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Impact of Entrepreneurial Activities on Natural Capital

By Godfrey Wasara

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I. Background

It is important to state right at the beginning that climate change is natural, as evidenced by the period like the ice age; what becomes of concern is accelerated climate change that we are experiencing now. Atmospheric scientists believe that we are experiencing unusually rapid warming of the global climate and that this is a result of human activities, although there is uncertainty about the rate and degree of warming Beazley (1993). He further argues that this is a result of increased concentrations in the atmosphere of what are known as greenhouse gases, among which are carbon dioxide, water vapour, methane, chlorofluorocarbons (CFCs), and nitrous oxide.

Kennedy (1987:103) posits that the scientific explanation behind global warming relates to the "thin-film" that clothes our planet earth. The earth is a closed system where nothing enters or leaves except the sun's radiant energy. Processes on earth occur when materials change forms. A good example of a material changing is gasoline used to move a vehicle. As it travels, the gasoline is not eliminated, but instead, takes some other form. Kennedy argues that if such a closed system was to run indefinitely, the transformation system constitutes a closed cycle in which material returns to its original form: new resource becomes useful matter which becomes waste which is then absorbed back into the ecosystem to become future raw material. Other things remaining equal, it becomes a perfect self-sustaining cycle of life. Bottlenecks often occur in the conversion of raw material to the useful matter, as evidenced during Malthus's times when population growth detected demand for more resources. As a result, scarcity forced inhabitants to innovate on new technology that resulted in the birth of the steam engine, the industrial revolution, internal combustion, and electricity to mitigate the bottlenecks. The more people the earth needs to support, the better they are supposed to live, and the faster the transformation needs to be driven. The ecosystem has been run faster than it can sustain itself.

Kennedy further argues that the bottleneck appears to have shifted to the waste disposal stage. Once humanity forces the system to run harder, the waste-carbon dioxide (CO2), emissions, chlorofluorocarbons (CFC) acidified forests and polluted rivers get worse. Feeding coal to the steam engine is easier than getting CO2 emissions absorbed into the ecosystem.

Global warming and the earth's closed system relates to the interaction between the sun's heat and certain greenhouse gases in the atmosphere. Sun's energy comes to us through radiation, but almost all of that radiant energy is either reflected or radiated back into space. If it were not, the earth would then keep on heating up forever. When it functions properly, a uniquely balanced system exists. But if-as scientists now believe it is happening-the composition of the trace gases in our atmosphere is altered by human activity, then more radiated heat is being trapped (as within the glass of a greenhouse) which not only warms up the atmospheric gases but everything else as well. At the same time, scientists are concerned that the ozone layer, which protects the earth and its inhabitants from harmful solar radiation, is being significantly depleted by chemical emissions like CFCs. The bigger the ozone hole, the more vulnerable human beings are, say to skin cancer Kennedy (1997:107).

As alluded to earlier on, the phenomenon of global warming has always been with us and is vital for life. Without the earth's atmosphere, temperatures would be about minus 18 degrees Celsius, not

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comfortable when compared to our average normal temperature of 15 degrees Celsius. Thus the range of 33 degrees Celsius is the reason why the earth is not cold and dead like Mars which, if ever it had an atmosphere, lost it long ago and is lifeless and frozen. On the other hand, carbon dioxide constitutes bulk of Venus's atmosphere hence its temperature is hotter that the baker's oven (450 degrees Celsius), making life impossible. While Mars is a deep freeze and Venus is a furnace, a thin film of matter-including its vital atmospheric gases-that permits life, wraps the earth. Should the composition of these gases alter dramatically, we would either return to the ice age or find our temperatures rising to uncomfortable or disastrous levels. Kennedy (1997:106)

Entrepreneurs carry out entrepreneurial activities with one objective in mind: that of increasing their wealth. Such acts have taken a toll on natural capital, a key factor of production that has turned into a passive victim of entrepreneurial activities. Destruction of natural capital during the wealth creation process strengthens the argument in favor of carrying out an investigation on the impact of entrepreneurial activities on natural capital and the need to come up with necessary interventions.

The objective of the study is premised on the ontological view that the preservation of natural capital gives rise to sustainable entrepreneurial activities. Entrepreneurial interest revolves around financial prosperity. The attitude does not take due consideration to harm inflicted upon both natural capital and, subsequently, human capital. Unfortunately, this is against the long term sustainability of both natural capital and overall economic development.

It is, therefore, necessary to lay a firm foundation that enables entrepreneurs to appreciate the need to carry out financial agreements, financial arrangements and, financial transactions with due regard and respect for natural capital if they intend building and growing economically sustainable enterprises.

