directed downward: If a tempest comes, if the soil dries out or trembles, there will be no complete peace. I wish each reader these seven types of peace based upon the wisdom of the Aymara. But I also hope that, besides the seven forms of peace, you have plans to make them. Of the seven, five depend only upon you and your family, your introspection, your spirituality, your friendships. But two of them, those directed to the right and downward, depend upon your sociopolitical action. They depend upon struggle. If we want complete peace, therefore, we have to act to achieve it. Your right-side peace will not be complete until all human beings have the same chance in life. It is likewise necessary to include in your plans the struggle to protect nature, the beginning of the revolution for sustainable development. Without this, you will not have the peace directed downward, with Mother Earth. Nor will you guarantee the same chance to all generations, leaving future human beings without access to the same legacy of nature. These two plans of struggle are needed to achieve peace with the Earth and with humanity. Without them, you will not have the other five forms of peace either. It is impossible to have peace while there are children without schooling or while there is destruction of the Amazon. How can you not feel remorse while knowing that we have already lost five centuries of history? How can you have peace with the future while knowing that we are tearing our country and the world to pieces? And how can you have peace with the family when your children and grandchildren are asking what you did to prevent the tragedy? I wish you all the seven types of peace and hope that you will struggle for your right to them. Because peace does not just happen, peace is made.

**Chapter 2 : A Millennial Land Ethic: Or What Would Leopold Do Today? | HuffPost**

*Get this from a library! Food for thought. [Gillian Standing] -- Looks at why people need food, the different types of crops that are grown, and the various things that can be farmed - including chickens, cattle, fish and cash crops; also examines the effects of.*

February 16, Food Security in Africa The site in which I initially began my research was the CARE organization website, as it had been brought up in lecture a few weeks ago. Since, the course is based upon food and development with a particular emphasis on Africa and South Asia, I was most interested in finding information on food security. Upon visiting the homepage of the CARE website <http://www.care.org>: Therefore, a topic relating to this specific area seemed of particular interest to me. In addition, a link was found at the bottom of the page as a way to learn about the different projects being implemented in specific African countries. This led me to a page with an alphabetical list of African countries, in order to find out more about the CARE programs in specific African countries <http://www.care.org>: I chose to focus on Zambia, as it has personal connections, as was mentioned above. Thus, clicking on the link for Zambia, led me to a page devoted to the way in which CARE has been working in this country to help the people recover from food shortages during and after droughts <http://www.care.org>: However, more recently the CARE organization has been helping the people of Zambia to implement various programs that will help them in numerous ways agriculture, health, education. Thus, many projects were listed for Zambia. This led me to a page that discussed the ways in which CARE has been aiding the people to perform more sustainable agricultural practices <http://www.care.org>: On this page the CARE organization states that they work with farmers in the area by introducing new agricultural techniques, seeds, techniques for animal husbandry, in order to increase the amount of crops and animals a farmer is able to obtain, without harming the environment. I found this interesting, as it correlates to the issues we have been discussing in lecture for the past few weeks. The SADNET program, according to the website, has been established in order for information, seeds, and marketing strategies, etc. Thus, in this case, according to the CARE organization, they have been trying to help the people of Zambia maintain their rights as farmers, without seemingly stripping them of the seed and land rights, but ensuring that they have equal rights and opportunities to provide for themselves, as well as for the production of an income. However, in my opinion, I must question how successful these endeavours have been within Zambia. The CARE website seems to indicate that all the programs that have been implemented have been entirely successful. This seems too good to be true. Especially when they described the way in which they have implemented new techniques for farming, new seeds, etc. Also, one must question the range of impact these programs have had upon the entire country. The website never really went into detail about the exact areas within Zambia that these projects were being implemented. Therefore, it was hard to tell the true outcome and effectiveness of the programs being implemented, as the written material on the website was very brief, as well as the extremely optimistic descriptions and pictures that were used to depict the success of the programs that are currently being used within Zambia. Therefore, the website depicted a lot about the issues of food security within Africa, in specific within Zambia. However, the information that the reader is exposed to seems to be biased, in the way that the CARE organization promotes their programs as being flawless, in order to have a link at the bottom for donations. Thus, one must question the true success of these programs outlined by the CARE organization, in order to fully understand the success of the organization in the projects they have implemented worldwide. In conclusion, these were the findings I came across when searching about food security within Africa. Journal Entry 2 By: Mary Gallicchio Water as an Agricultural Commodity In doing this second journal entry, I was not entirely sure of the direction I wanted to pursue or which topic I wanted to focus on. So, I began a search by going to the IDRC website, as this organization had come quite a few times in lecture. I decided to look into this organization. Once at the homepage, there were so many different categories of topics to choose from. This took me to a new page <http://www.idrc.org>: Thus it is an extremely vital resource and it struck as odd that all this time we have been talking about these issues, the subject of water quality, availability and usage never occurred to me as being a crucial component, especially as I am a Geography major, who interest is in the area

