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Environmental Sustainability & Law

Each day we encounter the environment both directly and indirectly; it impacts our lives in an infinite amount of ways. As a society, actions in our every day lives may feel as if they do not have consequences; more importantly, possible consequences are not thought of when making a decision. When impacting the environment, changes are made in a wide array of ways, such as biodiversity, natural resources, and living organisms. Specifically, as the population increases, it is clear that humans are the main causal factor for negative changes occurring within the environment. In this paper, I will discuss various topics such as economic relations, ecological balance, interdependencies with humans and other organisms, as well as sustainability.

When an effect or object results from human activity, this is known as an anthropogenic cause. As stated, humans' decisions are seen both directly and indirectly. For example, humans directly affect aesthetic value from acts such as deforestation and simply removing plants. Since 2010, the world has seen a net loss of 4.7 million hectares every year (Food and Agricultural Organization, 2020). From the direct loss of forests by humans cutting them down, we directly lose the ability to enjoy aesthetic pleasure. Next, humans more commonly see and are affected by the indirect effects of our actions on the environment. For instance, as humans burn fossil fuels, Carbon Dioxide (CO_2) levels are raised in the atmosphere. From there, there has been an ongoing decrease in pH levels in the ocean, known as Ocean Acidification (Fisheries, 2014). Organisms such as those with carbonate-based skeletons and shells begin to dissolve posing a risk to those other organisms which rely on them for food. Since humans consume large amounts

of seafood, we are indirectly seeing the results of lesser amounts of organisms in the ocean due to the initial factor of fossil fuels being burned.

Building off of this, actions such as building fossil fuels are irreversible and permanent. Unlike the water cycle where water returns to its original state, the burning of fossil fuels cannot be replenished and reused. As we burn fossil fuels, there is permanent damage to the ground-level ozone from greenhouse gas accumulation (Enzler). Trees help regulate the water in our atmosphere. As stated earlier, deforestation is occurring across the entire world at a large rate. With this being said, deforested areas see lesser amounts of water in the air due to fewer trees being able to regulate the water cycle (Pachamama Alliance).

In this paper, I will demonstrate that our environment has faced consequences from humans and that economic factors should not play a role in environmental policy formation. Tammana Begum argues that no country or human is exempt from contributing to harming the environment; instead, some are worse than others because of by-product rates and the use of fossil fuels. In line with this position, I will argue that in every realm of our life, humans act or don't act a certain way due to laws being in place and not wanting to face the consequences of violating them. Concerning the environment and law, environmental law should be based around a system that focuses on sustainability; we must develop policies that maintain an ecological balance. However, it is not that simple due to factors such as employment, product sourcing, and the economy as a whole. Instead of these laws being influenced by how the economy will react by them being put into place, the sole reason behind laws should be for the betterment of our environment. Noted by Callicott, basing laws on economic factors is a flaw and should not be accounted for. He bases this flaw to be due to how the value of ecosystems is determined. Many times and Callicott disagrees with, value is based upon how consumers derive commodities from

ecosystems. From there, this way of valuing ecosystems leads to a cost-benefit analysis mindset which is flawed.

What role do economic factors play in the formation of environmental policies/laws?

To have environmental laws/ policies that support sustainability, ecocentrism is the viewpoint that should be adopted. More specifically, instead of looking at just one part of an ecosystem, its entirety should be looked at as a whole rather than just focusing on an individual part. In terms of ecological networks, ecologists conclude that environmental relations exist between both organisms directly, but also organisms with their environment, too (Donhauser, 2016). Since ecology is the interaction between both living and non-living parts, our environment reacts and relies on all parts and how they interact with one another. Because of this, all parts need to be considered since every part relies upon one another. Laws tend to focus on who will be benefiting the most by them being put into place. Existing laws look at factors like personal gain and profit, therefore, leading to policies that reflect this inconsiderate mindset. However, this does not always result in fair law. Concerning environmental law, humans should not be the focal point, instead, all parts of the environment need to be accounted for. Philosophers can play a role in helping guide how environmental policies are formed by adding a socially agreed-upon viewpoint. (Norton, 2002) In this sense, there need to be objective moral values upon which our environmental laws/policies are based upon.

Economic Relation

Humans' actions that have made a negative impact on the environment have resulted from laws/policies that are currently in place. Because of this, regardless of whether they are supporting sustainability or not, society follows them due to the possibility of consequences.

Essentially, laws, policies, and how our society is shaped are putting individuals in a difficult situation on choosing environmentally friendly options. For example, electric cars, which leave less of a carbon footprint, are generally more expensive and harder to charge with not many stations in place. We need policies that support environmental sustainability because our actions reflect the environment future generations will be left with to face. Simply pushing off the need for sustainability will only cause a larger problem for the generations to follow.