The pollution of air has a negative impact on both human and ecosystem health, contributes to eutrophication, atmospheric ozone, and acidification of water and soil. It also impacts on agriculture production and forests resulting in reduced yields. Most of these damaging effects originate from industrial activities. Nitrogen Oxide (NO) emitted from combustion is a dominating pollutant resulting in eutrophication (EEA 2014)

The last three decades saw the emerging of a school of thought which saw some components of environment as an equally vital type of capital necessary for the sustainability of the economy as are produced and human capitals. These newly recognized forms of productive resources have come to be collectively called *natural capital.* The emergency of the concept of natural capital reflects the perception that environmental systems play a fundamental role in determining output and the human well-being, provision of resources, and services and absorbing emission and waste. It constitutes the vital core forms of capital by providing necessary conditions for human existence. It is the source of priced and unpriced environmental inputs upon which production depends. It is now increasingly recognized that natural capital, just like other types of capital, should be conservatively looked after, if the economy is to be sustainable Smith, Simard, and Sharpe, (2015:5). Natural capital is both limited and vulnerable. Nevertheless, the lack of recognition of the intrinsic importance of biodiversity, and a clean and healthy environment makes the concept of applying nature to capital cumbersome.

Entrepreneurial activities rely heavily on natural capital for raw materials. No enterprise can operate in the absence of natural capital. People, profit, and the planet, can no longer be separated. Sustainable natural capital is the primary moral and economic imperative of the 21st century. From an entrepreneurial point of view, it avails both business opportunities and risks. Decision-makers should note that there is a complex interconnectivity among nature, society, and business. Most importantly, current incremental changes towards sustainable natural capital are not sufficient. We need a fundamental shift in the way enterprises are managed and the way entrepreneurs act and organize themselves King, (2009). The success of enterprises in the 21st century bears a relationship to three independent sub-systems-the natural environments, social, and political system, and the global economy. Global enterprises cannot do without the three, and they need all three to flourish (*Tomorrow's Company*.)

Considering the above, it becomes evident that Economy/Business/Profit, People, and Planet/Natural capital can no longer be separated. The class action, fall in the market value of shares, and emergency of environmental pressure groups together with related fines and penalties solidify the case. The negative impact of entrepreneurial activities reciprocated by depletion, degradation, and pollution of natural capital, resulting in climatic changes, underpin the need for governments to formulate public policy that encourages entrepreneurs to take due consideration of natural capital as they go about their activities and participate in sustaining it for the benefit of future generations.

II. Research Questions

- What is the main objective of entrepreneurial activities?
- What is natural capital?

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- How do entrepreneurial activities impact on natural capital?
- What may be the remedies?

III. Research Methodology

The study investigated the impact of entrepreneurial activities on natural capital. The study used the qualitative research methodology, and collected data from various documents, and observations where possible. The study involved library-based, desk, and archive research. Literature was reviewed from books, journals, website pages, newspapers, magazines, government Acts and publications. Authenticity, creditability, representativeness, and meaning determined the choice. The study made the observations in the SADC countries. The researcher was able to draw direct evidence of the eye by visiting various stakeholders in the SADC countries and also went into the field to note the impact of such activities on natural capital. The researcher felt that, at times, it is best to observe what actually happens on the ground. It was, therefore, necessary to do direct observations of natural settings.

IV. Discussion

a) *Introduction*

Clarke J, (2002:168) citing astronaut Bormann, F., notes that those who have had a chance to watch the earth from as far as the moon, agree that the earth is small, and its resources are limited. The population dependent on it is already too large, and continues to increase. Natural stocks of air and water are rapidly getting polluted with sewage and chemicals. The best everyone can do is to realize that the resources we have are not inexhaustible. We, and the generations to come, all live on this planet.

The natural capital we exploit will not exist in perpetuity. *Homo sapiens* have been successful. He has increased, but until recently, war, famine, and pestilence have kept that increase within reasonable bounds. As a species, he did not until recently outrun the resources available to him, but during the last century, this has changed. Population growth has become a geometric progression. The dead are no longer the majority. Probably less than a million survived the ice ages. By the time the first cities began to appear eight or nine thousand years ago, the world population could have reached five million. By 1 500 BC world population may have numbered seventy million; by year 1AD, perhaps one hundred and fifty million; by 1600AD five hundred million, by 1800AD nine hundred million and by AD 1900, 1.5 billion. Then acceleration took off. By AD 1950 world population had doubled to three billion. By 1990 it was six billion. More than half the men who ever lived, have lived during the past 70 years. Nearly two-thirds of the built-up area was open land when I saw born. Three hundred and fifty thousand years ago, a man was using fire. Of the fire man has used for heat, transport, power, and war, four-fifths have been used during my life time. I am now 70. This population explosion has not resulted from larger families; on the contrary, almost everywhere, couples had fewer children. The trouble has been that public health has checked nature's cull. Too few babies have died, Paget, (1995:96).The lives of all of us are intimately tied to the resources our planet provides-resources such as air, water, soil, minerals, plants, and animals. The extent of human impact on the earth depends on the number of people there are and how much of these resources each person uses. The maximum use of resources that the planet or particular region can sustain defines its carrying capacity Beazley, (1993). Though we can increase the carrying capacity through technology and agriculture, there is a reciprocal cost of reducing biodiversity and disrupting ecological processes.