of natural resources. Thus, the issue of water seems to be an ideal discussion topic, in order to further understand food production, distribution, security, as well as the affect upon human health and well-being. Thus, in researching the topic of water within the FAO website, I was surprised to find how many links there were for this subject. Within this article, it depicts how water was once thought of as a renewable resource, with an unlimited capacity to provide for current and future generations of population. However, more recently, it has been found that a very small percentage of water on earth is in the form of freshwater most of which is locked up in glaciers and this percentage is decreasing due to our overuse and exploitation of this natural resource. Thus, there is increasing competition and demand for this precious resource, but not enough to go around. What FAO proposes is to do is to value water according to its economic, as well as its social and environmental importance as a natural resource need by humans to sustain life, as well as source to produce food. Thus, water is the most important resource to people within the developing nations, as a source of food security growing crops-irrigation , income in order to grow crops to sell and health. Another link found within the FAO website, was one that provided a guided tour about water and its importance as a natural resource, as well as its importance to food security and sustainable development [http:](http://) On this web page, there were graphs depicting a comparison in water use between developing and developed countries. From this guided tour, I found that water is used the most in agricultural practices both within the developed and developing nations. In comparison to the developing countries, the developed nations use a higher percentage of water for industrial purposes than for domestic and agricultural purposes. Thus, water is crucial to food security. Without access to water, such as due to droughts, or having to travel far distances to fetch water, as well as the lack of an irrigation system, people suffer higher rates of malnutrition and are not able to produce enough food to sustain their families, let alone produce some sort of income. But how is water managed in order to ensure that individuals living within the developing nations will be able to continue to support themselves through agricultural practices? Within the guided tour, they emphasize the role technology in improving water practices for agriculture. Thus, the organization is attempting to adapt better solutions to the environment and people, rather than implementing solutions that are incompatible with the people and environment within developing nations such as Africa and Asia. One technique that they use is to direct the flow of rainfall water to the area in which they are growing crops. As well, they collect water and prepare reservoirs before dry seasons, so that they are unaffected by drought. Thus, the conclusion of the guided tour indicates that water availability is still an issue that has not been resolved. However, something must be done soon, to help establish sustainability between water and agriculture, as population is continuing to increase. Other links that helped to generate these points include articles from the World Water Forum [http:](http://) Finally, one may wonder is something can be done in order to convert saltwater into freshwater that can be used for agricultural processes. This has been considered by the FAO, but it is extremely expensive, as the water has to be processed before it can be used for agricultural practices. Although there has been increased technology and success in this area, in which prices have dropped and may continue to do so. Therefore, the use of saltwater may actually become a viable route for agricultural practices, in order to preserve our freshwater supply and maintain drinking water quality [http:](http://) In conclusion, as has been demonstrated, water is a vital resource in the performing agriculture practices, as well its importance to humans as a source of nutrition drinking water, food , and its importance as a way of producing an income. Therefore, sustainable practices of water conservation must be implemented in order to use the water without exhausting the resource. The FAO website was highly detailed in the analysis of water and has many different conferences, as well as projects within many different countries to help the inhabitants achieve sustainable development and food security [http:](http://) Therefore, in discussing development and agriculture within developing nations, an analysis of water and its importance to the livelihood and well being of individuals living within developing countries, is crucial to the understanding of issues such as irrigation and climate, which correlate to the ongoing issue of food security and development. Journal 3 March 15, Gender Relations and Food Production In thinking about an essay topic, I was considering the idea of gender relations within the developing nations associated with food production and security. Therefore, I decided to search it within Google, using the terms gender relations and developing nations. I came across a few publications that were very interesting. They were apart of the FAO Food and Agricultural Organization

