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An Empirical Perspective of Sustainable Entrepreneurship across Countries

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ABSTRACT

This paper presents empirically grounded evidence on the manifestations and characteristics of sustainable entrepreneurship across countries through the use of the 2009 Global Entrepreneurship Monitor (GEM) data. Sustainable entrepreneurs were identified on the basis of the extent of integration of their economic, social and environmental goals. There were 295 sustainable entrepreneurs identified, most of them coming from developed countries. Defining and distinctive characteristics such as age, gender, company size, employment status, forms of innovation of sustainable entrepreneurs were also derived from the dataset.

I. INTRODUCTION

The world is beset by socio-economic and environmental challenges. There is poverty, unemployment, criminality, youth restlessness as well as pollution, ozone depletion and deforestation to contend with. These challenges undermine the path towards sustainability. They

are roadblocks to sustainable development. Government, communities, business and consumer markets have to join hands to face these challenges and build a more sustainable world.

Since the beginning of the 21st century, there is heightened awareness and concerted effort on the part of business to contribute to sustainability. Sustainability is a concept and attitude in development that refers to being able to meet the needs of the present without compromising the ability of the future generations to meet their own needs (World Commission on Environment and Development, 1987). These efforts are anchored on three pillars, namely: economic, social and environmental.

One of the ways by which business exerts an influence to sustainability thrusts is through entrepreneurship. It is a remedy to many worldwide challenges by driving economies, generating employment, encouraging product development and engaging the vulnerable sectors of society including women and youth.

Depending on the goals that motivate the entrepreneur, there are four types of entrepreneurship, namely: commercial entrepreneurship, social entrepreneurship, ecopreneurship and sustainable entrepreneurship. Economic goals are prominent in commercial entrepreneurship. Social goals are prominent in social entrepreneurship. Environmental goals are prominent in ecopreneurship. In sustainable entrepreneurship, the approach is wholistic. Economic, social and environmental goals have equal prominence.

Sustainable entrepreneurship is still largely theoretical because less attention has been given to the integration of economic, social and ecopreneurship in sustainable entrepreneurship than to its individual components. Thus, the sustainable entrepreneur is still a theoretical abstract (Tilley & Young, 2009). There is, therefore, a need to give empirically grounded evidence on sustainable entrepreneurship.

II. STATEMENT OF THE PROBLEM

What defining and distinctive characteristics of sustainable entrepreneurship can be derived from empirical data across countries?

III. OBJECTIVE

The aim of this research is to draw empirical evidence from the Global Entrepreneurship Monitor (GEM) data so as to identify sustainable entrepreneurs across countries and associate certain characteristics such as as age, gender, company size, employment status and forms of innovation to them.

IV. SIGNIFICANCE

This will lead to a better appreciation of sustainable entrepreneurship across countries by advancing research on it. Findings will contribute to the scant empirical research on sustainable entrepreneurship. It can also increase awareness of entrepreneurial approaches that are wholistic in nature.

V. SCOPE AND LIMITATIONS

The study will be limited to the descriptive analysis of the 2009 Global Entrepreneurship Monitor (GEM) data. The results serve to provide preliminary insights with which to subsequently make an in depth study on by way of primary data collection through survey and/or case studies.

VI. REVIEW OF RELATED LITERATURE

Entrepreneurship consists of putting up a new business and transforming innovations into economic goods in the process (Nowduri, 2012). Through venture creation, entrepreneurs create new value necessary for economic systems to function properly (Bruyat & Julien, 2000). Especially in Asia, growth of economies are significantly attributable to entrepreneurship.

Entrepreneurship has been traditionally and exclusively linked to profit making or generating maximum economic value for the entrepreneur (Campbell, 1992; Caisson, 2003: in Nowduri, 2012; Majid, 2012). At the beginning of the 21st century, however, value generated by entrepreneurship other than what is economic has received attention fom the public sector, the media, the population at large, as well as from scholars (Bacq, etal, 2011). More and more companies are becoming active as prime movers of sustainable development. Their contribution to the sustainable development of the economy is indeed counted on as they provide solutions to environmental and social problems by offering environmentally and socially superior products serving the mass market and society at large (Schaltegger & Wagner,2011).

As a result, entrepreneurship can now be categorized into several subfields: commercial(or economic) entrepreneurship, environmental (or ecopreneurship), social entrepreneurship and

sustainable entrepreneurship (Majid, 2012). Majid (2012) noted that each type has its own priorities but all of them are required to survive economically.

Table 1. Subfields of Entrepreneurship

Sub-field	Description
Regular/economic	Being economically orientated by discovering and exploiting opportunities to make profit, through processes of venture start-up, risk assumption, product or process innovation and resources management.
Green/environmental	Being environmentally or ecologically embedded by preserving natural resources and creating economical development.
Social	Being socially embedded by complementing social and profit goals.
Sustainable	Being future orientated by balancing the efforts in making contributions to produce economic prosperity; social justice and social cohesion; as well as environmental protection.