The same argument underpinned the well-known essay penned by the British philosopher Malthus in the 17th century. He posited that the population grew at a geometric progression while food production increased on arithmetic proportions. During that time, his argument was neutralized by the agriculture and industrial revolutions together with Britain's expansionist and colonialist policies. Today many third world countries remain confined in the Malthusian trap. Now the question is, should population explosion be reduced by letting babies die? Babies cannot be left to die. The solution lies in efficient and effective management and narrowing of the negative co-relation that exists between population growth and its needs against sustainable development through prudent exploitation of natural capital to meet desired goals.

The soil which has kept breaking away from high lands during these ages and these disasters, form no pile of sediment worth mentioning, as in other regions, but keeps sliding away ceaselessly and disappearing away in the deep Plato as cited by Zangger (1992:125). On commenting on the above observation, Zangger went on to say that soil erosion was the most disastrous environmental catastrophe ever to have occurred on earth. Plato, too, considered it as the most important factor of environmental change in ancient Greece, stressing the awareness of people in the Classical period towards their environmental impact (1992:125). From what is happening now, one can conclude that we have not learned much in the past 2330 years. It remains an undisputed fact that the Greeks who lived after the Bronze Age were aware of climatic changes and their consequences, and they also knew that the landscape's fate is largely dependent on human use and abuse Zangger (1992:127.)Kennedy (1997) cements Plato's concern above by arguing that

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since mid-twentieth century alone, the world has lost nearly one-fifth of the top-soil from its croplands, one-fifth of its tropical rain forests and some tens of thousands of its plants and animal species. And each new investigation of "The Earth as Transformed by Human Action" reveals mounting pressure (1997:98). According to alarming appeal sent to Latin American Presidents in July 1991 by Gabriel Garcia Marquez and other distinguished signatories, as we move into the 21st century, three-quarters of America's tropical forests may be felled. 50% of their species lost forever. And what these trends reflect is that what nature created over the course of millions of years will be destroyed by us in little more than forty years. In the end, it is not only the environment that gets destroyed, but human beings themselves also. Natural disasters such as floods and earthquakes are a manifestation of the conflicts that occur between people and the geophysical processes.

b) Natural Capital

The concept came about when economists began to view stocks of clean water and air as well as forests, fisheries, and the ever-evolving system that supports them and us as *natural capital*. Originally, the term was used to refer to those aspects that humanity exploited for its well-being such as fertile top soil. Growing awareness of the intricacy and delicate balance of the relationship between natural environment and human economies is encouraging many to think of our total environment as precious natural capital.

Natural capital has always been ignored in macroeconomic models, and accounting for it comes as an afterthought. It has always been there but appears in a hidden way as a fixed and indestructible factor of production Ramsey (2010). The renowned economist David Ricard called it Land. The term ignores other components of natural capital namely, clear water and air, forests, fisheries, and evolving systems that support them and us.

In the infancy of Economics as a subject, economists defined productive inputs under land labor and capital. Capital here referred to *produced capital*. Land did not cover all the aspects of nature but was, however, limited in supply. The rest was limitless and taken for granted. Less attention was given to it due to the belief that it was costless, and its supply was infinite.

Now, there is pressure to economize natural capital. The exploitation of natural capital is not sustainable. On the other hand, waste products from production are degrading and polluting the world's stocks of natural capital.

One may argue why it is necessary to value natural capital; the following reasons suggested by the State of Natural Capital sum it all up:

1. Such valuation is unavoidable since human requirements exceed resources available to satisfy them all. Therefore, as society decides to do one thing, it is making a decision not to do another. Values on each option are implicitly being placed, and trade-offs made.
2. It is better to be explicit about trade-offs and valuations inherent in decision making than to keep them implicit and invisible. By incorporating the value of natural capital into decisions made by the governments, business, and individuals, scarce resources are used more efficiently, economic growth can be better supported, and societal wellbeing increased.
3. The reason for placing a value natural capital is not about putting a price and selling it off. Placing a value on it ensures that it is no longer ignored when making decisions. Mismanagement, over-consumption, and under-investment in natural capitalis due to our ignorance of its value *(The State of Natural Capital 2015:13)*.

