
INDUSTRIALISATION AND ENVIRONMENTAL DEGRADATION; A CASE OF BUNDIBUGYO TOWN COUNCIL, BUNDIBUGYO DISTRICT**1 Musoke Micheal, 2 Dr Arinaitwe Julius, 3 Musiimenta Nancy****1, 2, 3 Metropolitan International University**

ABSTRACT: The study was aimed at investigating how industrialization has contributed to environmental degradation using Bundibugyo Town Council as a case study. The study was guided by the qualitative research design where data was collected using questionnaires, interview and observation on over 50 respondents purposefully selected. A qualitative case study design was selected because it helped to get detailed information on how industrialization leads to environmental degradation in Bundibugyo Town Council. This was research design was selected in order to capture deep understanding of the study including respondents' feelings, emotions and non-verbal communications. The findings of the study indicated that industrialization contributes to water, air, noise pollutions which greatly affect the ozone layer. The study also indicated that deforestation, over population, landslides, floods and over consumption are some of other factors that contribute to environmental degradation. It was therefore concluded that industrialization has great impact on environment and recommendations were made such as putting up anti-deforestation law, reducing on the price of electricity among others.

Key: *Industrialization, Environmental Degradation, Deforestation.*

Background of the Study

The industrialization and industry revolution can be traced as a long way as 18th century starting in Britain when she shifted from agrarian financial system to manufacturing financial system after which unfold to other elements of the world. Since a long time, commercial boom has started out to have an effect on surroundings with severe disadvantage issues (Annet et al., 2023). It reasons notable strain at the entire bionetwork and herbal machine additives like water, air, soil, bio-range such as surrounding eco-machine. figuring out the severity of the trouble, effects of industrialization at the surroundings want to be analyzed with extra intensity and feeling (Christopher, 2022). business effluents contain numerous important nutrients or own homes which

could without problems be applied for many price-delivered functions with commendable blessings to society and surroundings. This examines focused on the position of industrialization closer to environmental degradation in Bundibugyo metropolis Council. Industrialization has introduced economic prosperity; additionally, it has led to greater populace, urbanization, apparent pressure at the primary existence supporting systems whilst pushing the environmental impacts towards the threshold limits of tolerance. With booming commercial growth and relatively low land mass, environmental sustainability is now becoming a good-sized identifying thing in business improvement process (Oromo et al., 2023).

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This includes the conceptualization of some key phrases inside the research subject matter. consistent with Miriam Webster (2015) defines industrialization as the increase and attention of industries in one specific location (Polycarp et al., 2023). because of this whilst an area has more than one industry then it's far an industrialized place. these industries deal with the producing of merchandise. Robinhood (2019) defines industrialization as the method thru which a country can shift from an agrarian financial system into mass production economic system (Moses et al., 2022). Environmental degradation consistent with oxford dictionary is the misuse of the environment. Environmental degradation is the disintegration of the earth or deterioration of the environment thru the intake of property, as an example, air, water and soil; the destruction of environments and the eradication of flora and fauna. Its miles characterized as any change or aggravation to nature's turf visible to be pernicious or unwanted. Ecological effect or degradation is created

Specific objectives

- Find out the role of industrialization towards environmental degradation in Bundibugyo Town Council
- Investigate other causes of environmental degradation in Bundibugyo Town Council
- Find out the possible measures to environmental degradation in Bundibugyo Town Council.

Research questions

- How does industrialization cause environmental degradation in Bundibugyo Town Council
- What are other causes of environmental degradation in Bundibugyo Town Council
- What should be done to conserve the environment in Bundibugyo Town Council?

Methodology

with the aid of the consolidation of a correctly full-size and expanding human populace, continuously expanding financial improvement or according to capita fortune and the utility of asset arduous and polluting era (Nicholas et al., 2023).

Problem Statement

Bundibugyo is one of the districts that is regarded for the developing of cocoa and can industries have been put in location to add fee on cocoa through production of goodies, jerry and others. Being close to the slopes of the mountain, Bundibugyo is expected to have sturdy surroundings with appropriate ecology, ecosystems, fertile soils (Annet et al., 2023). However, unluckily, Bundibugyo district is one of the districts that are constantly tormented by flooding of rivers and landslides inside the region. As a minimum in every yr., any human beings are displaced, others die and many plants are destroyed through heavy rainfall, floods and landslides (Nicholas et al., 2023).

