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Global Degradation of Environment

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ABSTRACT: Environmental degradation is the deterioration of the environment through depletion of resources such as quality of air, water and soil; the destruction of ecosystems; habitat destruction; the extinction of wildlife; and pollution. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable.[1][2] The environmental degradation process amplifies the impact of environmental issues which leave lasting impacts on the environment.[3]

Environmental degradation is one of the ten threats officially cautioned by the High-level Panel on Threats, Challenges and Change of the United Nations. The United Nations International Strategy for Disaster Reduction defines environmental degradation as "the reduction of the capacity of the environment to meet social and ecological objectives, and needs"

KEYWORDS: environment, degradation, extinction, habitat, pollution, threats

I. INTRODUCTION

Environmental degradation comes in many types. When natural habitats are destroyed or natural resources are depleted, the environment is degraded; direct environmental degradation, such as deforestation, which is readily visible; this can be caused by more indirect process, such as the build up of plastic pollution over time or the buildup of greenhouse gases that causes tipping points in the climate system. Efforts to counteract this problem include environmental protection and environmental resources management. Mismanagement that leads to degradation can also lead to environmental conflict where communities organize in opposition to the forces that mismanaged the environment.[1,2,3]

Biodiversity loss

Deforestation in Europe, 2018. Almost all of Europe's original forests have been destroyed.

Scientists assert that human activity has pushed the earth into a sixth mass extinction event.[5][6] The loss of biodiversity has been attributed in particular to human overpopulation, continued human population growth and overconsumption of natural resources by the world's wealthy.[7][8] A 2020 report by the World Wildlife Fund found that human activity – specifically overconsumption, population growth and intensive farming – has destroyed 68% of vertebrate wildlife since 1970.[9] The Global Assessment Report on Biodiversity and Ecosystem Services, published by the United Nation's IPBES in 2019, posits that roughly one million species of plants and animals face extinction from anthropogenic causes, such as expanding human land use for industrial agriculture and livestock rearing, along with overfishing.[10][11][12]

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| Volume 11, Issue 1, January 2024 |

Since the establishment of agriculture over 11,000 years ago, humans have altered roughly 70% of the Earth's land surface, with the global biomass of vegetation being reduced by half, and terrestrial animal communities seeing a decline in biodiversity greater than 20% on average.[13][14] A 2021 study says that just 3% of the planet's terrestrial surface is ecologically and faunally intact, meaning areas with healthy populations of native animal species and little to no human footprint. Many of these intact ecosystems were in areas inhabited by indigenous peoples.[15][16] With 3.2 billion people affected globally, degradation affects over 30% of the world's land area and 40% of land in developing countries.[17]

The implications of these losses for human livelihoods and wellbeing have raised serious concerns. With regard to the agriculture sector for example, The State of the World's Biodiversity for Food and Agriculture, published by the Food and Agriculture Organization of the United Nations in 2019,[18] states that "countries report that many species that contribute to vital ecosystem services, including pollinators, the natural enemies of pests, soil organisms and wild food species, are in decline as a consequence of the destruction and degradation of habitats, overexploitation, pollution and other threats" and that "key ecosystems that deliver numerous services essential to food and agriculture, including supply of freshwater, protection against hazards and provision of habitat for species such as fish and pollinators, are declining."[19]

Impacts of environmental degradation on women's livelihoods

On the way biodiversity loss and ecosystem degradation impact livelihoods, the Food and Agriculture Organization of the United Nations finds also that in contexts of degraded lands and ecosystems in rural areas, both girls and women bear heavier workloads.

