Madahascar Essay, Research Paper

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Madagascar: A Dying Land In Need of Help

Madagascar is one of the most diverse areas of land that has undergone evolution totally independent from surrounding continents. The plant and animal species located on the island are all endemic to the island, meaning all are native species. The amount of diversity is very high compared to that of other continents and the species found here cannot be found anywhere else in the world. Currently all organisms located on this island are in danger, even the humans. Much damage has already been done, yet each year the land seems to die even more. Many species are dying off rapidly and drastic measures will have to be taken to stop all of these species from becoming extinct.

All problems for this island arose with the introduction of humans. According to fossil records, humans arrived approximately 2000 years ago. With their arrival came destruction, a destruction that would continue until present day. They were not aware of their actions at the time and how they would forever change the ecosystem of Madagascar.

The most destructive problem that occurred a hundred years ago and is still practiced is that of tavy. Tavy is a process of forest clearing, also known as slash and burn. Humans living on the island use this system to create farmland for harvesting their most precious crops. What they do is they cut down all trees and or shrubs then set fire to the area of land that they want to farm. They use the burnt materials as fertilizers and then plant their crop. Next season the farmer must move to another area and continue to burn more of the forest down. Due to this form of farming, humans have turned vast wetlands into deserts and luscious forests into tundra. In the early days of colonization the humans would come back to the same plot of land after about 20 years. During that period of time the land was allowed to regenerate, thus not permanently destroying the land. When they returned to the land after it had regenerated they would continue slashing and burning it, releasing the nutrients that had been restored. The problem in this process arose when the population of Madagascar grew too large. With the increase of population came the need for more farmland. Now with the enormous amount of people living off of the land there is no more time for re-growth. Instead farmers are forced to re-plant on the same area of land over and over again. This makes problems worse because the area of land then becomes infertile relatively quick. According to specialists nearly one hundred tons of topsoil is destroyed each year. After that land is reaped of all its nutrients the farmers have no choice but to move to another area. Tavy is single handedly responsible for destroying the entire island that was once a luscious rain forest with many endemic species. What remains of this unique rain forest is only 10% of what existed before the arrival of humans. At the rate the forest is currently being destroyed, scientists give the remaining forests only 25 years to live. Madagascar has permanently lost many of its native plants that cannot be found anywhere in the world. Many plants living here have been found to have medicinal purposes. Two drugs that have been used on the island naturally are vincristine and vinblastine. The plants in this rain forest provide cheap and easily accessible Medicare. These plants could hold cures for the diseases of the future and are also the home to some of the most unique animals in the world that now must adapt or die.

Currently the numbers of animal species living on the island are decreasing at an alarming rate. Many unique species are becoming extinct due to the loss of land and because of poachers. Still living on the island are some of the most interesting species living today. One of the species that is completely endemic to the island is the lemur. A lemur is in the category of primates along with monkeys, apes, and humans. However, Lemurs are part of a sub-branch called prosimians, while humans and other types of monkeys are located in the anthropoid branch. A major distinguishing feature in prosimians is the inability to use their digits (fingers) the same way other primates do, and that females play the dominant role in the family. One other difference in prosimians is they have a moist nose used to detect what is good and bad. At one point in time Madagascar was reported to have had over 50 endemic species of these lemurs living on the island. Unfortunately with the arrival of humans the lemur number is down drastically. Also due to the extensive amount of crop burnings these lemurs and other species of animals have nowhere to find shelter and seek food. Now that only 10% of the forests remain this becomes harder and harder for animals to survive with humans. Some odd 16 species of lemurs have been found to be extinct and it is reported that only about 33 endemic species of lemurs exist on the island today. Some of the lemurs that have been found in fossils are some of the strangest creatures ever found. One of the most unique skeletons of a lemur found was the size of our modern day gorilla. This is such a great discovery since all lemurs existing now are no bigger than that of a normal rhesus monkey. These gargantuan sized lemurs were not killed by a lack of habitat, but by poachers and hunters. No one knows for sure why this species has been killed off but many believe that it was either for amusement or because of fear. On the island another species is very unique to the island. This is the chameleon. The chameleon is a very unique form of lizard. What is so special about it is the chameleon’s ability to change colors depending on mood or temperature changes. Contrary to the popular belief chameleons do not change colors for camouflage. Madagascar is the home for approximately 50% of all chameleon species. That is about 59 rare species that are living on the island. As with the lemur though, the chameleons are in great danger of becoming extinct on the island. However, lemurs and chameleons are not the only type of unique animals who call Madagascar home. According to Dr. Laurie Godfrey “Almost all of Madagascar’s reptile and amphibian species, half of its birds, and all of its lemurs are endemic to the island; meaning they can be found nowhere else on earth” (The PBS website). So not only will two unique species become extinct but many along with the lemurs and chameleons will follow. The habitats of these organisms are being destroyed at a rate they cannot adapt. If the burning of forests continues it will not be long until all the lemurs, all the chameleons, and all of the other unique organisms of the island are no more. Unfortunately another problem lies in trying to stop the force that is actually killing them off.