Source: Richomme-Huet and De Freyman (2011) and Tilley and Young (2009)

Source: Majid, I. A., & Koe, W. L. (2012). Sustainable Entrepreneurship (SE): A Revised Model Based on Triple Bottom Line (TBL). *International Journal of Academic Research in Business and Social Sciences*, *2*(6), 294-310, page 297

While there was only commercial entrepreneurship in the past, sustainability oriented entrepreneurship has also emerged, taking on any of these 3 forms: ecopreneurship, social entrepreneurship and sustainable entrepreneurship. Depending on the goals, an enterprise can be classified accordingly, as follows:

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Table 2. Forms of Sustainability Oriented Entrepreneurship

	ECOPRENEURSHIP	SOCIAL ENTREPRENEURSHIP	SUSTAINABLE ENTREPRENEURSHIP
Core Motivation	Contribute to solving environmental problem and create economic value	Contribute to solving societal problem and create value for society	Contribute to solving societal and environmental problems through the realization of a successful business
Main Goal	Earn money by solving environmental problems	Achieve societal goal and secure funding to achieve this	Creating sustainable development through entrepreneurial corporate activities
Role of Economic Goals	Ends	Means	Means and ends
Role of non-market goals	Environmental issues as integrated core element	Societal goals as ends	Core element of integrated end to contribute to sustainable development

Source: Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: categories and interactions. *Business Strategy and the Environment*, *20*(4), 222-237.

Entrepreneurial profiles can vary among types. Compared to commercial entrepreneurs and social entrepreneurs tend to be younger and have a higher educational attainment. More males engage in entrepreneurial activity than females but gender gap is smaller in commercial entrepreneurship.

The percentage of commercial entrepreneurs that are employed (full time or part time) are lower than social entrepreneurs (Bacq,etal,2011).

The profile of a sustainable entrepreneur has yet to be explored. This task is challenging because sustainable entrepreneurship, in particular is a complex phenomenon as it integrates and requires equal contributions to economic, social and environmental aspects (Majid, 2012). It also offers products that can be considered sustainability innovations meant to serve the mass market and the larger part of society (Schaltegger & Wagner,2011) .

In a study made by Choi & Gray (2008), they identified 21 successful sustainable entrepreneurial companies. Then list of these companies are in Table 3.

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Table 3. Sustainable Companies

Company	Main business area	HQ location
AgraQuest	Natural pest management	CA
Ben & Jerry's	Ice cream	VT
The Body Shop	Natural skin care product	UK
Berkeley Mills	Furniture	CA
Chris King	Bicycle components	OR
Eileen Fisher Clothing	Comfortable clothing	NY
Explore Inc.	After-school day care	MD
Green Mountain Energy	Cleaner energy	VT
Iggy's Bread of the World	Bakery	MA
Interface Carpets	Floor covering	GA
Just Desserts	Desserts	CA
Magic Johnson Enterprises	Real estate	CA
Migros	Food retail	Switzerland
Newman's Own	Salad dressing	CT
Patagonia	Outdoor clothing	CA
Rhythm & Hues	Entertainment (Special effects)	CA
Seventh Generation	Household products	VT
Stonyfield Farm	Organic yogurt	NH
Tom's of Maine	Personal care products	ME
White Dog Cafe	Restaurant	PA

Table I.
Sustainable companies

Source: Choi, D. Y., & Gray, E. R. (2008). The venture development processes of "sustainable" entrepreneurs. *Management Research News*, *31*(8), 558-569, page 561.

In an effort to understand how sustainable entrepreneurs achieve their business objectives along with values and mission-oriented goals, they Choi & Gray (2008) found that sustainable entrepreneurs are one-of –a-kind. They have limited business backgrounds. They get financing from non-conventional sources and are more flexible with human resource practices. They are shrewd and innovative.

VII. METHODOLOGY

The main data source for a descriptive statistical analysis of sustainable entrepreneurs is the Global Entrepreneurship Monitor (GEM) 2009 special issue, the first worldwide survey on social entrepreneurship. GEM is an international research program providing data on entrepreneurship on a national level. It generates cross-country analysis of levels and determinants of entrepreneurial activity. It makes use of the Adult Population Survey (APS) questionnaire. In 2009, it had a special section on the prevalence and nature of entrepreneurship with a social purpose. Data was collected from 49 countries.

For the purpose of this research, answers to 10 questionnaire items as well as demographic data on age and gender were analysed. To identify the sustainable entrepreneurs from the sample, the answer to the following questions were used:

Question 1: Are you, alone or with others, currently trying to start or owning and managing any kind of activity, organization or initiative that has a particularly social, environmental or community objective?
Question 2: Organizations may have goals according to the ability to generate economic vale, societal value and environmental value. Please allocate a total of 100 points across these three categories as it pertains to your goals. For example, an organization's goals may allocate 80 points for economic value, 10 points for societal value and 10 points for environmental value.

How many points for economic value?
How many points for societal value?

And, finally, how many points for environmental value?

Answers to Question #1 should be affirmative and the points for economic, social and environmental vale should be more than 10 but less than 50.

VIII. RESULTS AND DISCUSSION

Table 4 in the Appendix summarizes and organizes the data related to sustainable entrepreneurship from the GEM 2009 Survey.