Women's livelihoods, health, food and nutrition security, access to water and energy, and coping abilities are all disproportionately affected by environmental degradation. Environmental pressures and shocks, particularly in rural areas, force women to deal with the aftermath, greatly increasing their load of unpaid care work. Also, as limited natural resources grow even scarcer due to climate change, women and girls must also walk further to collect food, water or firewood, which heightens their risk of being subjected to gender-based violence.[20]

This implies, for example, longer journeys to get primary necessities and greater exposure to the risks of human trafficking, rape, and sexual violence.[21]

Water degradation

Ethiopia's move to fill the Grand Ethiopian Renaissance Dam's reservoir could reduce Nile flows by as much as 25% and devastate Egyptian farmlands.[22]

One major component of environmental degradation is the depletion of the resource of fresh water on Earth.[23] Approximately only 2.5% of all of the water on Earth is fresh water, with the rest being salt water. 69% of fresh water is frozen in ice caps located on Antarctica and Greenland [4,5,6], so only 30% of the 2.5% of fresh water is available for consumption.[24] Fresh water is an exceptionally important resource, since life on Earth is ultimately dependent on it. Water transports nutrients, minerals and chemicals within the biosphere to all forms of life, sustains both plants and animals, and moulds the surface of the Earth with transportation and deposition of materials.[25]

The current top three uses of fresh water account for 95% of its consumption; approximately 85% is used for irrigation of farmland, golf courses, and parks, 6% is used for domestic purposes such as indoor bathing uses and outdoor garden and lawn use, and 4% is used for industrial purposes such as processing, washing, and cooling in manufacturing centres.[26] It is estimated that one in three people over the entire globe are already facing water

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| Volume 11, Issue 1, January 2024 |

shortages, almost one-fifth of the world population live in areas of physical water scarcity, and almost one quarter of the world's population live in a developing country that lacks the necessary infrastructure to use water from available rivers and aquifers. Water scarcity is an increasing problem due to many foreseen issues in the future including population growth, increased urbanization, higher standards of living, and climate change.[24]

Industrial and domestic sewage, pesticides, fertilizers, plankton blooms, silt, oils, chemical residues, radioactive material, and other pollutants are some of the most frequent water pollutants. These have a huge negative impact on the water and can cause degradation in various levels.[20]

Climate change and temperature

Climate change affects the Earth's water supply in a large number of ways. It is predicted that the mean global temperature will rise in the coming years due to a number of forces affecting the climate. The amount of atmospheric carbon dioxide (CO_2) will rise, and both of these will influence water resources; evaporation depends strongly on temperature and moisture availability which can ultimately affect the amount of water available to replenish groundwater supplies.

Transpiration from plants can be affected by a rise in atmospheric CO_2, which can decrease their use of water, but can also raise their use of water from possible increases of leaf area. Temperature rise can reduce the snow season in the winter and increase the intensity of the melting snow leading to peak runoff of this, affecting soil moisture, flood and drought risks, and storage capacities depending on the area.[27]

Warmer winter temperatures cause a decrease in snowpack, which can result in diminished water resources during summer. This is especially important at mid-latitudes and in mountain regions that depend on glacial runoff to replenish their river systems and groundwater supplies, making these areas increasingly vulnerable to water shortages over time; an increase in temperature will initially result in a rapid rise in water melting from glaciers in the summer, followed by a retreat in glaciers and a decrease in the melt and consequently the water supply every year as the size of these glaciers get smaller and smaller.[24]

Thermal expansion of water and increased melting of oceanic glaciers from an increase in temperature gives way to a rise in sea level. This can affect the freshwater supply to coastal areas as well. As river mouths and deltas with higher salinity get pushed further inland, an intrusion of saltwater results in an increase of salinity in reservoirs and aquifers.[26] Sea-level rise may also consequently be caused by a depletion of groundwater,[28] as climate change can affect the hydrologic cycle in a number of ways. Uneven distributions of increased temperatures and increased precipitation around the globe results in water surpluses and deficits,[27] but a global decrease in groundwater suggests a rise in sea level, even after meltwater and thermal expansion were accounted for,[28] which can provide a positive feedback to the problems sea-level rise causes to fresh-water supply.