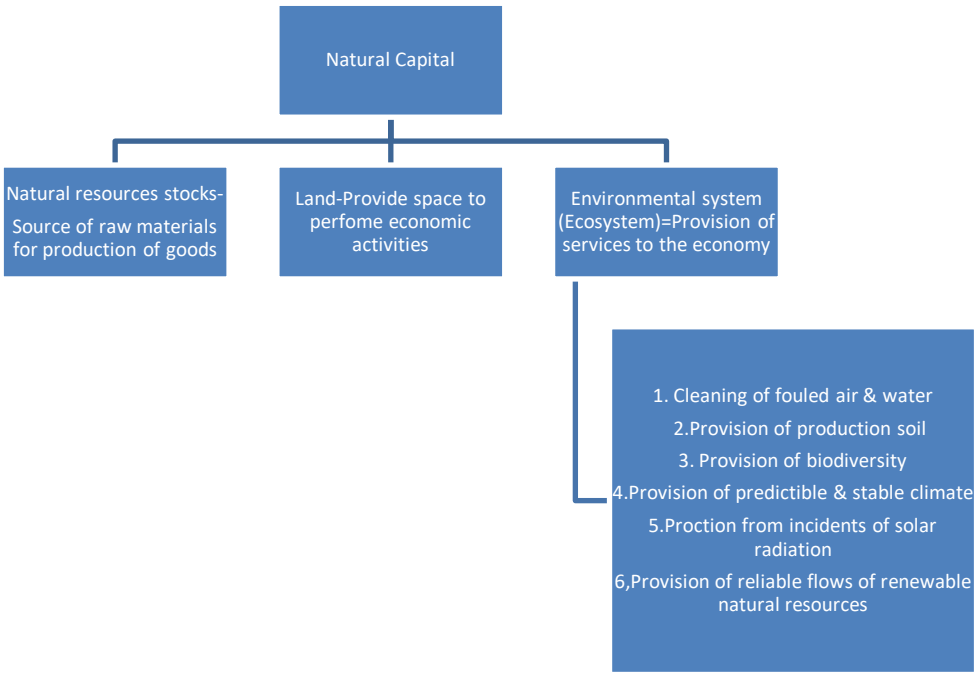
Humanity consume natural capital directly and indirectly, like other capitals. Some resources within it are aesthetic, intrinsic, and bio diverse. The ecosystem is a vital component of natural capital. In it are visible products such as food, fuel and fresh water and many others that are out of view. It further sustains life through preservation and regeneration of soil, maintenance of nitrogen and carbon, recycling of nutrients, controlling of floods, mitigation of droughts, filtering pollutants, assimilation of waste, pollination of crops, operation the hydrological cycle, and the maintenance of the gaseous composition of the atmosphere Ramsey. F (2010:2). The invisible functions of the ecosystem are ignored in estimating the worth or value of natural capital.

It was discovered recently that the correct indicator of economic progress over some time is the change in *inclusive wealth*. Inclusive wealth is the sum of the social worth of all capital assets economies relyon. The social value of an asset is its *shadow price* as opposed to the familiar market price. Shadow value relies on both usefulness and facts. An asset's shadow price is the contribution an additional unit would make to human well-being Ramsey, F. (2010). That which pollutes has a negative shadow price. Human well-being refers to both those still living and future generations.

In the System of Environmentally-Economic Accounting (SEEA) framework, natural capital refers to all types of environmental assets, the naturally occurring living and non-living components of the Earth constituting biophysical environment European Commission et al. (2014).

The ecosystem assets and natural resources make up natural capital.

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Source: Self

Figure 1: Components of natural capital

United Nations Environment Program (2014:7) citing Voora and Venema (2008) says that the natural capital concept was popularised in the early 1990s and was born out of theoretical advances to bridge the gap between economics and ecology. Various definitions of natural capital underlie human well-being. Daly (1994), as cited by UNEP (2014), defines natural capital as a stock that yields a flow of natural productive resources and tangible natural resources. OECD (2007) defines natural capital as natural assets in their role of providing natural resources inputs and environmental services for economic production. The UNEP (2012) emphasizes specific components; Natural capital includes land, minerals, and fossil fuels, solar energy, water, living organisms, and the services provided by the interaction of all these elements in ecological systems.

Neumayer (n.d.:3) broadly defines natural capital as a stock that provides current and future flows of service. It is then the totality of nature, that is, resources, plant species, and ecosystems that are capable of providing human beings material and nom-material services.

The diagram below illustrates the operation of the ecosystems.

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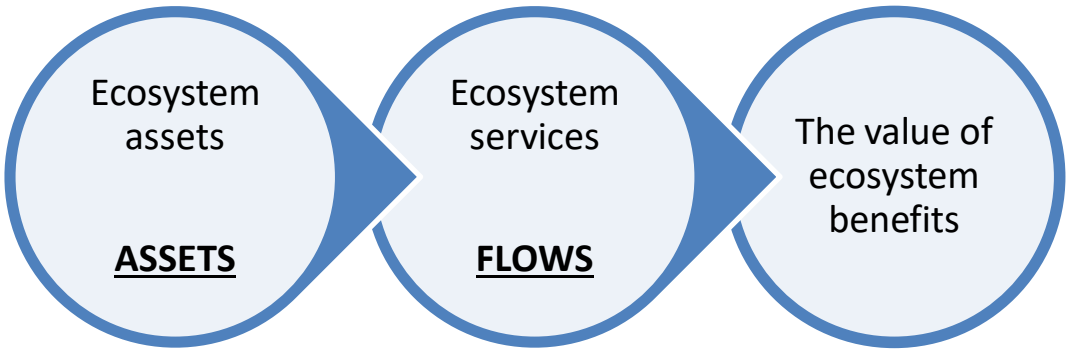


Figure 2.2: Ecosystem assets and ecosystem services: Stocks and flows. Source: UNEP-Towards a global map of natural capital