One component, the intragenerational component, states that the number of people in poverty is increasing while fewer resources are being left for future generations, known as the intergenerational component (Goodland, 1995). The world we are living in now is based upon what generations before us did, and we are facing the consequences. In terms of environmental policy, it is more reasonable to say we are facing consequences from what those before us have not done. For example, in 1988, James Hansen, the director of NASA asserted that climate change is happening and there is no longer any doubt. His testimony was brought before the Senate and the testimony focused on the consequences we are seeing from fossil fuel consumption. However, despite this hearing happening over 30 years ago, the levels have continued to increase and CO2 levels are now nearly double the concentration since 1988 (Loria, 2018). Because of this, laws and policies need to support sustainability. To address concerns, like climate change, thinking sustainably when manufacturing goods, carrying out daily tasks and sourcing energy will put us in a more likely position to decrease our environmental impact.

The Basis of Environmental Sustainability

To decide what sustainability looks like, we must first understand what the term means. In this section, I will define what sustainability is and how humans are at the center of

understanding what this relationship entails. For starters, when trying to define what this term is, it is typically described by giving examples of what sustainability looks like. In both a positive and negative sense, topics of pollution, fossil fuel usage, and rising climate temperatures are some examples. However, instead of the term simply meaning negative effects humans pose on the environment, the broad term refers to the relationship humans and the environment have between one another; the prevention of depleting natural resources to promote an ecological balance.

What does the term 'ecological balance' mean in terms of sustainability? The term interdependency is used to describe when two or more things, people, or animals are dependent on one another; commonly in their everyday lives (Chadwick, 2012). Relating to the topic of sustainability, ecological balance involves interdependencies between two or more living things, or living things and their environments. Dependencies do not require the two or more sides to be living; therefore, various environments, of which are nonliving, can be part of interdependencies. Ecological balance, also sometimes expressed as the balance of nature asserts that in most times, nature and ecological systems are usually stable. However, changes in one part of an ecological system will throw off this "balance". For instance, carnivores, or those animals who rely on meat as a primary source of their nutrition have an interdependency with their pray. If, for instance, a disease wiped out a large portion of their meat source, this ecological balance would be thrown off and unstable.

There is no doubt that humans have a near-infinite amount of interdependencies with the environment, animals, and ecosystems. These dependencies are shown in our reliance on food that is grown, animals for meat usage, and land for home development (Chadwick, 2012). It can be argued that human interaction and a balanced ecosystem are incompatible, or cannot take

place. From this viewpoint, it necessarily follows that humans simply existing causes nature to be unstable. However, this viewpoint can be contested with many modern-day habitats being created by humans. For example, various forests around the world are the result of humans transplanting seeds from other areas. Although there is uncertainty defining what 'ecological balance' is and what it looks like across the world, there is no denying that humans have an interdependency with animals, ecosystems, and various habitats.

As stated, sustainability is typically defined by giving examples of how humans do not have a sustainable relationship with our environment; so how exactly do we have this negative relationship? The society we live in is much different than just 200 years ago, and the way humans interact with and use the environment has changed similarly. More specifically, human usage and depletion of natural resources, such as fossil fuels, have increased with societal changes. The industrial revolution, the invention of vehicles that cause emissions, and population growth are just to name a few. The question of sustainability, climate change, and environmental impact has become more prevalent due to humans not living as sustainably compared to centuries ago. For example, with lesser population sizes, there was less need to deforest and urbanize lands. Also, the invention of new technology and manufacturing of goods and services leads to a source of carbon emissions from their production.

Humans do not have a sustainable relationship because of the rapid use and seemingly never-ending depletion of resources. As the world population has grown exponentially, urbanization has posed the problem of decreasing farmland, which produces the food we eat. For starters, the world population in 1800 was roughly 1 billion compared to the current 7.7 billion today (Roser et al., 2013). In turn, ecosystems are not only facing negative effects due to the depletion of their size and vegetation that grow within them, but humans are inadvertently

facing negative effects, too. For example, when humans deplete the environment's size, it causes a spiral effect on food production and the ability to feed the growing population. To increase yields per acre since urbanization first became an issue, GMO seeds are more common than not, which have chemicals that runoff in water sources. The average farmer today produces 262% more food than that of a farmer in 1959 (American Farm Bureau Federation, 2017).

Turning natural ecosystems into farmland is not the issue, instead, taking existing farmland and turning it into residential property leads to the struggle of feeding the growing population. Therefore, since we are faced with producing more food with less land, GMOs, pesticides, herbicides, and other chemicals are used which runoff into the water and cause algae blooms, and are unnatural for plants to grow with. Humans do not have a sustainable relationship with our environment through the depletion of natural resources and the inability to recreate them.

To promote a sustainable relationship between humans and our environment, it is necessary to first establish and assert that humans can and should use resources in our environments. If one views that humans ought not to have the relationship in which we use the natural world's resources, then there cannot be a sustainable relationship with this viewpoint. Sustainability describes the relationship between both humans and the environment; so, it is necessary to have the view that humans are not unethical for using the natural world's resources. Leopold's vision in 'The Land Ethic' provides a view on humans' relationship to nature is morally specified. I am introducing Leopold's view because it establishes the fact that humans and the environment do interact with one another; and, including how we should land have rights on its own, if it has any. He viewed that land does not have rules about what we should do with the land. Instead of letting economics decide how we use land, we should consider land but with lesser rights than we have. Having a land ethic would be beneficial for people because it will establish rules encouraging the

life of the land. By giving the land the right to exist would also positively affect the wildlife that relies on the land to survive.