Document Repository, which contains various documents that have been published with regards to development initiatives worldwide. This makes development information extremely accessible and is very useful in providing information with which to analyze a given issue of concern. The links for the publications are [http:](#) In this article, it describes how overall, there are expectations of an increase in food production and security within developing nations, reducing the level of starvation, hunger and malnutrition. However, it states that countries such as South Asia and Africa will not improve greatly, as they are agricultural societies that rely heavily on the importation of food. Thus, they are not self-reliant, depending too much on developed nations for the supply of food. As well, they do not have high levels of purchasing power or access to food within their own countries. Structural Adjustment Policies SAP seeks to increase privatization and reduce the boundaries of the market, as well as reducing social services. However, according to the FAO, this would allow food prices to rise tremendously creating great difficulty for people, particularly women, as they must provide their own services to their families without the means to do so. This article then makes reference to the way in which the privatization strategies harm the poorest people, namely women. Therefore, this article does not provide much detail about the specific gender differences that occur. However, it does provide a general overview and touches on the causes of inequality, with more of a focus on the economic and political aspects of food security and production. As well, within the developing nations, women are the main labourers in the agricultural domain and thus would be mostly affected by industrialization and commercialization. They are also the main domestic providers, in which they must tend to their family. Thus, if social services are removed health care, employment, they become less empowered and must work harder to provide these services for their families, in addition to sustaining themselves through the production and consumption of food. Women are then put at a greater disadvantage and are not able to focus on producing food, thus this process suffers. Therefore, this article provides beneficial economic information about developing nations. The second link [http:](#) These publications complement the first article, as they examine the roles of both men and women within a developing nation, in order to manage biodiversity and ensure the security of food. Within these reports, the authors describe how men produce food in order to sell it for a profit. Whereas, women produce food in order to feed their families. Whereas, the men grow crops that are known to the developed nations, in order to purchase. Thus, the FAO, as well as the IDRC have implemented a few projects within Asia, with which to combine the efforts and roles of both men and women, in order to achieve sustainability. This seems to be a better explanation of gender relations and seems to represent an equality-based strategy, with which both men and women are considered as playing a role in their financial and nutritional security. Although, there are problems for women to prove their knowledge publicly, based upon the culture. This therefore, makes it hard to take into account both gender roles and how they work as complementary sources of food production. Thus, the theoretical ideas to use both kinds of knowledge prove to be an appropriate strategy. However, the implementation may not be as easy due to the way in which gender roles are viewed by the people themselves and their culture, as well as their ideology of gender and women within the food production sphere of society. Thus, these approaches, as well as the way in which the information was presented seem to be an improvement upon the first article discussed, however it too has issues that may arise and hinder the successfulness of such developmental projects. In conclusion, gender relations within developing nations greatly affect the level of food production and food security that may be experienced. However, the problem with the way women are viewed within their culture may greatly hinder their ability to improve sustainability. Thus initiatives must be implemented with which to empower women, within their own societies, so that they may have an equal contribution to improving and sustaining their food security status, as they have the potential to do so. Journal 4 March 29, Sustainable Fishing In choosing a topic for this journal, I decided to follow the instructions within the course outline and link the final journal entry to a topic discussed within the final weeks of the course. Therefore, as I did my presentation on fisheries and its usefulness to my essay, I decided to further research the area of sustainable fishing within developing countries South Asia and Africa.