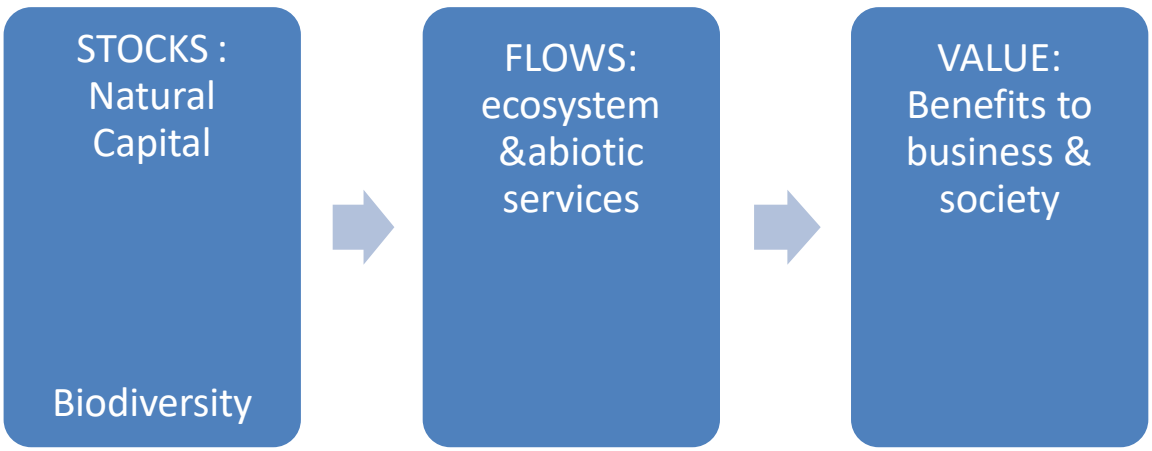


Figure 2: Natural capital stocks, flows, and value. Source: Natural Capital Protocol

Neumayer (n.d. 6) further posits that natural capital has the following three unique characteristics.

1. It provides basic life support systems that no other form of productive can provide:

It performs several function other forms of productive cannot do Ehrlich & Ehrlich (1992). It is the basis of life; human and non-human. The world economy is contained in the ecosystem and not the other way round Daly & Townshend (1993). Man has since existed without other forms of capital but cannot survive without other components of the natural productive resource like air and water, to name just two. Nature enables human existence. It can cope with destruction to a certain level, and once it exceeds that threshold , there is a likelihood of total breakdown. There are limits to meta-resource depletion Ehrlich, (1989). These life support resources are non-substitutable, and their degradation leads to irreversible catastrophes. It is hard to calculate their value to human existence. The usefulness is infinite.

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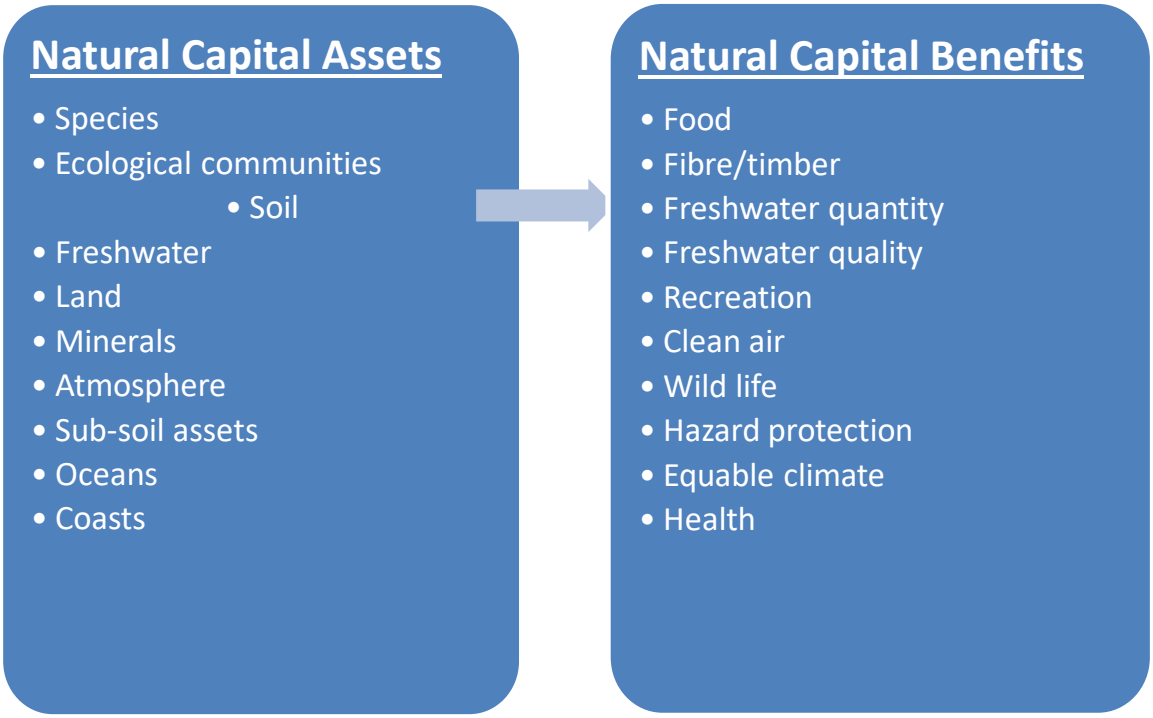


Figure 3: Natural capital Assets and types of benefits. Source: The State of Natural Capital

To some extent, natural capital is a necessary input to production:

The first law of thermodynamics postulates that we produce nothing without resource inputs and we can destroy nothing as well There is a minimum productive natural capital needed for resource input and for taking up the unwanted side products of output-pollution and waste. In practice, it is possible to live without produced capital like cars and factories.