A rise in air temperature results in a rise in water temperature, which is also very significant in water degradation as the water would become more susceptible to bacterial growth. An increase in water temperature can also affect ecosystems greatly because of a species' sensitivity to temperature, and also by inducing changes in a body of water's self-purification system from decreased amounts of dissolved oxygen in the water due to rises in temperature.[24]

Climate change and precipitation

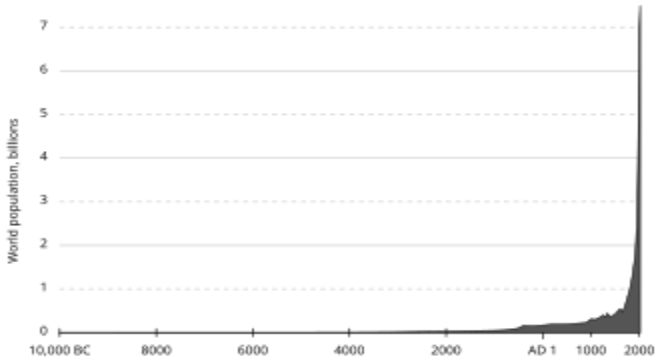
A rise in global temperatures is also predicted to correlate with an increase in global precipitation but because of increased runoff, floods, increased rates of soil erosion, and mass movement of land, a decline in water quality is probable, because while water will carry more nutrients it will also carry more contaminants.[24] While most of the attention about climate change is directed towards global warming and greenhouse effect, some of the most severe effects of climate change are likely to be from changes in precipitation, evapotranspiration, runoff, and soil moisture. It is generally expected that, on average, global precipitation will increase, with some areas receiving increases and some decreases.[7,8,9]

Climate models show that while some regions should expect an increase in precipitation,[27] such as in the tropics and higher latitudes, other areas are expected to see a decrease, such as in the subtropics. This will ultimately cause a latitudinal variation in water distribution.[24] The areas receiving more precipitation are also expected to receive this increase during their winter and actually become drier during their summer,[27] creating even more of a variation of precipitation distribution. Naturally, the distribution of precipitation across the planet is very uneven, causing constant variations in water availability in respective locations.

Changes in precipitation affect the timing and magnitude of floods and droughts, shift runoff processes, and alter groundwater recharge rates. Vegetation patterns and growth rates will be directly affected by shifts in precipitation amount and distribution, which will in turn affect agriculture as well as natural ecosystems. Decreased precipitation will deprive areas of water causing water tables to fall and reservoirs of wetlands, rivers, and lakes to empty.[27] In addition, a possible increase in evaporation and evapotranspiration will result, depending on the accompanied rise in temperature.[26] Groundwater reserves will be depleted, and the remaining water has a greater chance of being of poor quality from saline or contaminants on the land surface.[24]

Climate change is resulting into a very high rate of land degradation causing enhanced desertification and nutrient deficient soils. The menace of land degradation is increasing by the day and has been characterized as a major global threat. According to Global Assessment of Land Degradation and Improvement (GLADA) a quarter of land area around the globe can now be marked as degraded. Land degradation is supposed to influence lives of 1.5 billion people and 15 billion tons of fertile soil is lost every year due to anthropogenic activities and climate change.[29]

Population growth



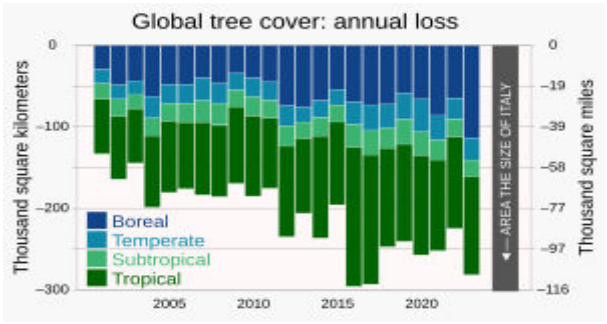
Graph of human population from 10,000 BCE to 2000 CE. It shows sevenfold rise in world population that has taken place since the end of the seventeenth century.

The human population on Earth is expanding rapidly, which together with even more rapid economic growth is the main cause of the degradation of the environment. Humanity's appetite for resources is disrupting the environment's natural equilibrium. Production industries are venting smoke into the atmosphere and discharging chemicals that are polluting water resources. The smoke includes detrimental gases such as carbon monoxide and sulphur dioxide. The high levels of pollution in the atmosphere form layers that are eventually absorbed into the atmosphere. Organic compounds such as chlorofluorocarbons (CFCs) have generated an opening in the ozone layer, which admits higher levels of ultraviolet radiation, putting the globe at risk.