### Chapter 3 : Whistling Up The Road: 7 types of peace

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I mean real, hands-on, getting your cuticles data-dirty analytics. Making commerce better is a perfectly good thing to do. Commerce matters to all of us. We could live without essays. You can check out Earthwatch here at Earthwatch. I love everything about what they do and the way they approach it. I love the science part, which is fascinating. And I love the approach, that assumes we are at our best when we do good not from ideology, which is often cold and artificial, but from passion. Even more, that worthwhile commitment comes from passion tempered by knowledge. We all realize that knowledge without passion achieves little. But passion without knowledge more often does harm than good in our complex society. So Earthwatch provided us six years of data on their expeditioners folks who volunteer to take field trips to support their scientific endeavors, their donors, and the intersection of the two, and let us have at it for day. They asked three big questions: Great questions all, but a lot to ask of a five-hour day. We pre-loaded their data into Tableau, and after a brief context-setting presentation from the Earthwatch folks, we split up into groups with each group drawing a single question. Each group produced a full-on dashboard and spent some time answering the questions. One of the great challenges for many non-profits is the split between what you do and those who pay. In the traditional enterprise, good products and service make your customers happy and willing to pay. So the challenge and the opportunity is how to connect donors to the mission. The mechanism for doing that at Earthwatch is the expedition. Hands on participation in an Earthwatch expedition is by far the best spur to giving they have. So one of our groups focused specifically on the relationship between expeditions and giving “and what they found was fascinating and unexpected. With only age, gender and zip code to work with and that data obviously spotty with null values dominating each demographic category, the options for look-alike or advanced targeting are fairly minimal. However, even with such thin gruel, there are findings to be had and analysis to be done. Graph donors, and the left-hand side of the horse-shoe the teenagers go away. There were two other points that emerged from simple graphs of donations by age and donation amount by age. Earthwatch gets lots of donations from seniors. Forty and sixty are big inflection points. They are times when almost all of us step outside the lines for at least a short while and think about the shape and nature of our life. The combination of some key interest variables and a big birthday might be enough. Targeted marketers know the importance of magic moments, and the finer-grained you can make them, the more efficient you can be. For a non-profit like Earthwatch with tiny marketing dollars, the tighter you can draw the boundaries around a magic-moment, the more likely you are to be able to use it effectively. Thinking about that donor curve also makes plain how important both patience and a long-term strategy are to a non-profit like Earthwatch and maybe to a lot of for-profits as well. Earthwatch has been around for a long time. That means some of their early expeditioners are retirees now. If you can keep track of people for twenty, thirty or forty years, you have an opportunity to re-ignite those connections. When they have teenagers themselves, they are the right audience to target for expeditions and donations. This long term view seems hard. But if they can create mechanism to stay in touch till those graduates hit forty, fifty and sixty, that is worth a lot. Social media is, of course, a great way to do this. And facilitating social media connections with volunteers ought to be a long-term strategic goal for any non-profit that engages with young people. Just looking at the shape of the donor and expeditioner curves can help inform strategic thinking. From a more tactical standpoint, we also looked at the relationship between their new membership program and repeat giving. Earthwatch has bounced back and forth a bit on membership, but they currently are focused on it. More interesting, however, was the impact of membership on donation pattern and stability. Did they give less or more? Going back to the shapes of curves, the team that looked into the relationship between giving and expeditions found something truly interesting. What they found was kind of a shock. Not much giving ahead of time, a short latency period after the expedition, then a sharp hump followed by a quick decline and a long slow descent as the halo from the trip gradually dispersed. Much of that is exactly what they found. The shocker was on the other side of the

curve. The pre-trip donation amounts were quite a bit smaller on average, but the number of donations was almost symmetrical. I would never have expected that. Apparently, when people are getting ready for an expedition they are also in the mood to make a donation. Their donation solicitations are not at all focused on the pre-trip period. The third team looked at the behavior of expeditioners. Their initial analysis focused on when people book an expedition versus the type of expedition. It turns out that there are some pretty distinct types of trip. Expeditions to Africa are usually booked a long time in advance. Expeditions in the US and places like Costa Rica are more typically booked months in advance. There are seasonal impacts as well, with most expeditions getting booked in the spring to take place over summer. You bet it is. But that trip to Costa Rica still has plenty of runway. Finally, that team looked at the impact of discounts on cancellation behavior and which expeditions were most cancelled important from a planning perspective. This might indicate that some discounting is economically beneficial – even it drives no initial lift. Still, we had a lot of fun doing work we genuinely enjoy for an organization that truly matters. Are there some big takeaways about analytics from our one-day Hackathon? Most of them are things we all should know. Earthwatch helped make the process more productive by coming to the table with three real and fairly concrete problems. Knowing the questions you want to answer is the single most important step in any analysis. Limitations on the data place real boundaries on what you can do – not only with analysis but with the fruits of that analysis in targeting and personalization. The team that started by focusing on the impact to donations after taking an expedition ended up talking much more about the impact to donations of planning for an expedition. People do donate after going on an expedition. But they had the imagination and sense to see that a more interesting hypothesis emerged from the data. Problems like the cohort analysis of membership or the impact of cancellation really required statistical analysis tools with more horsepower and more data manipulation capabilities. Still, the ability to quickly explore a data set across many dimensions is wonderful and the utility of that ease in the right hands is hard to overestimate. Finally, the biggest part of any analysis is the imagination to map the data to the business problem or opportunity. They are more often sparked by simple views and cuts of the data line graphs or bar charts that make obvious some fundamental fact about the business. Either way, it makes for a better strategy and more confident decisions. Finally, one last plug for Earthwatch. What they do is important and, often, very cool check out that Barrier Reef diving expedition.