2. It provides multiple benefits simultaneously

One of the unique characteristics of natural capital is that it delivers several benefits simultaneously. Investment in natural productive resources has the potential of bringing in plenty of benefits to various beneficiaries.

3. We cannot reconstruct some elements of natural capital once they are destroyed:

Destruction of certain components of natural productive resources is irreversible or quasi-reversible. Other types of natural capital are not substitutable as opposed to produced capital. Though costly and time-consuming, human-made productive resources can be reconstructed. An example of non-substitutability is the destruction of biodiversity, where it becomes impossible to replace the lost species. On the other hand, ozone layer depletion and global warming may regenerate to their former state if allowed to do so though it takes some time. Consumption of non-renewable energy is an example of quasi-irreversibility.

Neumayer (n, d) further argues that the reason we cannot preserve the non-substitutable and quasi-reversible natural capital is because of risk, uncertainty, and ignorance found in abundance in the world we live. ACCA et al. define natural capital as the stock of natural productive resources derived from natural resources such as biological diversity and ecosystems along with geological resources such as gases and minerals. It is the supplier of the products and services upon which the global economy relies and provides inputs and indirect benefits to the business. Natural capital is the quantity of the natural productive resources obtained from natural sources such as physically tangible items, biological diversity, and ecosystems, in addition to gases and minerals. It provides the products and services upon which the economies rely and, is a source of inputs to the business. It is the elements of the natural environment that provide valuable goods and services to people (Natura Capital Committee). It is another term for the stock of renewable and non-renewable natural resources on earth (e.g., plants, animals, air, water, soils, minerals) that collectively produce benefits to people Atkinson & Pearce (1995). The flows can be ecosystem services or abiotic services which provide value to the business and society (Natural Capital Protocol).

Ecosystems are made up of plants, animals, micro-organisms, and the non-living components of nature that work together as a functional unit. They include deserts, coral reefs, wetlands, and rain forests.

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Ecosystem services: The intangible utilities that rely on biodiversity obtained by human beings from the ecosystems. Benefits people gain from the ecosystem such as timber, fiber. pollination, water regulation climate regulation, recreation, mental health, and other

Abiotic services are benefits people enjoy. These are a product of fundamental geological processes. The comprise supplies of minerals, oils, and gases as well as geothermal heat, wind, tides and the annual seasons. (Natural Capital Protocol)

Biodiversity is made up of various living organisms at species, habitat, and genetic levels. It is a component of natural capital. It is critical to the health, and wellbeing of natural productive resources since it keeps natural calamities like floods and droughts under surveillance. It supports vital processes such as the carbon and water cycle and soil formation. Biodiversity is a component of natural capital and also underpins ecosystem services (Natural Capital Protocol)

c) *Impact of public entrepreneurial activities on natural capital*

Kennedy (1997) argues that the earth's thin film of life is entire and interconnected to such an extent that damages afflicted upon the atmosphere by activities in the tropics could have negative effects not just locally but everywhere. He further argues that the environmental crisis we confront now is qualitatively and quantitatively different from anything before because so many people have been inflicting damage on the world ecosystem during the 20th century that the system as a whole-not simply its component parts-may be in danger (1997:96) He further argues that the prospect that human economic activities are creating a dangerous greenhouse effect of global warming with consequences for the entire earth's ecosystem and the way of life for both the rich and the poor alike.

Every business impacts and depends on natural capital in one way or another and will, therefore, experience some risk and opportunities associated with those impacts and dependencies TEEB (2012). Resultant effects arise directly from business operations or indirectly from the use of products and services. Such effects occur at any point in the value chain through exploration and extraction of raw materials, intermediate processing, and production of finished goods, distribution, consumption, disposal, or recycling. Most of these impacts are negative and include land degradation and air pollution. On the other hand, dependencies on natural capital include the production of crucial inputs like land, raw material water energy, natural filtration of water, waste assimilation, and protection from floods and storm drainage.