Only 39 countries from the 49 surveyed had sustainable entrepreneurs. There were 295 sustainable entrepreneurs identified. It is approximately 0.19% of the total sample size. Quantitatively, in addition to what Choi & Gray (2008) found out qualitatively, the sustainable entrepreneur is indeed one-of-a-kind. Most of them come from developed countries. Its characteristics are similar to commercial entrepreneurship: more males with ages ranging from 35-45 years old. However, unlike the commercial entrepreneurs, sustainable enterpreneurs tend to work full-time. Firm size is small. Their innovations are mostly in production methods and markets. They also serve a need that other companies can serve as well.

IX. CONCLUSION AND RECOMMENDATIONS

Sustainable entrepreneurship is a rare phenomenon. Patterns can be observed that are comparable to other form of entrepreneurship but due to the unique integration of the economic, social and environmental aspects in sustainable entrepreneurship it may have a separate set of theories that can be used and formulated with the use of the initial patterns unveiled in this study. Future

studies validating the patterns herein and uncovering new ones may be explored with the use of theoretical frameworks on sustainable entrepreneurship under a survey or case study design.

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Corporate Governance and Corporate Social Responsibility in Tanzania: The Case of Selected Companies

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Abstract

This paper sets out to examine the neglected research area of corporate social responsibility of the Mining Companies in Tanzania. This study was guided by the following specific objectives i.to examine tax payment compliance of the mining companies in Tanzania ii. to explore the extent to which mining companies donate local communities services in Tanzania iii.to investigate the compliance of environment management Act of 2015 iii.to explore the challenges facing Tanzania in enforcing corporate social responsibility of the mining companies in Tanzania. This study used a case study design and the methods of data collection were interview and documentary review. The sample size was 74 respondents selected through purposive sampling. The study findings revealed that there is poor practice of corporate social responsibility due to none compliance mining companies on paying tax, environmental pollution in Tighthe river in north Mara, inadequate compensations to the relocated local communities in Tanzania, conflict between artisan miners and multinational mining companies as well as low contribution of mining companies to the National economy that have turned the Country into resource curse. Also this

study noted some challenges such as weak legal enforcement, lack of government stake in the mining companies, corruption and lack of awareness of the rights and obligation of the Mining Companies' operations to the community resulting into myth of mining companies' social responsibility in Tanzania. This study recommends that the government should increase stake of government in Mining Companies as it is in Botswana, establishment of comprehensive legal and regulatory framework for corporate governance in Tanzania so as to have effective and efficient corporate social responsibility in Mining sector.

1.0. Introduction

The subject of corporate social responsibility of mining companies is very important in Tanzania mostly because of it is still a relatively new subject in corporate governance here in Tanzania and there are quite a few researches done about this field. Although responsible thinking and caring for the surrounding have become more important and popular, Tanzanian society is still generally demanding bigger responsibility from mining companies and organizations [30]. In this regards, the economical and social results of the mining companies are still more taken into account because in Tanzania, the practice of CSR is still largely voluntary despite having legislations such as The Extractive Industries Act of 2015, The Mining Act of 2010, The Petroleum Act of 2015 and The Environmental Management Act of 2004 that have provisions that require companies to have CSR [28]. Fortunately, government together with the rise of civic society have taken bigger lead and turned their attention to more socially responsible Companies.

In the mining sector, some of the companies subscribing to CSR principles are Barrick Gold with its much publicized "responsible mining" approach, Anglo Gold Ashanti, Resolute Mining, and

Tanzanite one [30]. In Tanzania mining companies' social responsibility has become a national agenda because the Country has unique geological environment that hosts a variety of economic minerals [20]. The most famous deposit is the Lake Victoria Greenstone belt in the central and north-central part of the country, but there are viable resources of various minerals in the north-east and the south-west as well [29]. Gold discovery and exploitation by German colonialists started towards the end of the 19th century and lasted until the First World War [29]. During the British colonial era (1918-1961) mineral production and revenue were mainly from gold, diamonds, lead, mica, salt and tin. Gold was at a peak level in 1940 when it contributed to about 90% of the value of the mineral production [29]. The discovery of large diamond deposits in Shinyanga region in 1940 and the subsequent establishment of Williamson Diamond Mine led to a dramatic rise in the national mineral revenue.

During Independence in 1961 did not lead to immediate changes in the mining sector. In the early 1960s, the contribution of mining to Gross Domestic Product (GDP) averaged was 3 – 4 percent [29]. In the period 1960 to 1966, however, the last big gold mines at Geita and Kiabakari closed down. Following political changes in 1967, a number of industries were nationalized and mining sector included in this reform.

In the liberalization period up to the 1980s, diamond production from Williamson Diamond Miners Ltd (WDL) accounted for more than 70 percent of the total value of mineral production in Tanzania [26]. As production at WDL continued to decline, contribution of the mining sector to GDP fell to about 1 percent in the period 1988 and its contribution to national revenue was only 0.3 percent [28]. There was little investment in the sector, and due to price regulations and lack of

market, the greater share of recovered gold and gemstones were smuggled out of the country. According to official figures, the total gold production was only 800 kilograms in the eight years period 1981-89 [29]. This nominal production in mining companies signified mundane corporate/companies social responsibility at that time in Tanzania.