The available fresh water being affected by the climate is also being stretched across an ever-increasing global population. It is estimated that almost a quarter of the global population is living in an area that is using more than 20% of their renewable water supply; water use will rise with population while the water supply is also being aggravated by decreases in streamflow and groundwater caused by climate change. Even though some areas may see an increase in freshwater supply from an uneven distribution of precipitation increase, an increased use of water supply is expected.[30] An increased population means increased withdrawals from the water supply for domestic, agricultural, and industrial uses, the largest of these being agriculture,[31] believed to be the major non-climate driver of environmental change and water deterioration. The next 50 years will likely be the last period of rapid agricultural expansion, but the larger and wealthier population over this time will demand more agriculture.[32]

Population increase over the last two decades, at least in the United States, has also been accompanied by a shift to an increase in urban areas from rural areas,[33] which concentrates the demand for water into certain areas, and puts stress on the fresh water supply from industrial and human contaminants.[24] Urbanization causes overcrowding and increasingly unsanitary living conditions, especially in developing countries, which in turn exposes an increasingly number of people to disease. About 79% of the world's population is in developing countries, which lack access to sanitary water and sewer systems, giving rises to disease and deaths from contaminated water and increased numbers of disease-carrying insects[10,11,12]

Agriculture



The rate of global tree cover loss has approximately doubled since 2001, to an annual loss approaching an area the size of Italy.[35]

Water pollution due to dairy farming in the Wairarapa in New Zealand

Agriculture is dependent on available soil moisture, which is directly affected by climate dynamics, with precipitation being the input in this system and various processes being the output, such as evapotranspiration, surface runoff, drainage, and percolation into groundwater. Changes in climate, especially the changes in precipitation and evapotranspiration predicted by climate models, will directly affect soil moisture, surface runoff, and groundwater recharge.

In areas with decreasing precipitation as predicted by the climate models, soil moisture may be substantially reduced.[27] With this in mind, agriculture in most areas already needs irrigation, which depletes fresh water supplies both by the physical use of the water and the degradation agriculture causes to the water. Irrigation increases salt and nutrient content in areas that would not normally be affected, and damages streams and rivers from damming and removal of water. Fertilizer enters both human and livestock waste streams that eventually enter groundwater, while nitrogen, phosphorus, and other chemicals from fertilizer can acidify both soils and water. Certain agricultural demands may increase more than others with an increasingly wealthier global population, and meat is one commodity expected to double global food demand by 2050,[32] which directly affects the global supply of fresh water. Cows need water to drink, more if the temperature is high and humidity is low, and more if the production system the cow is in is extensive, since finding food takes more effort. Water is needed in the processing of the meat, and also in the production of feed for the livestock. Manure can contaminate bodies of freshwater, and slaughterhouses, depending on how well they are managed, contribute waste such as blood, fat, hair, and other bodily contents to supplies of fresh water.[36]

The transfer of water from agricultural to urban and suburban use raises concerns about agricultural sustainability, rural socioeconomic decline, food security, an increased carbon footprint from imported food, and decreased foreign trade balance.[31] The depletion of fresh water, as applied to more specific and populated areas, increases fresh water scarcity among the population and also makes populations susceptible to economic, social, and political conflict in a number of ways; rising sea levels forces migration from coastal areas to other areas farther inland, pushing populations closer together breaching borders and other geographical patterns, and agricultural surpluses and deficits from the availability of water induce trade problems and economies of certain areas.[30] Climate change is an important cause of involuntary

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| Volume 11, Issue 1, January 2024 |

migration and forced displacement[37] According to the Food and Agriculture Organization of the United Nations, global greenhouse gas emissions from animal agriculture exceeds that of transportation.[38]

Water management

A stream in the town of Amlwch, Anglesey, which is contaminated by acid mine drainage from the former copper mine at nearby Parys Mountain

Water management is the process of planning, developing, and managing water resources across all water applications, in terms of both quantity and quality." Water management is supported and guided by institutions, infrastructure, incentives, and information systems[13,14,15]