### Chapter 4 : food for thought

*To create and raise awareness around just and sustainable food - that is our mission. Our founding passion is focused around social and environmental justice, meaning we care about where our ingredients come from.*

Wednesday, October 30, Thank you, Earthwatch! With the end of October comes the tapering off of rainy season. We provide them with food, accommodation, extensive training, and a whole list of chores while the elephants provide the dirt with enthusiastic aplomb. Our research site, on the other hand, benefits not from the quantity of volunteers, but the extraordinary quality that Earthwatchers inevitably seem to bring to the table. And so, in honor of the men and women and wonderful teenagers from the Los Angeles Zoo! Research can be more efficient: We can run more elephants through our experiments each day without leaving ourselves exhausted and useless in the afternoon. Earthwatchers ask thought-provoking questions: They keep us on our toes and bring in a fresh perspective, framing a problem in way we had never considered. Being able to watch the elephants interacting from multiple vantage points allows for greater accuracy, but it also requires the increased number of sharp eyes that Earthwatch volunteers provide. Behavioral Observations Photo Credit: Fresh pairs of eyes and ears: Earthwatchers bring in new viewpoints, come up with different phrasings and pairings, and can take a step back and view a larger picture when our team may be caught up in the monotonous daily details. Display a variety of talents: From picture book illustrators to accountants, graphic designers to retired high school teachers, every Earthwatcher brings something different. We can pick their brains on potential fundraising strategies or curriculum design, or put them to work creating visual aids for classrooms or social media sites. TEI is a multi-faceted non-profit, and every volunteer finds their own way to contribute. Breaks up the monotony: Earthwatchers are a vibrant group of new faces, brimming with adventures and advice to share, who are exciting even when the exhaustion inherent in coordinating people and animals starts to seep in. Opportunities to work with underutilized elephants: As GTAEF is a foundation that rescues elephants from potentially bad situations, not all of the elephants up here in the Golden Triangle possess the training or temperament necessary for guest programs. Recently, Earthwatchers have been helping us work with Lakheng, a skittish 40 year old who is still learning how to use our equipment. They act as ambassadors upon their return: After an intense, ten day elephant research expedition, our Earthwatchers are ready to spread the message of conservation. They give TEI excellent lip service and recruit other people and organizations to our cause. Running through a vet check with Dr. Cherry Photo Credit 9. We RAs cherish the ten days of Earthwatch for the chance to eat catered meals from the best cook in town. The field of animal conservation is not an optimistic one; each day we face the reality that the creatures we are privileged to call co-workers may very soon become extinct. But the fact that there exists a fraction of people who are willing to donate their time, resources, and passions to our cause renews our hope that we may one day be able to transform human-elephant conflict into human-elephant cohabitation. Our Incredible Teen Team! Elise Gilchrist And so, we thank them! We thank them for the support, the memories, the laughter, and the hope that for every Earthwatcher who passes through our program, there are thousands more like them out there who are willing to listen and ready to act. It was a fantastic year!

## Chapter 5 : Discovering Ancient Societies in Portugal

*Our artisanal products use the best possible, real ingredients - sourced locally whenever possible. We produce in small batches with love and commitment to our farmers, our employees and you.*