In 1986, Tanzania agreed to a structural adjustment programme designed by the World Bank and International Monetary Fund. Internal and external trade was liberalized, and the government opened up for foreign investment in the Country [29]. In Tanzania, the liberalized mining legislation of late 1990s, which offered lucrative contracts to international mining companies which did not encourage an upgrading of Tanzania's Artisanal Small Miners sector to a medium-scale mining operations, which could work as sub-contractors for Larger Scale Mining [30].

The liberalization of mining, accompanied by the legalization of the buying and selling of gold and gemstones through banks and designated dealers, had immediate effects. In 1991, mineral sales increased almost 70 percent. This dramatic raise is attributed to record gold production and sales mainly by small-scale miners [2].

The economic reforms also entailed a boom in large scale mining. Foreign investors were invited to enter the country's mining sector, and since the late 1990s, Tanzania has received large capital inflows [29]. In addition to Geita Gold Mine and the AFGEM Tanzanite mine and major mining establishments include Kahama Mining (owned by the Canadian company Barrick, the third largest gold company in the world), Afrika Mashariki Gold Mines, Golden Pride Project, Buhemba Gold Mine, and Williamson Diamonds Mining [2]. The increase of the multinational

companies was not revealed if as related to conducive enforcement of legal framework and privatization policy which presupposes effective Mining companies' social responsibility.

Alongside these large establishments, there are thousands of people engaged in small scale mining. In the Tanzanian context, the terms artisanal and small scale miners are seldom differentiated. However, in the 1998 Mining Act, a small scale miner "is the holder of a mineral right through a Primary Mining License issued by the Commissioner for Minerals" [24]. The term 'small scale mining' covers everything from truly artisan mining which is often hazardous to miners' health and the environment to medium scale mines which make use of modern technology and proper disposal of chemicals.

A survey conducted for the World Bank in 1996 estimated that 550 000 people were directly employed in small scale mining [20,30]. Another study estimated that by the late 1990s, the sector employed somewhere between 500 000 and 1.5 million people [8]. These figures continue to be widely quoted, since no baselines on mining have been conducted since then, and since national surveys like the Household Budget Survey and the Labour Force Survey have little information on mining activities. However, the mining Act of 1998 entailed a number of changes which have resulted in both a decrease and an increase in small scale mining over the last six years [24].

At the moment, there are 5 600 small-scale claim holders for minerals, gemstones, stones and salt in the country, but many are dormant due to lack of capital. If we estimate that two thirds of the claim holders, 3 700, are active, and that each mine has 30-60 mine workers, it means that there are some 170,000 small scale mine workers in the Country. Several observers have referred to the

relationships within small scale mining as exploitative, since mine workers generally work for food and shelter only in the period before actual extraction is begun [15, 24].

As in other countries, many of the artisanal miners are itinerant and work only in the agricultural off season. It is not uncommon for young men to work as small scale miners for a few years, and then withdraw when they have raised enough capital to build a house and/or invest in business [8].

Therefore, the studies mentioned above show the mixes results. First the contribution of the mining sector to national revenue was only 0.3 percent in 1998 while after the establishment of the Mining Act in 1998 artisanal miners decreased and the relationship with small scale miners was exploitative in nature implying that at this juncture, the Mining Companies' corporate social responsibility was trivial and mundane although little has been investigated in Tanzania. So this study seeks to examine the mining corporate social responsibility by focusing on the legal compliance of the mining companies, ethical compliance that explores whether companies acting justly and fairly, and well as the economic responsibility of the mining corporations to the local communities and the government in Tanzania.

2.0 Statement of the Problem

Tanzania is endowed with huge amount of minerals which have contributed to development of the mineral sector especially from the liberalization period in 1980's to 2021. This period has witnessed an increase of the multinational companies in Tanzania coming to invest in mineral sector. These companies include golden pride established in 1998, Barrick Gold Corp in 2001,

Anglo gold ashante in 2000, Africa Mashariki Gold in 2002, Meremeta Co.Ltd Gold established in 2003, Barrick company in 2009 [2]. These companies are obliged to comply on corporate social responsibility by acting in accordance with to Environmental Management Act of 2005, Mining Act of 1998, Corporate Tax Act and other ethical standards guiding the operation of the mining companies in Tanzania. Observance of the fore mentioned obligations have caused a formal debate (in decision making bodies such as parliament and local councils and informal debate (discussion) in the areas where these Companies are operating particularly rural areas especially when they operate hazardously. Nevertheless, the extent to which mining companies comply with corporate social responsibility is less known. Therefore, this study seeks to unfold whether the mining companies comply to corporate social responsibility and if not why is it so?**.** This study was guided by the following specific objectives i.to examine tax payment compliance of the mining companies in Tanzania ii. to explore the extent to which mining companies donate local communities services in Tanzania iii.to investigate the compliance of environment management Act of 2015 iii.to explore the challenges facing Tanzania in enforcing corporate social responsibility of the mining Companies in Tanzania.

3:0.Literature Review

In an attempt to accurately define the concept of Corporate Social Responsibility (CSR) it is argued that no single definition has dominated past researches [4]. It is also argued that Corporate Social Responsibility is the umbrella that covers a variety of theories such as Stakeholder Theory; Corporate Philanthropy; Corporate Responsibility and Corporate Social Policy [4]. Of course, there are some differences among these concepts and in some cases; one theory is the continuation of another.