Nature's Instrumental Value

Does nature have value in and of itself? Or, is this possible value determinant whether it can benefit us in some way? Rolston (1991) states, "Some of the values nature carries are up to us, our assignment. But fundamentally there are powers in nature that move to us and through us". Suggested by this quote, even though we determine some of the value nature has to us as an individual, nature does have a fundamental value that is not up to humans to determine. Connecting back to sustainability, it is necessary to understand the value, such as value with nature in order to determine what sustainable solutions look like.

For nature and all its parts to have a basis in law, it must have value, so what kind of value does nature have to humans? For starters, something has instrumental value if it benefits us in some way. For example, gold has instrumental value because it is simply just a rock, but we put a value on it since it is worth a lot of money and can be used for trading. On the other hand, something has non-instrumental value even if it does not have a direct benefit to someone. If we say that nature has one of these two types of values, then we are establishing how we view nature. For example, if we assert that nature has intrinsic value, then we value it regardless of whether it benefits us or not. More specifically, whether or not a flower benefits us, we still put a value on that flower. In contrast, if we assert that nature has instrumental value we are then saying we only value nature when it benefits us. For example, if a tree can benefit us in some way then it would have value solely because of the benefit it gives. If we say that nature has "moral standing" then we are asserting that nature has an interest we should consider in moral

deliberation. So, if we consider nature's interest in discussion, then we are assuming it has "moral standing". As suggested by Wohlwill, if we view nature as more beautiful rather than a tool to use for making money, then environmental sustainability will be promoted. More importantly, this aesthetic viewpoint relates to and supports the claim that nature has intrinsic value.

Relating to the three viewpoints, ecocentrism, and anthropocentrism, I stated that ecocentrism is the best viewpoint to take when looking at our relationship to nature. For starters, anthropocentrism views that humans are the center or focal point of the entire universe. More significantly, not only are humans the focal point, but they are also the most important (Kortenkamp, 2001). If society adopts this standpoint, there will be little consideration for nature in terms of laws and policies. Since humans are viewed as the most important, the support of sustainable policies would be not only neglected but most likely irrelevant. In contrast, ecocentrism is the viewpoint that supports nature having intrinsic value, therefore deserving moral consideration. More specifically, nature has moral consideration because how nature is treated affects humans. If this viewpoint is widely accepted by society and policymakers, it would be a step in the right direction.

Another viewpoint, biocentrism, is also flawed and is not useful to base policies on. Biocentrism supports that all life needs to have the same moral consideration (Lanza, 2010). For example, under this view, it would follow that humans and nature should have equal moral standing. However, this is flawed too because just because a being is alive, it should not follow that it has equal moral standing as a human. If we accept Biocentrism, we would be responsible for protecting all living things, which is impossible for humans to accomplish. If humans are not viewed as the focal point of the universe, nature will be considered in policymaking, which will most likely lead to policies that support sustainability being passed.

Economic Reasoning

As stated, economics plays a large role in how humans treat nature, land, and more importantly, influences the formation of environmental laws. The land itself is viewed as valuable in the sense it provides assets and protection for people. With there being less land available due to urbanization, the price per acre has only continued to rise. Because of the monetary value of land in society, value is taken into consideration during policy formation. As suggested by Norton, sustainability may be more achievable if economics, such as the possible negative effects of implementing a sustainable law would have on the economy. For example, policymakers may be hesitant to support a policy that is sustainable due to a probable result of unemployment, resources being harder to obtain, or value loss. Because of this, there is a correlation between economics and hesitancy for sustainable laws being passed.

One of the biggest areas of Environmental Law, agriculture, is concerned with pollution and waste from pesticides, chemical fertilizers, and animal waste. To preserve the ecosystem, policies have been put in place regarding agricultural pollution (Shortle, 2001). For example, policies, such as required decreased tillage reduces field runoff. Although this is not a complete solution, policies in a similar format promote a sustainable relationship. Since part of humans having a sustainable relationship with our environment is looking out for future generations, promoting actions that decrease our environmental harm will put future generations in a better spot.

There is an immediate need for actions that promote environmental sustainability. Humans have a relationship with nature that depletes resources and this puts future generations in a spot that has continued pollution and environmental issues. Due to the depletion of fossil fuels and natural resources, it is more important than ever to slow down the usage, but also to

promote human relationships with the environment. Instead of being reliant and depleting, a better relationship would view nature to have intrinsic value and moral standing. Current laws and policies support humans being the focal point, or more important than other beings. To counteract this harmful thought, ecocentrism viewpoints need to be adopted, especially when deciding laws and policies to adapt. Humans will inevitably interact with our environment; however, it is our responsibility to act in a sustainable way to prevent future, permanent, damage.

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