It is wrong when it tends otherwise. He was deeply immersed in educating the public and wildlife managers about the fundamentals of ecology, as applied to a Wisconsin deer population explosion. He argued passionately that game management had to shift from a focus on economics and extraction to a more holistic view of the biotic community--one that included ethics and aesthetics and restoring all species, including predators. Since , our organization has been enabling people from all walks of life to join leading scientists working on crucial environmental research. Our mission is to engage people worldwide in scientific field research and education to promote the understanding and action necessary for a sustainable environment. Today, climate change, an exploding human population, enormous global economic challenges, and a more conservative political climate have significantly increased the conservation problems the world faces. Our organization strives to support rigorous science that enables people to take action to address these problems. Most of our Earthwatch staff consists of millennials--the generation who reached adulthood around the turn of the 21st century. They hail from diverse academic backgrounds, but when you ask about their life goals, the concept of sustainability rapidly comes up. In other words, what would Aldo do today? Some of the millennials in the Earthwatch office urged a big-picture approach that puts science and ethics firmly at the forefront. Zachary Zimmerman wrote, "It took millions of years for our universe to engineer something as infinitesimally unlikely as life, and many more to establish a balance between all its forms across the planet. Let us not be so arrogant as to think we are ready to step up to that drawing board with but a few hundred years under our belts. It is impossible to restore, only to nudge creation to start anew. It is right to encourage land that is naturally productive, biodiverse, stable, and integrated with the wider world. This meant eliminating fuzzy words such as "integrity" and replacing them with ecological terms. Elise Begin wrote, "A thing is right when it tends to restore or preserve the resilience, stability, complexity, and beauty of the biotic community. It is wrong when it tends otherwise," and Laura St. Ali Soofi stated, "A thing is cooperative balanced when it tends to preserve the biodiversity, connectivity and natural, indigenous, aesthetic of the biotic community sustainably. A thing is disruptive unbalanced when it tends otherwise," and Jacob Samborn wrote, "A thing is inculpable, blameless, when it neither inhibits nor propagates against the natural selective pressures of the biotic community. To tend otherwise is artificial. Earthwatch millennials give me great hope.

*Earthwatch was founded in and currently supports scientific field research in maintaining biodiversity. food for thought Journal # 5 Ashley Burke.*

In fact, very few fungi cause a nuisance. Moreover, without fungi humans could not exist. Most terrestrial plants obtain their nutrients and water from soil through fungi associated with their roots. Furthermore, fungi are the main garbage disposal agents and nutrient recyclers of the natural world. They are hugely important as food for soil animals and in producing human food, eg Quorn, cheese, chocolate and soft drinks. Fungi produce many "wonder drugs" including penicillin and statins to control cholesterol. Within this vast kingdom of organisms that is so crucial to our very existence, it is hard to single out just one species. However, my choice would be *Amanita muscaria*, the fly agaric. This fungus forms mycorrhizas with the roots of forest trees, providing them with water, mineral nutrients, protection from pathogens and some pollutants. It also recycles dead organic matter. It is used as a food source by some animals, and produces powerful chemicals that may turn out to yield novel pharmaceuticals. This m-year-old collaboration has spawned a rich diversity of species and promoted the rise to dominance of humans. Now the need to feed our burgeoning population, coupled with the agricultural means to that end – a plethora of pesticides, the unabated loss of natural habitat and the translocation of alien species and diseases - are driving wild and managed bee populations into a very steep decline. Bees are irreplaceable and the debate about what might happen if they disappeared is no longer academic. Not only will the world be a much less colourful place, it will also be poorer in every other way imaginable. The effects will be nothing short of catastrophic. Plankton Plankton is a collective term for a myriad of bacteria, viruses, plant-like microbes and small animals that drift at the mercy of the winds and the ocean currents and wind. They are the base of the whole food web that lives in just about any body of water you care to imagine: Temperature extremes hold no bounds and plankton survive being encased in ice in our Arctic and Antarctic oceans and can survive near boiling waters in hot springs. Not only that, but plankton cells can be carried large distance in aerosols in the wind, and some people even believe they can survive in space. They not only fuel aquatic ecosystems, but some release gases that can influence cloud formation and therefore global climate. But apart from how vital the plankton are to running planet Earth, they are simply beautiful to look at. Plankton have been an inspiration to artists and designers ever since the first microscopes were invented, and plankton inspired design can be found on a whole range of scales from buildings to wheel hubs. Many species provide essential services eg, disease control, clean water, pollination and insect regulation, and we are now faced with an agony of choice. Given finite amounts of conservation dollars, which species can we not do without? I present the case for bats. Bats provide a number of these essential services; for example without bats many commercially important crops such as bananas, mangoes, dates and tequila would fail. Insects consumed by bats translate to millions of dollars saved on pesticides. Bats are also indicators of general ecosystem health and monitoring their populations provides us with early warning systems of irreversible damage. Bats also have many irreplaceable traits, they are the only mammals to use powered flight, can hunt and navigate in the pitch darkness using only sonic echoes, provide the imagery of Dracula and the flying creatures of Halloween. Gorilla Monkeys, apes and lemurs must be saved, not just because they share so much DNA with humans although blood is thicker than water, so this convinces many people, not because they are fascinating research subjects though clearly they are, not because they are intelligent social mammals who have every right to exist though arguably they do; not even because primate-watching can form the basis of multimillion-pound tourist industries, creating jobs and lifting rural communities out of poverty. Any one of these would be reason enough to fight for the survival of our zoological next-of-kin, but I would argue that their ecological role as keystone species in tropical and sub-tropical forests is more important. Primate habitats provide ecosystem services we all depend upon – especially absorbing carbon while releasing oxygen through photosynthesis and pumping water into the atmosphere through evapo-transpiration, which drives global rainfall patterns. What most people fail to recognise, however, is that primates sow the trees of tomorrow by dispersing seeds in their dung. If we want