[39] The issue of the depletion of fresh water has stimulated increased efforts in water management.[25] While water management systems are often flexible, adaptation to new hydrologic conditions may be very costly.[27] Preventative approaches are necessary to avoid high costs of inefficiency and the need for rehabilitation of water supplies,[25] and innovations to decrease overall demand may be important in planning water sustainability.[31]

Water supply systems, as they exist now, were based on the assumptions of the current climate, and built to accommodate existing river flows and flood frequencies. Reservoirs are operated based on past hydrologic records, and irrigation systems on historical temperature, water availability, and crop water requirements; these may not be a reliable guide to the future. Re-examining engineering designs, operations, optimizations, and planning, as well as re-evaluating legal, technical, and economic approaches to manage water resources are very important for the future of water management in response to water degradation. Another approach is water privatization; despite its economic and cultural effects, service quality and overall quality of the water can be more easily controlled and distributed. Rationality and sustainability is appropriate, and requires limits to overexploitation and pollution and efforts in conservation.[25]

Consumption increases

As the world's population continues to grow larger by the minute, the demand for natural resources increases as well. With the need for more production of increases comes more damage to the environments and ecosystems those resources are housed in. According to United Nations' population growth predictions, there could be up to 170 million more births by the year 2070. The need for more fuel, energy, food, buildings, and water sources grows with the number of people on the planet.

Deforestation

As the need for new agricultural areas and road construction increases, the deforestation processes stay in effect. Deforestation is the "removal of forest or stand of trees from land that is converted to non-forest use." (Wikipedia-Deforestation). Since the 1960s close to 50% of tropical forests have been destroyed, but this process is not limited to tropical forest areas. Europe's forests are also destroyed by a number of factors; livestock, insects, diseases, invasive species, and other human activities. A large number of the world's terrestrial biodiversity can be found living in the different types of forests. Tearing down these areas for increased consumption directly decreases the world's biodiversity of plant and animal species native to those areas. Along with the destruction of habitats and ecosystems, the decrease of the world's forest contributes to the amount of CO_2 in the atmosphere. By taking away forested areas, we are limiting the amount of carbon reservoirs, limiting it to the largest ones; the atmosphere and oceans. While one of the biggest reasons for deforestation is for agriculture use for the world's food supply, removing trees from landscapes also increases erosion rates in areas, making it harder to produce crops in those soil types.

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| Volume 11, Issue 1, January 2024 |

II. DISCUSSION

Environmental degradation is an increasingly pressing issue that affects us all. It is caused by a variety of factors, ranging from human activities to natural disasters, and its effects can be devastating. Many of these effects can cause further degradation, which means that this impact works as a downward cycle. Fortunately, there are solutions, and we can all work together to mitigate its impacts. Plant With Purpose exists to help reverse this cycle and create a more sustainable future for communities all around our planet.

Causes

Poverty

Poverty is a major contributor to environmental degradation. People living in poverty often experience hunger and food insecurity, which leads to over-exploitation of natural resources. For example, trees are frequently harvested to turn into charcoal, a product that can be sold for quick cash. This can lead to deforestation, air pollution, and other unsustainable practices that have a negative impact on the environment.

Poverty also affects environmental degradation in other ways. People living in poverty may not have access to education about environmental issues or the resources to invest in sustainable practices. They may also be more likely to engage in activities that are harmful to the environment, such as burning wood for fuel or dumping waste into rivers and streams. These activities can have long-term negative impacts on the environment, including air and water pollution, soil erosion, and loss of biodiversity.[16,17]

Deforestation

Deforestation is the permanent destruction of forests in order to make the land available for other uses. It is one of the leading causes of environmental degradation because it reduces biodiversity, disrupts the water cycle, and contributes to climate change.

Trees also play an important role in the water cycle by absorbing water from the ground and releasing it into the atmosphere. Without trees, the water cycle is disrupted, leading to droughts and floods. Deforestation also contributes to climate change by releasing carbon dioxide into the atmosphere. Additionally, deforestation can lead to soil erosion, which can lead to desertification and other land degradation issues. All of these effects of deforestation can have long-lasting impacts on the environment.