Traditionally, in Tanzania, Corporate Social Responsibility (CSR) is widely understood as philanthropy ("doing good with part of the profit") and thus refers to charitable community support projects in most cases [18]. In the contemporary global business environment, CSR generally refers to sustainable business performance, i.e. the principle to generate profit itself in a socially and environmentally responsible way. Community involvement and development is part of this, but other aspects, such as labour practices/human rights, environmental friendly production methods, and fair and transparent operating practices are equally important [1].

However, in an endeavour to have a holistic view, this paper accepts all these definitions and their similarities and interprets all concepts as one, using the term CRC. Besides, this is the case in Tanzania where the term CRC, endorses all social, environmental and corporate actions of the Mining Companies that affect positively or negatively the people's lives.

One of the first ideas of CRC was the concept that managers needed to accept their social responsibilities [3]. Similarly, [6] illustrates that CRC relies on two fundamental values that have constituted the basic premises for the development of its thinking: First, businesses operate at the satisfaction of society and second, businesses act as a moral representative within society [6]. [18] suggests clearly that the cornerstone of the economic system and the main role of every corporation is to be profitable by the selling of products and services that have demand. CRC includes all the economic; ethical; juristic and philanthropic demands that society requires from them at any given moment of their operations [8].

A very important step for the launch of CSR was the Green Paper on CSR which presented by [10] noted that CSR means Companies integrate social and environmental concern in their business operations and in their interaction with their stakeholders in a voluntary basis as [10] argues that the first social responsibility of business is to immunize adequate profit to cover the future costs. The increasing power of multinational corporations coupled with the globalization phenomena creates even greater need for corporate transparency and accountability to the society [20]. An intense globalization movement in issues such labour, human rights and transparency are part and parcel of CRC.

Therefore, in this study mining companies' CRC is understood as an obligation that is company is required by law and economics to pursue long and short terms goals that are good for a society, the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of workforce and their families as well as local community and society at large. CSR includes conducting business in an ethical way and in the interests of community responding positively to emerging social priorities and expectation, willingness to act as head of regulatory confrontation balancing shareholders interests against the interest of the wider community and being a good citizen in the community. This definition is used in this study particularly when corporate social responsibility in the Mining Companies entails the following dimensions. First, corporate social responsibility entails requirement of corporate activities to contribute to wealth creation which generally contribute to poverty reduction and improvement of people's livelihood. This is associated with the view that mining companies should pay their corporate taxes. Second, it also requires mining corporate entities to conduct their activities in a manner that will not endanger the lives and property of the citizens for

example the mining corporations should not pollute and damage the environment (water, air, land, vegetation) to mention a few.

Third, legal responsibility that is the requirement of the mining companies to comply with the laws specifically environmental management Act of 2005 and corporate tax law (societies) codification of right and wrong or not acting only for profit but doing what is right, just and fair to the communities surrounding them and elsewhere. Fourth, voluntary and philanthropic promoting which is based on human welfare and good will, being a good corporate citizen contributing to the community's good quality of living standard in different aspects such as voluntary contribution on education, health and water supply facilities which in Tanzania they considered to be under the companies' donations to local communities.

Furthermore, there are three reasons why corporations should take stakeholders into account: firstly, because it is the law; secondly, because it is in the overall and long term interest of the corporation; and lastly, because stakeholders have value and deserve consideration in their own right [12]. It is well documented that the companies which include their stakeholders in their planning and implementation of CSR programmes stand higher chances of succeeding in their social responsibility and sustainability than those that formulate and implement CSR programmes independently [11, 12, 13]. Full stakeholder participation means involvement of the beneficiaries from the preparatory stage of problem identification, intervention identification, project financing, project implementation and project monitoring and evaluation. This involves interaction with and among people concerned [30]. Therefore, the process of stakeholder involvement means stakeholders are present and engaged in the process of analyzing, planning and design, taking

action, evaluation and review [30, 12,6, 13, 11]. Therefore, the process of stakeholder involvement means stakeholders are present and engaged in the process of analysing, planning and design, taking action, evaluation and review [30].

Also, CSR projects that do not involve communities where they are based stand a greater chance of either failing from reaching their objectives or being rejected by their intended beneficiaries. Community involvement is not just about being nice; it is a central pillar in the business of CSR. Some external secondary stakeholders in Tanzania are rejecting or ignoring local CSR projects affecting them, which raises a question of whether they have been consulted at all in the relevant decision making [30]. Using the experience of communities in the area of the Geita Gold Mine (GGM) in Tanzania and stakeholder theory, this qualitative study analyses the relationship between CSR and involvement of non-consumer stakeholders in decision making processes and their outcomes. The study used a combination of interviews with key informants, and focus groups to obtain information, opinions and perceptions of company administrators, business people, government actors and local community members so as to fill analytical gap between claims on CSR success stories made by companies and the experience of people on the ground [30]. The study found out that key leaders in the local communities who were neglected in the CSR decision making process were led to view the projects as redundant or irrelevant. The study recommends that for an autonomous, robust and sustainable CSR project, a company needs to be inclusive, by integrating local key representatives at every stage of the CSR project's life. In addition, the study recommends that for CSR projects to be genuinely appreciated, and to meet the goals it sets with communities as the beneficiaries of transformation, the CSR projects need to be monitored carefully and audited regularly. This study focused on stakeholder's participation

and engagement in CSR but it does not consider the compliance of mining companies on CSR in Tanzania which this study seeks to unravel.