Research Design

The researcher applied the qualitative research design which was in form of a case study. Mugenda and Mugenda (2003) describes a case study as an in-depth investigation of an individual, a group, institution or a particular phenomenon. Koul (2001) looks at a case study as an attempt to examine a particular individual or a unit in depth in order to gather pertinent information that can help to solve a problem at hand. This case study of Bundibugyo was aimed at investigating how to industrialization affect the environment. A qualitative case study design was selected because it helped to get detailed information on how industrialization leads to environmental degradation in Bundibugyo Town Council. This was research design was selected in order to capture deep understanding of the study including respondents' feelings, emotions and non-verbal communications.

Study Population

Amin (2005) defines study population as a complete collection of the elements that are of interest in a particular investigation. It is also defined as the entire set of cases from which research samples is drawn (Wilson 2010). The research was conducted on the environmental officers, industrialist, politicians, farmers and business personnel in the town council.

Sample size

The researcher selected only 70 respondents from the total population and this was based on the recommendations of Amin (2005) who said that the fewer respondent in the qualitative research produces credible and reliable data than many respondents.

Participants	Number	Percentage
Environmental officers	10	14
Politicians	10	14
Industrialists	10	14
Business personnel's	20	28
Farmers	20	28
Total	70	100

Sampling Technique

Sampling is the selection of a proportion from the largest population whose views are generalized to represent the views of the target population due to limited time and resources (Wilson 2010).

The researcher used Purposive or Judgmental Sampling Method. Purposive sampling method is where the participants are selected deliberately because they have knowledge about the study in order to get reliable

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information. The researcher used purposive sampling method because it will provide reliable data got from the reliable source (Maxwell 1996).

Data collection methods

Primary and secondary data was collected using variety of methods and tools in order to achieve reliable and valid data.

Self-Administered Questionnaires

The researcher also employed open ended questionnaires in order to captures the respondent's views about the study. These questionnaires were supplied to educated personnel

Data quality control.

The researcher ensured the quality of the research instruments by the use of validity and reliability. These were done in the following ways:

Validity.

Kallet (2004) defines validity as the credibility of experimental results and the degree to which the results can be applied to the general population. The validity of the instruments in this study was established by setting question items in the interview guide, self-administered questionnaires and checklist in conformity with the study's objectives. To ensure that interview guide, self-administered questionnaires and observation checklist measures the study objectives, the researcher sought advice from fellow students and the university supervisor.

Reliability.

Amin (2005) defines reliability of an instrument as the degree to which it consistently measures whatever it is meant to measure. To ensure this consistency, the researcher first piloted and tested the instrument will be sent to 20n participant (around 50 % of the expected participants) before data collection in the field. The results from the piloted sturdy were compared with the resulted from the general study in order to measure the level of consistency

Data analysis

The researcher analyzed data using the SPSS (Nelson et al., 2022). This is the process of identifying patterns or themes within the data collected qualitatively (Braun& Clarke 2006). The commonest ideas from the respondents made up themes which helped to have a detailed understanding about the topic understudy.

RESULTS

Industries found in Bundibugyo District.

The researcher found out that the major economic activities that are practiced by the people of Bundibugyo Town Council and the district at large is cocoa growing.

The presence of cocoa lead to the growing of industries purposely for cocoa processing and these include among others Esco Uganda limited factory, Olam Uganda factory, Uganda cocoa factory, three farmers cocoa chocolate factory among others. Most

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of these factories deals with fomentation of cocoa, drying up cocoa among others.

The Role of Industrialization towards Environmental Degradation in Bundibugyo Town Council

The purpose of this study was to find out how the increased the increased environmental degradation is related to industrialization in the area understudy. Environmental degradation is one of the largest threats that are being looked at in the world today. The United Nations International Strategy for Disaster Reduction characterizes [environmental degradation](#) as the lessening of the limit of the earth to meet social and environmental destinations and needs (Winny et al., 2023).

According to [Wikipedia](#), “Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems; habitat destruction; the extinction of wildlife; and pollution (Ninsiima et al., 2023).

The study findings indicates that cocoa factories in the contributes to noise pollution in the area. One of the district environmental officers had this to say during our face-to-face interview.

The words of the environmental officer are in line with the observation findings when the researcher visited the Esco factory, he found out that fermentation machine generates a lot of sound which can move around 50 km in the area.

Air pollution is also another impact of industrialization towards the environmental degradation depending on the study results.

Investigate other Causes of Environmental Degradation in Bundibugyo Town Council

The purpose of this was to answer the second research question which demanded for other causes of environmental degradation in the area understudy rather than industrialization.

Other than industrialization, another cause of environmental degradation in the area under study is deforestation (Ivan & Kazaara, 2023). Deforestation is the cutting down of trees to make way for more homes and industries.

Apart from that, the use of forest land for agriculture, animal grazing, harvest for fuel wood and logging is some of the other causes of deforestation (Davids et al., 2023). Deforestation contributes to global warming as decreased forest size puts carbon back into the environment.