Climate Change

Climate change is a major contributor to environmental degradation because it can cause soil erosion, which is the process of wearing away the land surface by the action of natural forces such as wind, water, and ice. Climate change can cause an increase in the intensity and frequency of storms, worsening erosion. This can be especially damaging in areas that are already prone to soil erosion due to their topography or land use.

Additionally, climate change can cause an increase in the intensity and frequency of floods. Floods can carry away large amounts of sediment, which is then deposited elsewhere, leading to changes in the landscape. Furthermore, climate change can cause an increase in the intensity and frequency of droughts, which can lead to soil erosion due to wind and water. In other cases, climate change can create longer periods of drought, which results in insufficient plant growth.

Soil Damage

Soil erosion can have serious consequences for the environment, as it can lead to a decrease in soil fertility, an increase in sedimentation in waterways, and an increase in the risk of flooding. In addition, soil erosion can lead to the loss of valuable topsoil, which is essential for plant growth and food production.

Soil erosion can also contribute to environmental degradation in other ways. Soil erosion can lead to increased air pollution, as the dust particles are carried away by wind and deposited in other areas. Finally, soil erosion can lead to a decrease in biodiversity, as it can reduce the amount of habitat available for plants and animals. All of these effects can have serious consequences for the environment and should be taken into consideration when developing land management strategies.

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| Volume 11, Issue 1, January 2024 |

III. RESULTS

Effects

Poverty

In many rural areas, people rely on the environment for their livelihood. Right now, 8 in 10 people living in poverty are rural, reflecting the severity of our environmental crisis. Environmental degradation is a major contributor to poverty. Deforestation, overgrazing, pollution, and climate change all contribute to environmental degradation and can lead to decreased crop yields and water shortages. These factors can all contribute to poverty, as people are unable to produce enough food to feed their families.

"I was exclusively dependent on agriculture to support my family," explains Chanceline in the Democratic Republic of the Congo. "Relying only on agriculture hindered my development. I had dreams of also starting some commerce, but I never had the financial resources to get started with my dream."

As extreme weather events damage crops and reduce crop yields across Eastern Africa, people have grown increasingly unable to produce enough food to feed their families.

Deforestation

As environmental degradation worsens poverty, it drives people towards overharvesting of resources, namely, trees. When land is degraded, people are more likely to deforest an area in order to access the fertile forest soil for agricultural and other uses. Deforestation can also occur when land is cleared for agricultural or industrial purposes, or when forests are burned to create space for urban development. All of these activities can lead to a decrease in the amount of forested land available, which can have a devastating impact on the environment.

Soil Damage

Environmental degradation damages soil in a variety of ways. It furthers erosion, which removes topsoil and reduces the fertility of the soil. It can also cause an increase in salinity, which affects the ability of plants to absorb water and nutrients. Environmental degradation can lead to compaction, which reduces the amount of air and water that can be held in the soil. Finally, it can lead to a decrease in organic matter, which affects the ability of the soil to retain nutrients and water and to support plant growth.

Climate Change

Environmental degradation is a major contributor to climate change. Deforestation, overfishing, and other unsustainable practices lead to the destruction of habitats, the release of greenhouse gasses, and the disruption of natural carbon sinks. As habitats are destroyed, fewer plants are available to absorb carbon dioxide from the atmosphere, leading to an increase in atmospheric concentrations of the gas. The destruction of coral reefs and other marine ecosystems also leads to a decrease in the amount of carbon dioxide that is absorbed by the ocean, further contributing to climate change. Additionally, unsustainable practices such as overfishing can lead to a decrease in the number of organisms that consume carbon dioxide from the atmosphere, further exacerbating the problem.[18,19]

Further Vulnerability

When people living in rural areas experience environmental degradation and increasing poverty, they resort to desperate actions. Many times, children are taken out of school to work on their farm, and this disproportionately applies to girls. As a result, gender equality and education suffer.

Many people resort to migration, either to more urban areas or other countries, in search of sufficient work opportunities. Unfortunately these journeys are often dangerous, and displaced rural people in new cities or countries are especially vulnerable to exploitation. Environmental degradation is a significant contributor to human trafficking and violent activity.