Another ongoing problem exists on the island and lies in the hands of the people who live there. This problem is a little more complex than the others because it does not involve the forests or the animals that live on the island. Instead it involves the economic standings of the government and people of the island. Unfortunately, like most other African countries Madagascar is very poor. They are a very simple people with a very simple way of life. Their main goal is to survive. For them to survive they must continue with the only means they know, and this is tavy. The people of the island for the most part are still very uneducated and need to learn of other means of sustenance. According to Dr. Claire Kremen, “About 80 percent of the population are subsistence farmers, many of whom depend entirely on ‘natural capital’ to support their way of life” (The PBS website). Basically the people of this island are entirely dependant on the crop that they grow each year. The so-called “natives” of the island truly do not have the same sense of money as we do. Instead they look at value as how much land they own, and how much they produce. As stated by Oliver Howes, “annual spending per person is US$7” compared to the USA’s $2765 (Howes, 577). This is a large difference considering that these people make only about US$240 each year. Just imagine that we spend nearly four hundred times more than the average Malagasy farmer. Since the people of this island are so poor they have no choice in continuing what they are doing. The Malagasy farmers solely rely on what they produce to help them live. When a person cannot eat because they are forced to stop farming, this is when the real problems will occur. Unfortunately this is a never-ending cycle because even if they do continue to farm and burn down more forest, eventually they will come to the same end. No more farm land, no more food, no more way of life. And if the burning does continue then there will cease to exist any form of life. Whether it is rare flowers and trees, or very unique animals such as lemurs. Even the humans will need a place to move so that they could continue living. It does not help that the people of the island rely on only one method of survival, a method that has been put to use for over two thousand years. The educational state of the island will drastically affect the outcome in the next few years. Not only do the farmers and the herders only know of one way of life, but they do not even realize the amount of damage they are doing. If you were to ask one of them they would say that there will always be forest and that they will never run out. Little do they know that eventually there will not be any left and we must tell them. It is our duty to save one of the last paradises on earth.

Unfortunately for the island of Madagascar there are so many problems that must be solved for it to be saved. Conservationists throughout the world are looking for answers. Answers that would provide suitable solutions that will help save the lemurs, chameleons, the forests, and the humans. All of these depend heavily on the resources of the island, an island that is dying. Many solutions exist for these problems; one solution though just might not be enough. It might take multiple solutions to help stop this destruction.

The first solution that I came up with is very utopian in nature. It is very wishful thinking and most likely will never take place. My idea would be to remove the initial problem. As stated above this problem would be the humans. Ever since they arrived nothing but mass destruction and disrespect for the land has occurred. What I suggest would be a mass movement of these people to near by countries. Most likely in areas of Africa, otherwise to parts of the Middle East. With the removal of these people the island would have a chance to rejuvenate. Unfortunately this process would take many years but might be worth it. The areas of land that are exhausted will gradually become nutrient filled with rainfall and from decaying matter such as trees. I would not promote the removing of all people. Certain people would be allowed to stay and live in harmony with the land. Of course they would have to learn to adapt to a new way of life. Ways of life that hang in the balance with nature and would not ultimately ruin the ecosystem. I know this is wishful thinking because moving that many people to areas that they are unfamiliar with would be disaster. Especially since most of the countries surrounding Madagascar are in no better condition. They are just as poor and over populated as is.

To address the senseless killings of lemurs and other species, the government should devise a system of rules and regulations. These rules and regulations would set strict punishments on anyone who would knowingly kill any of the creatures on the list. To do this there would have to be a group that acts as a policing agent. This group would be responsible for finding out who killed these rare animals. Also the punishments should increase with the rarity of the animal. So a species that is very close to extinction would cause a higher penalty than that of a more fertile one. I would have to say that this system if ever implemented should go as far as protecting certain types of flora. It is sad to see that already some of the plants on the island have become extinct. The only reason this solution would not work all to well would be the reason that surveillance would be minimal. There is a slim chance that any group could catch someone in the act of killing one of these species. The laws would simply be there to scare people into not doing it.