The study results also indicate that over population is also another factor responsible for environmental degradation in the area understudy.

Rapid population growth puts strain on natural resources, which results in the degradation of our environment. Mortality rate has gone down due to better medical facilities, which has resulted in an increased lifespan (Jac & Kazaara, 2023). More population simply means more demand for food, clothes and shelter. You need more space to grow food and provide homes to millions of people. This

results in deforestation, which is another factor in environmental degradation.

Environmental degradation is also caused by natural occurrences in the areas having in mind that the Town Council is located in the footsteps of mount Ruwenzori. Natural cases such as flooding of rivers, landslides quakes, tidal waves, storms, and wildfires can totally crush nearby animal and plant groups to the point where they can no longer survive in those areas (Nicholas et al., 2023).

This can either come to fruition through physical demolition as the result of a specific disaster or by the long-term degradation of assets by the presentation of an obtrusive foreign species to the environment. The latter frequently happens after tidal waves, when reptiles and bugs are washed ashore. The results also indicate that landfills also contribute to the environmental degradation in the area of the study. Landfills pollute the environment and destroy the beauty of the city. Landfills come within the city due to the large amount of waste that gets generated by households, industries, factories and hospitals (Turyatamba et al., 2022). Landfills pose a great risk to the health of the environment and the people who live there. Landfills produce a foul smell when burned and cause substantial environmental degradation. A more basic cause of environmental degradation is land damage. Numerous weedy plant species, for example, garlic & mustard, are both foreign and obtrusive. A rupture in the environmental surroundings provide for them a chance to start growing and spreading (Moses et al., 2022). These

plants can assume control over nature, eliminating the local greenery. The result is a territory with a solitary predominant plant which doesn't give satisfactory food assets to all the environmental life. Thus, the whole environment can be destroyed because of these invasive species.

The Possible Measures to Environmental Degradation in Bundibugyo Town Council.

The results indicate that, in order to eliminate the negative impact of industrialization to the environment, factory should use nontoxic chemicals and silent machines in order to reduce on water, air and land pollution. In order to mitigate the adverse effects of environmental degradation, stopping deforestation is crucial for our environmental system. We cannot afford to cut or burn trees down as trees store greenhouse gases, produce oxygen and are the natural habitat for many animals and plants, which may become endangered if these forests are destroyed. An extensive a forestation campaign should be launched in the interest of environmental protection. We can further make a positive impact through reforestation or forestation. The other option is to treat industrial waste to remove toxic components so that the rest of the waste can be disposed of safely. It isn't always easy, and it does require that each factory implements the proper procedures to purify or cleanse their waste byproducts. However, it can help reduce the soil, air and water pollution being produced by these facilities, and also help in [conservation](#) of natural resources (Jackline et al., 2023). Governments

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require intervening and setting a framework whenever there are problems that lead to significant eco-degradation. Governments set high taxes for activities that harm our planet and support environmentally-friendly behavior with financial subsidies. These will also force industries and private people to avoid activities that lead to environmental degradation. There should also be high fines for illegal dumping to reduce the adverse ecological consequences. People and industries will continue to dump their trash illegally as they know that even if they get caught, penalties are quite low. The leaders should advocate for reduction in waste production by using your items and food more efficiently. If you want to get rid of old but still working things, be creative to give it a new look or use it in another way.

Conclusion.

The study was aimed at investigating on how industrialization contributes to environmental degradation in Bundibugyo town council. The study found out that the area understudy has industries that deal in the cocoa fermentation and processing. It was therefore concluded that industrialization affects the environment in terms of air, water and noise pollution together with land degradation. These are supported with other factors such as deforestation which is due to increased poverty and population increase and then the nature of the land. Provision of environmental education, use of non-plastics and punishment of the environmental abusers are one of the solutions advocated to reduce on the environmental degradation.

Recommendations

Treat industrial waste to remove toxic components so that the rest of the waste can be disposed of safely. It isn't always easy, and it does require that each factory implements the proper procedures to purify or cleanse their waste byproducts. However, it can help reduce the soil, air and water pollution being produced by these facilities, and also help in [conservation](#) of natural resources

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By doing so, your material things will be used more effectively (Shamim et al., 2023). If they cannot be put to use anymore, separate them and give them for recycling.

Plastic waste is a big environmental problem that leads to significant plastic pollution and the degradation of our planet. In order to cut down plastic waste, avoid buying items with plastic wrapper or packaging, refrain from using disposable plastic bags, cups, plates, containers, cutlery, etc. Instead, bring your own reusable stuff, which can be reused several times.

It is highly essential that children should know about the adverse environmental consequences of our daily life behavior and the ways we can footprint.

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