3.1 Stakeholder's theory

Stakeholder theory has developed since the 1970s, and it is a general theory of the firm, incorporating corporate accountability to a broad range of stakeholders [16, 17]. This theory proposes that the role of the companies in the society has received increasing attention over time, with their impacts on employees, the environment, local communities as well as their shareholders becoming the focus of the debate. Stakeholder's theory may be viewed as conceptual cocktail concocted from variety of disciplines and produce a blend of appealing sociological and organizational flavours [18, 19].

The basis for stakeholder theory is that companies are so large, and their impacts on society are so pervasive that they should discharge accountability to many more sectors of the society than solely their shareholders [17]. Stakeholders include shareholders, employees, suppliers, customers, creditors, communities in the vicinity of the company's operations and the general public.

The most extreme proponents of stakeholder's theory suggest that the environment, animal species and future generations should be included as stakeholders. Using this analytical framework the general public (local people, government, artisanal miners, and employees of mining companies) may be viewed as corporate stakeholders because they are taxpayers to the government which provides Mining Companies with national infrastructures such as roads,

electricity, and security in which companies operate. In exchange, they expect companies as corporate citizens to enhance, not to degrade, their quality of life [3]. Therefore, this theory was useful in assessing CSR of the Mining Companies to the stakeholders such as citizens, local communities, shareholders, employees and government.

In this study, stakeholders are divided into primary and secondary. Primary stakeholders include company's owners, employees, customers, suppliers [29]. Secondary stakeholders, at the same time, are all other interested groups – consumers, lobbyists, governments, courts, the public and the society [29]. It is further noted that R. Edward Freeman has offered a very good overview of one large company's major stakeholders. As all these stakeholders have different interests, wishes and expectations towards the company and its business behaviour. The company has to find the solution of how to make decisions in a way, which satisfies, affect positively and equilibrates all the mentioned stakeholder-groups. Stakeholders under the discussion are affected positively or negatively by mining companies' social responsibility in Tanzania [4, 6]. The key stakeholders in this study are governments, communities, and employees, citizens, small scale miners and Multinational Companies. Stakeholders' theory was used to explore whether mining companies' operations are based on corporate social responsibility to the fore mentioned stakeholders.

4.0. Methods and Materials

This sub-section presents the methods for data collection, Sampling techniques and procedures as well as methods of data analysis.

4.1 Sampling techniques

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Thus in this study purposive sampling was applied for selecting respondents from the mining companies because they have the role of ensuring corporate social responsibility in mining companies in particular to the government, citizens, and other stakeholders in Tanzania. Another criteria for using purposive sampling is the issue of extreme case purposive sampling where the researcher expect that the mining companies and local communities have rich information with regard to mining companies and corporate social responsibility. The sample size is presented in table 1.0.

Table 1: Sample size and its composition (N=74)

S/No	**Category of respondents**	**Total number of respondents**
1	Artisanal miners n=16	16
2	Mining Companies Respondents n=6	06
3	Ordinary citizens n=52	52
4	**Total No. of respondents**	**74**

Source: Field data (July, 2021)

4.2 Methods of data collection

The methods of data collection were an in-depth interview was employed to collect data from 74 respondents who were purposively selected in order to obtain detailed information for the study.

An in-depth interview was adopted to all 74 respondents for the purpose of collecting adequate information from them as they are the one responsible for ensuring that CSR is effectively implemented in their respective areas by Mining companies.

Also, this study surveyed selected documents about mining companies' social responsibility in Tanzania written in different context across the world. Literature from Tanzania and experiences from global context were analyzed. In fact, this was a monitoring study to check whether mining companies in Tanzania adhere to CSR by complying with the environmental Management Act, paying corporate taxes, donations, protecting human rights in their operations as intended. It was therefore an exploratory study which though to uncover experience of complying on CSR to different stakeholders and challenges hindering corporate social responsibility of mining companies in Tanzania**.** Also, the study thought to understand the feelings of different stakeholders on the Mining Companies' CSR namely the government, local people, artisanal miners and employees of the Mining Companies. The qualitative paradigm was selected because of its underlying assumption that a phenomenon is likely to be examined in detail in order to be understood [11]. According to qualitative researchers such as [14] there are multiple realities and not a single reality of phenomena. These, however, can differ across time and space, the phenomena such as experience and feelings of stakeholders on CSR of Mining Companies can hardly be studied quantitatively. In order to arrive at the findings and recommendations of this study, a comprehensive documentary review and Interview were undertaken with regard to the management of the Mining Companies' operations in Tanzania and research questions under investigation.