Currently one solution that is being used is that of preservation parks. Certain conservation groups are trying to create national parks that would prevent people from slashing and burning anything in that area. One of the most prized reservations that have been established is that of the Masoala peninsula. With the help of the Malagasy government and organizations like Wildlife Conservation Society, CARE International Madagascar, and the Peregrine Fund, a national park has been created there. Within the confines of this park are some of the most rare species of lemurs. With the introduction of parks comes a mutual living environment between the people living there and the ecosystem. In the planning right now is for more preservation parks to arise. These parks are truly an important part in the preservation of the island. Without them nothing would be stopping these people from ruining the island that they live on.

A solution that might work better than imagined would be to use the native’s religion to help preserve the forests. In theory this would be a very effective deterrent and could possibly stop most of the people from ruining the land. With the help of a conservation group we could alter or revive conservational traditions within tribes. By using the patriarchs we could create a new dogma into their dina. The dina is a form of principles that the people must follow. If these are not followed that person will suffer “the worst Malagasy punishment of all: being banned from the family tomb at death” (Morell, 64). Knowing this no one would dare go against the altered dina. According to Virginia Morell “dina is more influential than any regulation enacted in the distant capital of Antananarivo” (64). Such groups as the WWF are trying to enact this solution. Unfortunately one hundred percent of the people do not follow this code of dina. This solution if implemented with others would help only to a certain extent.

Foreign Aid is one solution that could help very well. With the aid from U.S.A. or even the U.N. some of the land could become better preserved and maybe even restored. The aid could be in the form of either resources or money. The most reasonable method would be in the form of resources. This would be the most rational thing to do since most of the people do not look at money as a necessity. The kind of resources that could be supplied is vast. One kind of resource that I look at as being important would be in the form of natural fertilizers. Many of the farmers and even the herders could profit from this. With the help of the fertilizers the exhausted soil could be reused once again. Not only this but there will be room for growth to start back up again in the areas that they used to. People on the island could then slowly replant the habitat that they once destroyed. This is not that feasible. The main use of the fertilizers would be to help prevent farmers from having to move onto another section of land after their current one has become exhausted. This way they could live off that area of land for a longer period of time thus saving the remaining forests from destruction. The only downfall of this solution would be the high cost of these fertilizers. Millions of dollars would need to be spent in order to make this possible. Also the amounts of dirt that would be needed would be tremendous to have any effect. To transport all of this dirt would be near impossible unless taken from a near by country.

The single most efficient way to save Madagascar lies in the education of the people. It is amazing to even think that people living on the island do not know the repercussions of what they are doing. If you were to ask a wood gatherer about a certain tree that is near extinction, they would say that they just have to walk deeper into the forest to find it. They do not realize that soon that tree will cease to exist. Education would not only improve the quality of life for the people living on the island but will also help protect the remaining habitats of all the organisms sharing the area. Many things will have to be taught to the native people of this island. The first thing that must be explained to the people is that there is not an unlimited supply of trees to be cut down and sold. They should be shown a map and the amount of forests remaining. Secondly the people on the island must be taught almost an entirely new way of life. Learn how to reap all the benefits from the land without destroying the island. The answer to this would to teach them different forms of farming. Even to go as far as changing the type of crops they are planting. For the situation they are in the people of the island need a crop that will not need to be replanted every year. The natives should plant the kind of crops that are planted in such places as Hawaii and other warm climates. Crops like pineapples, oranges, and other exotic fruits that require the same climate as Madagascar. These ways the people not only make profit but they also have a long-term investment by planting trees. Also with this they no longer need to continue with the destruction of land. They can use the land that they have cleared already. The reason that education is better is the simple idea behind it. Not only is it cheaper than some of the other solutions but also it is less complex, will result in long-term preservation, and will have a greater outcome. Educating the Malagasy people really has no set backs and has no reasons that it should not be carried out. With the introduction of knowledge only good could arise. The natives can learn to live in harmony with their surroundings and still benefit. The only way they would cooperate anyways would be if something were in it for them anyways. With this solution it is a win-win situation. No one looses since the Malagasy people still get their food and income. Single handedly education will solve more problems by itself than any other solution. Lastly with the introduction of education some of the previously stated solutions will naturally occur with time.

In conclusion Madagascar is in deep need of help. Numerous problems exist in preserving the natural flora and fauna that exist on the island. The only true solution would be a combination effect. Yet the one simple solution that will solve most all of the problems of Madagascar lies in the hands of education. Knowledge is Power.

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