Solutions

Challenges like poverty, soil erosion, and climate change are both causes and effects of environmental degradation. This means that when one of these problems grows out of control, it sets off the other problems, and they all grow more severe together. It can lead to a very difficult life for someone living in a rural area that has been degraded.

Anicet in Burundi explains how his struggle with poverty was related to famine and food insecurity. "Before, we were living in extreme poverty and a state of panic because we could not find enough food. There were years when we only ate once a day," he shares.

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| Volume 11, Issue 1, January 2024 |

But what is Anciet supposed to do when the few available opportunities to earn cash threaten to contribute to further environmental degradation? This is why Plant With Purpose exists.

Solutions to poverty, climate change, and environmental degradation exist. When they are applied holistically, they can turn cycles of poverty into cycles of abundance.

Regenerative Farming

Regenerative farming is an agricultural practice that focuses on restoring the health of the soil and reversing environmental damage. This practice works to rebuild soil fertility, increase biodiversity, and reduce the use of synthetic fertilizers and pesticides. Regenerative farming also works to improve water retention and reduce water runoff, which can help to reduce soil erosion and improve water quality. Through the use of cover crops, crop rotation, and other practices, regenerative farming helps to improve soil structure, increase organic matter, and promote healthy microbial activity in the soil.

In addition to improving soil health, regenerative farming also works to restore biodiversity by increasing the number of beneficial insects, birds, and other wildlife. This helps to create a more balanced ecosystem that can better resist pests and diseases. By reducing the use of synthetic fertilizers and pesticides, regenerative farming also helps to protect waterways from contamination.

These practices typically increase crop yield by a good deal. As poverty is reduced, so too are the demands that it places on an ecosystem.

Tree Planting

Planting trees is an effective way to prevent environmental degradation. Trees absorb carbon dioxide and other pollutants from the air, helping to reduce air pollution. They also provide shade and shelter, helping to reduce the urban heat island effect and evaporation. Trees also help to reduce soil erosion by stabilizing the soil with their roots. In addition, trees help to conserve water by reducing runoff and providing a natural filter for water that passes through the soil. Finally, trees provide a habitat for wildlife, helping to maintain biodiversity. Planting trees is a simple and effective way to help protect the environment from degradation.

Savings & Loan Opportunities

Savings and loan opportunities can be an effective tool in preventing environmental degradation. By providing access to capital for projects that promote sustainability, or that simply provide families with a non-destructive means to grow financially and overcome poverty. This gives people in rural communities the means and margin to conserve and restore natural resources, such as forests and wetlands.

Spiritual Renewal

Spiritual renewal is a powerful tool for preventing environmental degradation. A restored relationship with the Creator can help us recognize our interdependence with the rest of creation. This can help us develop a sense of responsibility for the environment and a desire to protect it. This spiritual renewal can lead to stewardship: more mindful consumption, greater respect for the environment, and more sustainable practices. Additionally, it can inspire us to take action to protect the environment, such as engaging in conservation efforts, reducing waste, and advocating for environmental policies.

While a variety of solutions exist, it's important to implement them holistically. One of these solutions alone, without the enhancement of other activities, is likely insufficient to reverse environmental degradation. Plant With Purpose establishes Purpose Groups in rural communities, which are platforms that serve as farmer field schools, savings and loan groups, and spiritual communities.

"I am convinced that this new venture will make it easier for me to save even more money in the near future. I want to apply that towards growing my business," explains Chanceline, exemplifying how her savings and investments are creating a cycle of abundance. "The Purpose Group curriculum has helped me learn to make contour canals fixed with grasses and shrubs. I have also planted agroforestry and indigenous trees and used mulching and organic fertilizer combined with Mucuna green manure to improve the health of our farm."