4.3 Data analysis

In analyzing the data collected from the field, this study employed both qualitative and quantitative analysis. Content analysis was adopted in analyzing the data obtained from documentary review and in-depth interviews. Under Content analysis technique, data were systematically classified into defined categories comprising patterns of related information sub-themes. For instance, the data collected on tax payment compliance of the mining companies in Tanzania and the extent to which mining companies donated local communities services in Tanzania were analysed based on these sub-themes. In the analysis, major themes were determined based on major themes drawn from research objectives of the study. Hence data were grounded on themes and all data were qualitative. This method of data analysis facilitated the making of inferences from the qualitative data. On the other hand, with the aid the Statistical Package for Social Sciences (SPSS Version 19), descriptive statistics (tabulation) technique and cross-tabulation were used to analyze the quantitative data that were mainly obtained from the field and documentary review.

5:0.Presentation of the Findings and Discussion

This sub- section presents the findings on corporate social responsibility in particular how the mining companies donated services to local communities and preserved the environment as well as paying taxes. The findings are presented in the subsequent sections.

5:1.Mining Corporations and Corporate Social Responsibility in Tanzania

In this study, the conceptualization of the corporate social responsibility in Tanzania is based on depth examination is based on the extent to which mining corporations have been complying with laws particularly environmental laws, tax payment, donations to their host communities, ethical

operations of the companies which is construed to mean what is wrong and what is rights to the communities and the relationship between the large scale mining companies and artisan miners. The challenges faced by Tanzania in enforcing corporate social responsibility are further presented and discussed. The findings are presented in the subsequent paragraphs. Therefore, the section below is devoted to examine the largest mining companies' corporate social responsibility in Tanzania as presented in Table 2.

Table 2. Larger Mining Companies in Tanzania

Name of the Owner Mineral Established Investment	**Owner**	**Establishment**	**Type of Mineral**	**Investment USS**
Golden Pride	Mine Resolute Gold	1998	Gold	77.000.000
Bulyanhulu Gold Mine	Barrick Gold Corp	2001	Gold	280.000.000
Geita Gold Mine	Anglo Gold Ashanti	2000	Gold	450.000.000

Afrika Mashariki Gold Mine	Africa Mashariki Gold	2002	Gold	72.000.000
Buhemba Gold Mine	Meremeta Co. Ltd Gold	2003	Gold	65.000.000
Merelani Mining Ltd	Afgem Tanzanite	2001	Tanzanite	20.000.000
Williamson Diamonds Ltd	DeBeers and Tz Diamonds	1940	Diamond	12.300.000
Buzwagi Gold Mine	Barik Company	2009	Gold	N/A

Source: Compiled by Author, July, 2021

5.1.1Tax payment compliance of the mining companies

In examining tax payment compliance of mining companies as company's social responsibility, the attention was paid on the extent to which companies pay corporate taxes and well as small scale miners in Tanzania. The data were collected from Interview and documentary review. The findings are presented in Table 3 for further details.

Table 3: The responses on whether Mining companies complied with tax payment

S/No	Category of respondents	Mining companies paid taxes	Mining companies did not pay taxes	Neither	Total No. of respondents
1	Artisanal miners n=16	2(25%)	14(75%)	00	16(100%)
2	Mining Companies Respondents n=6	00	06(100%)	00	06(100%)
3	Ordinary citizens n=52	20(38.5%)	32(61.5%)	00	52(100%)
4	Total No. of responses	22(29.7%)	52(70.3%)	00	74(100%)

Source: Field data, July, 2021

The findings presented in Table 3 indicate that majority of respondents i.e 52(70.3%) stated that the mining companies were not paying corporate tax to the Tanzanian government. Nevertheless, the minority of the respondents had the view that the mining companies were paying taxes. This

view was shared by 22(29.7%) respondents who maintained that the mining companies paid taxes to the government.

The study findings show that actual revenue to the government from these mining activities was just about 0.3 percent of the total domestic revenue collection from 1998 to 2021. In the year 2019, the contribution of mining revenue tripled to about one percent of total domestic revenue, but this is still very low compared to Botswana where the mineral industry provides about 50 percent of Government revenue [20, 22]. Up till now, none of the Companies have started paying the 30 percent corporate tax since they have not yet recovered their capital expenditure. As the major mining companies advance to their full capacity and start to pay the corporate tax, the revenue to the government was expected to rise significantly. It is interesting to note that the much-debated royalty makes up less than a third of the total revenue income from the sector. In fact, tax on foreigners and local employees 'salary ("pay as you earn" PAYE) add up to more than the amount paid in royalties [25, 27].

The issue of revenue from large scale Mining companies has also raised considerable debates in Tanzania. Many people argue that the tax holidays and other incentives that have been granted to investors were too generous [20, 22]. There is also a feeling among both government officials and ordinary people that companies may not declare the correct amount that they are producing and that they in this way evade taxation. A common complaint is also that the 3 percent royalty is indeed too low. The government set up the commissions to look into these issues because the public has been complaining that the mineral sector is not contributing enough to the national economy [27, 28, and 30].

The commissions and the public suggested that the Government should consider increasing royalty rates on minerals produced so as to boost Government revenue. This suggestion has also been shared by different committees formed by the Government to review the performance of the mineral sector [27, 28].The low revenue collection from the mineral sector is contrary with the purposes of establishing the Tanzania Mineral Audit Agency (TMAA) under the Ministry of Energy and Minerals has been established to facilitate the maximization of Government revenue from the mining industry through effective monitoring and auditing and to ensure sound environmental management in the mining areas.