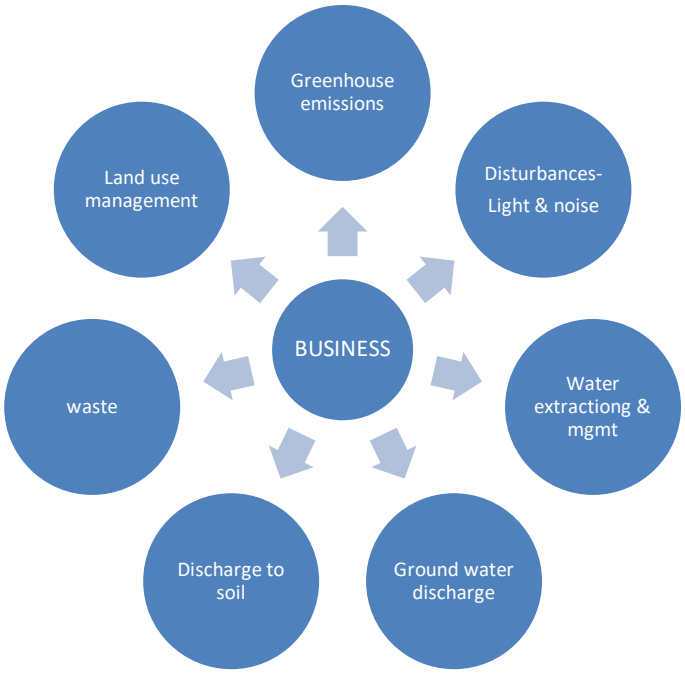
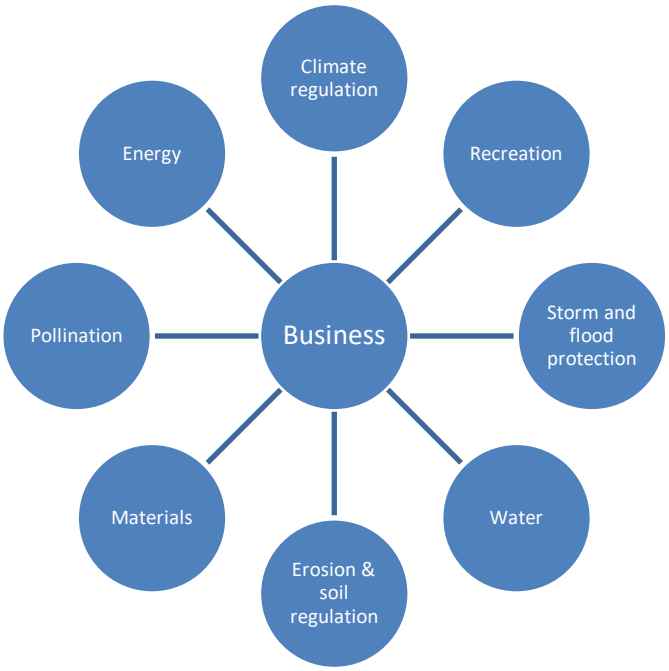


Figure 4: Business impacts on natural capital. Source: Natural Capital Protocol

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Source: Natural Capital Protocol

Figure 5: Business dependencies on natural Capital

The Natural Capital Protocol argues that to measure dependencies and impacts on biodiversity, one needs to understand the relationships between business activities, the changes in biodiversity, and the associated costs and benefits of these impacts. Business impacts on biodiversity may be direct, or indirect for example, through over-exploitation of natural resources, habitat loss or restoration, fragmentation or degradation of ecosystems, pollution the introduction of exotic species, or contribution to climatic change. They further argue that to measure business dependencies on biodiversity, one needs to understand what aspects of biodiversity business activities rely on, and how external factors can affect them. The value offered to some business is observable in some industries.

The motorized public transport sector

Due to various attributes that include low initial cost, flexibility, and versatility, motorized public transport entrepreneurship dominate markets for both passenger and cargo transport in most developing countries. Although it has become important to balance motorized and non-motorzsed passenger and cargo transport, the dominance of motorized public transport sector will continue for the foreseeable future. Rapid population growth, urbanization and excessive use of motor vehicles have generated mobility challenges in urban areas of Latin America and the Caribbean, including high rates of congestion, traffic accidents, pollution CAF (2010) as cited by the Inter-American Development Bank. According to a report by the Clear Air Institute, air pollution levels in many Latin American and Caribbean countries exceed World Health Organisation guidelines posing high adverse costs to human health, life expectancy and productivity Green and Sanchez (2013)

Volumes of motorized transport are increasing, but unfortunately, the use of emission control technologies is limited. Motor vehicles have become the number one source of urban air pollution in the developing world. Other negative impacts include accidents, noise, congestion, increased energy consumption, and greenhouse gas emissions. Without mitigatory interventions, living conditions in cities of the developing world will continue to deteriorate and finally become unbearable.

Air pollution is a well-known public health problem in most developing world cities. Epidemiological studies show that air pollution in developing countries accounts for high mortality rate, medical costs, and lost production ever years Fiaz, Weaver & Walsh (1996).

They list the following as the common air pollutants emanating from motorized transport system:

- Irrespirable particulate matter from smoky diesel vehicles, two-stroke motor-cycles, and 3-wheelers, burning of waste and firewood, entrained road dust and stationary industrial sources.
- Lead aerosol from the combustion of leaded gasoline
- Carbon monoxide from gasoline vehicles and burning of waste and firewood
- Photochemical smog (ozone) produced by the reaction of volatile organic compounds and nitrogen

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oxide in the presence of sunlight; motor vehicle emissions are a major source of nitrogen oxide and volatile organic compounds.