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these forests to be a permanent carbon store, a source of clean water and to regulate our climate in future, we had better not kill the gardeners of the forest today. Free to current Earthwatch supporters, but by ticket only. For all others, a donation will be requested on the door. Doors open 6pm cash bar.

Chapter 7 : Analytics for a (Good) Purpose | Measuring the Digital World

*Food For Thought. Home About Mentions Welcome Menu. Dinner Menu Breakfast Menu Lunch Menu Magic 55 Menu Gluten Free Menu.*

Brett November 14, 0 Comments Supply and demand. That is how most vacation packages are sold. If there are a few openings and a lot of interest, price goes up. If there are many openings and not much interest, price goes down. Earthwatch Expeditions are neither vacation packages, nor tourism trips. But if you want to traverse the Great Otway National Park while conducting valuable research on koala habitats to understand the impact of climate change on their population, you might find Earthwatch to be a unique opportunity. As a result of this difference, the way Earthwatch arrives at cost for its more than 50 expeditions all over the world varies significantly from how the travel sector creates its prices. This varies based on the duration of the expedition and the research being conducted. Typical costs include supplies, equipment, research permits, rent, utilities, and the hiring of local cooks or drivers, as well as food, accommodation, and local transport costs. Tracking Jaguar With a Radio Collar in Brazil Earthwatch costs incorporate much more than a traveler would get from a tour operator. Still, there is an expectation from participants that their contributions should be similar. We are constantly walking an incredibly fine line: Trying to keep the cost of participation accessible to the public, versus not undermining the research itself or the amenities for the public volunteers. In some instances, a portion of Field Grant costs are underwritten by a corporate sponsor or generous donor who contributes money to help fund the expedition costs. Earthwatch must also assure research scientists are fully trained on these measures. The more volunteers who join a project, the more successful all aspects of that project will be – from the team dynamic, to the amount of data collected. For instance, if participants leave a carbon footprint from jet fuel used to travel to an expedition, we offset that carbon by investing in wind farms, biomass energy, or other community projects. New research projects have challenges of their own – and Earthwatch often introduces up to dozen new research projects per year. Since contribution costs typically do not cover all costs related to starting a new project, Earthwatch must actively raise money from other sources to cover set-up costs so they are not passed to our volunteers. I asked Stacey what some of her biggest challenges were when finalizing the budgets with our scientists. Many of our expedition costs are fixed, meaning they are the same no matter how many people join a team. So if fewer volunteers sign up, there is actually greater cost per person. We look at historic volunteer bookings, changes to the research, travel trends, and geo-politics. For instance, if an area gets bad press and the public perceives instability, we will decrease our projections of volunteers. Also, because of the nature of field work, it can be hard to predict costs. This is especially true when costing a first-year project. Project budgets can change quite a lot in the second year. I was curious to what extent. Hopefully, this is offset by programs where we recruit more volunteers than we expected. Potential Earthwatchers can choose from other volunteering options during their time off. The hope is that they recognize that a contribution to Earthwatch has a real impact on environmental questions being asked by researchers all over the world , will provide an experience of a lifetime, and is worth every penny.

**Chapter 8 : - Food for Thought (Earthwatch) by Gill Standing**

*My job at the zoo sends several keepers on Earthwatch expeditions each year, so I've had the opportunity to hear about a lot of the different trips. To me, Amazon Riverboat Exploration is the best one available.*

**Chimpanzees** For a long time, chimpanzees were thought to be absentee fathers, but recent studies have shown that chimpanzee dads are actually very interested in their kids. While chimpanzees are a promiscuous species, these dads still invest time and care into their kids. These dads hang out with the mother of their kids, and spend time grooming and caring for their offspring. They make sure to watch out for their babies, but human encroachment and climate change are threatening their way of life. Many essential habitats of chimpanzees across Africa are being intruded on by human development, limiting the areas that chimpanzees can safely forage and care for their young. Along with limited space, chimpanzees face limitations in how much food forests are producing. In the Budongo Forest Reserve in Western Uganda, the largest area of tropical rainforest that persists in East Africa, fruit production is declining, putting chimpanzees and humans in conflict for resources. Earthwatch volunteers are monitoring this community of chimpanzees, and the forest on which they rely, in the expedition Investigating Threats to Chimps in Uganda.