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| Volume 11, Issue 1, January 2024 |

IV. CONCLUSION

Environmental degradation is a process through which the natural environment is compromised in some way, reducing biological diversity and the general health of the environment. This process can be entirely natural in origin, or it can be accelerated or caused by human activities. Many international organizations recognize environmental degradation as one of the major threats facing the planet, since humans have only been given one Earth to work with, and if the environment becomes irreparably compromised, it could mean the end of human existence.[20]

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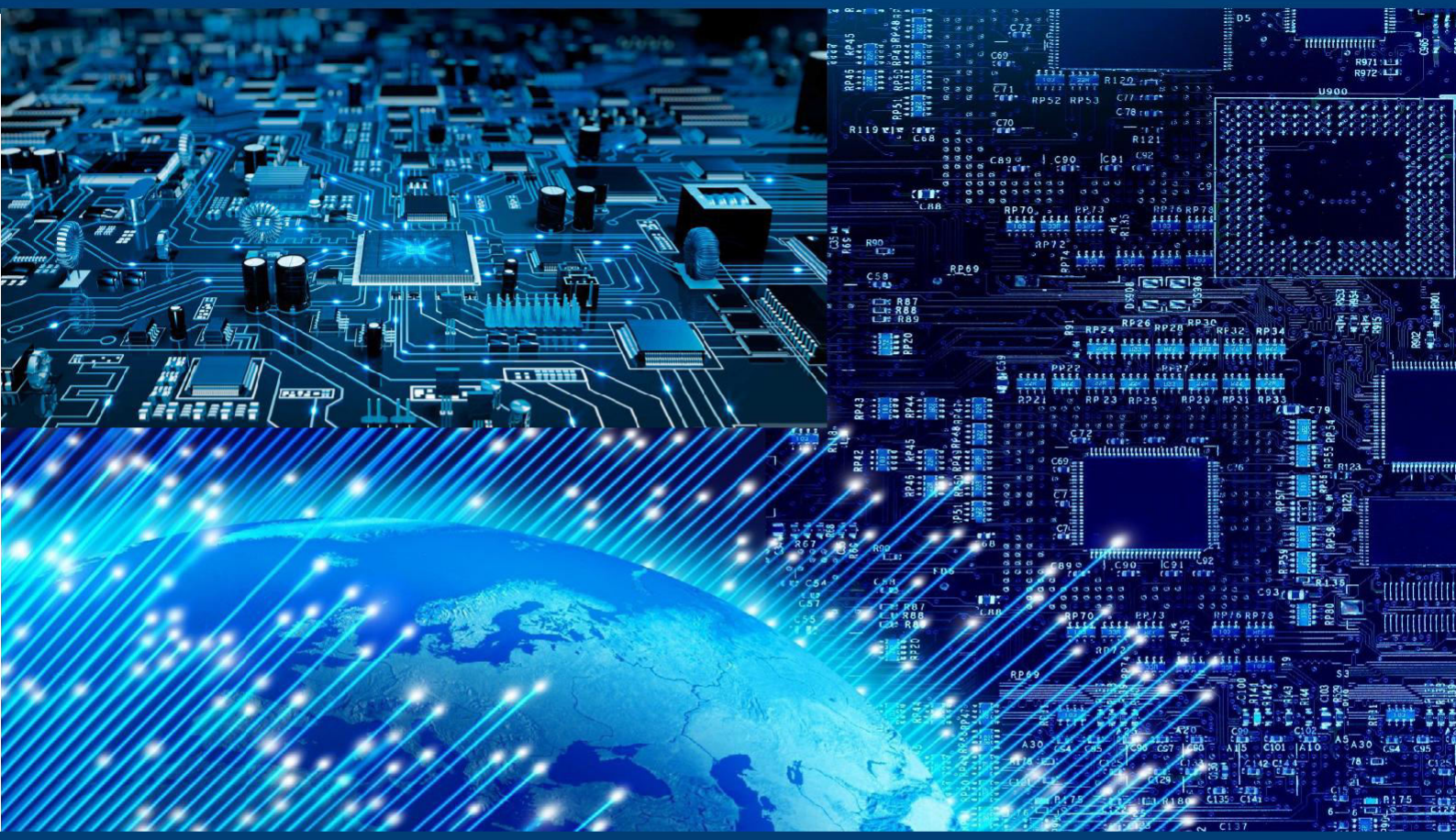

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