- Sulfur oxides from the combustion of sulfur-containing fuels and industrial processes
- Substances formed in the atmosphere by the reactions involving ozone, sulfur, and nitrogen oxide and volatile organic compounds
- Known suspected carcinogens such as benzene, 1.3 butadiene, aldehydes, and poly-nuclear aromatic hydrocarbons from motor vehicles exhausts and other sources Fiaz, Weaver & Walsh (1996:12)

They go further to state that in most cities, gasoline vehicles are the major sources of lead aerosol and carbon monoxide while diesel vehicles are the main sources of irrespirable particulate matter. In Asia, parts of Latin America and Africa two-stroke motor-cycles and 3-wheelers are also main contributors to emissions of irrespirable particulate matter. Gasoline vehicles and their fuel supply system are the main source of volatile organic compounds emission in nearly every city. Both gasoline and diesel vehicles contribute significantly to emissions of oxides of nitrogen. These, dominate in the emission of toxic air contaminants in the majority of cities and are probably the largest sources such contaminants Faiz, Weaver & Walsh (1996:14)

V. Conclusion and Recommendations

The study focused on assessing the impact of entrepreneurial activities on natural capital. The resource is an important component of the factors of production. The study can now confidently conclude that economic activities and entrepreneurial actions in particular impact negatively on natural capital. As they carry out their entrepreneurial activities, they will, on the other hand, be depleting, exploiting, and polluting the environment. The situation is exacerbated by poor waste management.

Planet Earth is the only asset we, as inhabitants, jointly own. It is imperative that we start acting responsibly, put a stop to careless exploitative tendencies, and try where possible to restore lost elements of natural capital. The developed nations have raised the red flag. Many initiatives are now in progress to halt unnecessary waste and restore the recoverable components of natural capital. Africa's vast natural resources are under threat of desertification due to population growth, unsustainable exploitation of natural capital and ineffective waste management strategies.

The study recommends the following

1. Governments should prioritize legislation that promotes prudent exploitation of natural capital and restoration of depleted capital where possible
2. Entrepreneurs should be motivated to innovate on business models that endure instead of burning out.
3. Governments need to incentivize those who invest in research & development and innovation in business models whose objectives include among others, achieving sustainable development
4. The researcher also asserts that 'the role of natural capital in entrepreneurial activities' should be incorporated in entrepreneurial studies and treated as a vital component of the syllabus.
5. Entrepreneurs' continuous training and development is of the essence.

The study focused on the impact of entrepreneurial activities-a component of economic activities-on natural capital. The researcher is also aware that there are other variables that impact on natural capital. Social, political, cultural, technological, and legal factors also play a role. These factors create the room for further research. Once all factors are taken into consideration, the human race can then join hands and fight in harmony against the negative impact of all factors to preserve our valuable resource; planet Earth.

References Références Referencias

1. ACCA, Fauna & Flora International & KPMG, *Is natural capital a material issue? www.kpmg.com ./UK/en/service/Audit/Pages/ClimaticChangeandSustainabilityServices.aspx*
2. Beazley, M. (1993). *Caring for the earth: a strategy for survival,* Reed Consumer Books Limited, London United Kingdom.
3. Clarke, J. (2002).*Coming back to Earth,* Jacana (Pty) Ltd, Houghton.
4. Faiz, A., Weavers, CS., Walsh, MP., (1996). Air *pollution from motor vehicles,* The World Bank, Washington DC.
5. Goodwin, N. R., (2003). *Five kinds of capital: Useful concepts for sustainable development,* Global and Environmental Development Institute, Working paper No. 03-07.
6. Green, J. & Sanchez, F. (2013) *Air quality in America: An overview.* Clean Air Institute. http://thecleanairinstitute.org/calidaddelaireamericalatina/cai-report-english.pdf.
7. Kennedy, P. (1997) *Preparing for the 21st century.*
8. King, M 2009, King Report on governance in South Africa, *Institute of Directors Journal, King 1V Review Journal (2016).*
9. National Capital Committee (2015) *The state of natural capital,* Third Report to National Economic Affairs Committee.
10. Neumayar, E., (2015). *Preserving natural capital in a world of uncertainty and scarce financial resources,* International Journal of Sustainable Development and World Ecology, 5 (1).
11. Simard, C., Smith R., (2001). *A proposed approach to environment and sustainable development indicators based on capital*, prepared for The

© 2020 Global Journals

National Round Table on Environment and Economy's Environment and Sustainable Development Indicators Initiative.
12. Smith, K. (1996). *Environmental hazards-assessing risk and reducing disaster*, Routledge, London, England Tomorrow's Company (2008) London, England.
13. *United Nations Environmental Program, Towards a global map of natural capital, (2014)* UNEP
14. *United Nations Environmental Program. Connecting finance to natural capital: A supplement to the natural capital protocol*, www.naturalcapitalcoalition.org/protocol
15. Zangger, E. (1992). *The flood from heaven,* Sedgwick & Jackson, London, England.

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