**A Magellanic penguin** crouches over its egg in the nest burrow. Magellanic penguins typically lay two eggs during the breeding season. Two Magellanic penguin chicks crouch under their parent. Researchers mark the chicks with chalk when they hatch: Eggs usually hatch 3 days apart, so the first chick is usually bigger. A hungry chick begs for food from its parent. The Magellanic and African penguins avoid the harsh cold that is usually associated with penguin habitat, preferring to stick to warm beaches or islands. Magellanic penguins, named for Ferdinand Magellan who first recorded them in , populate the Atlantic and Pacific shores of South America. African penguins, as their name suggests, stick to the beaches of South Africa and Namibia. These penguin dads, like many of their cousins, team up with their mates to raise a pair of eggs. Through the day incubation period, these feathered fathers alternate with their mate between brooding the eggs and hunting in the ocean – traveling incredible distances, sometimes over miles. Penguin parenting is already hardcore, but commercial fishing and pollution are making the job even more challenging. Penguins have to compete with fisheries for food, and much of the food and habitat they can find has been contaminated with oil, lead, or pesticides. These threats make it even more difficult to be a good penguin dad, but Earthwatch volunteers are trying to change the tide. Volunteers in Patagonia are recording the locations and behaviors of these seabirds during their foraging trips to aid in establishing regulations protecting these dads and their marine habitats on the expedition Trailing Penguins in Patagonia.

**Gray Wolves** Male wolves have a reputation for being loners, but in reality, these guys are definitely family men. He keeps the den protected, and, along with the rest of the pack, hunts for elk, deer, moose, or bison to feed mom and babies. As the pups become more independent, dad takes on the role of teacher and mentor, helping them learn to be full-fledged wolves. In the s, wolves had all but been eliminated from North America; however, environmental laws in the s helped to preserve this species and allowed them to re-expand into some of their old territories. Researchers are investigating how several forces of nature, including wolves and fire, are affecting biodiversity and ecosystem functions in Western Lakes National Park in Alberta, Canada. These researchers, working in partnership with the Blackfoot First Nation, are collecting data to understand exactly how these complex interactions between apex forces of nature and the rest of the food chain interact on the expedition Restoring Fire, Wolves, and Bison to the Canadian Rockies.

**Whooping Cranes** Our last dad is the Whooping Crane. These tall dads pick a partner for life and travel back and forth between the Gulf Coast of Texas and Alberta, Canada, each year accompanied by mom and their baby. During the spring in Alberta, the dads and moms make a nest by piling up vegetation in the middle of a shallow wetland, then stomp the vegetation down. The pair takes turns incubating the clutch, but crane dads take the lead on defending their breeding territory, flapping and hissing at intruders. After a month, the eggs hatch and the babies begin swimming and walking in just a few hours. The hatchlings stick with their parents for about a year, migrating with them to Texas before finding their own mate. While these birds are hard to miss at nearly five feet tall and weighing over pounds, they are rare. The current whooping crane population is just

individuals, a small fraction of the 20, cranes that used to exist in North America at the height of their population. One of the major factors that will affect Whooping Cranes as they make a return is the lack of suitable habitat. Their coastal landscape is being encroached upon by development, bringing along pollution and a reduction in food resources. At the same time, climate change is wreaking havoc on these areas. Earthwatch volunteers are helping to collect data on the saltmarsh ecosystems these birds rely on, as well as studying how environmental changes are affecting this endangered species on the expedition Protecting Whooping Cranes and Coastal Habitats in Texas.

**Chapter 9 : A Millennial Land Ethic: Or What Would Leopold Do Today? - CRISTINA EISENBERG**

*Around 8,000 years ago, Central Portugal underwent a dramatic shift in lifestyles from hunting and gathering to farming and herding. Usually thought of as one culture replacing another, there is evidence to suggest these cultural systems coexisted.*