Also there have been the political commitments unravelled though political speeches. For instance in 2005, in his inaugural address to the nation in December, 2005. For instance, President Jakaya Kikwete outlined the need for Tanzania to benefit from the mining sector. Furthermore, during his May Day Speech in 2006, he promised to review the mining contracts to ensure that the nation is benefiting from minerals. The same month the committee was formed to review the Mineral Development Agreement signed with the companies. In September 2006, the review committee submitted its report to the government, recommending both substantive changes to the mining and fiscal laws relating to mining. Some of the proposal included, state participation in development of infrastructure at the mines, corporate tax to be paid at the start of production and not after recovering investments costs, compensation for people displaced by mining to be pegged to the values of mineral exploitation on their land, and the mining companies to contribute to a government funds for environment rehabilitation [2]. If we look on these proposals, we observe

that they stress on the CSR of mining companies in Tanzania but were rejected and never took off the ground till 2015.

So most of the major gold miners had not started paying corporate tax in the fourth phase regime (2005-2015); instead they only pay royalties, local levies and other taxes. So despite of setting the commissions, tax evasion continue in many mining companies. This irregularity is underscored by for instance Tanzania Mineral Audit Agency indicated that no single mining company has started paying 4% of royalty and in the same period only two companies (not mentioned in the report) were paying 30 percent of the corporate tax which most of the companies have not been paying [26,28].

In 2015, when fifth phase president Hon. Dr. John Pombe Joseph Magufuli came into power, there were significant reforms in the mining sector aimed at promoting revenue collection and corporate social responsibility. In this case, the Mining Regulations on Local Content (2018), which came into effect in January 2018, requires mining companies to have bank accounts in a Tanzanian-owned bank in the country. This government's decision is in line with changes in mining laws aimed at curbing illicit financial flows in the mining sector.

But this trend has slightly changed since the fifth phase government came to power in 2015, as a result of TMAA's efforts; at least USD64.8 million in additional corporate income tax has been collected since 2016, accounting for roughly seven percent of mining tax receipts between 2016 and 2017. This amount only includes tax adjustments relating to hedging arrangements and the consolidation of income for tax purposes. The total amount of additional tax revenue attributable

to TMAA is likely to be higher. In October 2017, Barrick offered to pay the Tanzanian government $300m to resolve outstanding tax claims and would share equally any economic benefits from Acacia's operations in Tanzania with the government in future.

On other hand, it was reported in Bulyanhulu gold corporation where the general manager of the company told the journalists that "barrick is not paying corporate tax, it started paying corporations taxes in 2004 when they expected Company begin realizing profits". Now the questions are how and when the government knows whether the company has generated profits while the company owns the share by more than 100% [26, 28]. Also, the generous tax concession means that mining companies are able to avoid declaring a taxable income.

The latest report of the Tanzania Extractive Industries Transparency Initiative (TEITI generated local newspaper headlines on the issue of payment of corporation tax by mining companies [28, 30]. According to TEITI, just a single mine in Tanzania, Golden Pride owned by Resolute Tanzania Limited, paid corporation income tax amounting to Sh71.1 billion for the year ended 30th, June 2011. This revelation triggered debate on whether or not the government was truly earning enough taxes from gold mining industry [28]. While figures in the TEITI report were corroborated by, the former Minister for Energy and Minerals, Prof. Sospeter Muhongo, announced in Parliament in his 2013/14 budget speech in May that three gold mines - Geita Gold Mine, Tulawaka Gold Mine and Golden Pride Mine - actually paid Tsh. 467.7 billion in corporate tax by [23]. Corporate tax is paid to government after investor companies, not just in the mining sector, recoup their capital expenditures, and this is common practice under tax law around the World.

5.1.2 Tax compliance of small miners in Tanzania

This study examined the extent to which small scale miners paid taxes. The findings indicate that when it comes to collecting revenue from small scale miners, the government does not seem to have enough resources for a proper management. Out of 153 quarterly reports to the mining office in Mererani, only five claim holders report that they have had production, while all report expenditures [16, 27].The percentage reporting taxable profit is a little more than three percent. A medium scale miner in Rwamgasa, Geita, showed the team evidence that he had paid royalties, but said that they had never paid any taxes on the salaries of his one hundred employees, and that he saw no reason.

This is the clear indication that small scale miners do not pay income taxes of their employers as required. In fact, this is a clear indication of weak corporate social responsibility in Tanzania with regard to the companies and small scale miners not paying taxes. Since the fifth phase president came into power in 2015 to 2021, the Multinational companies were paying taxes which in long run mining sector's contribution to the government's coffer rose from 161bn/- in 2014 to 528bn/- in 2020. The sector accounts to 52 percent of all foreign currency and commands 51.9 percent of the value of the exported products.

5.1.3 Donations by mining companies to local communities

This study examined the extent to which mining companies donated services to local communities. These services include water, health, education services and any other support

provided by these Companies to local communities. The responses are presented in table 4.0 below for further details.

Table 4: Responses on whether Mining Companies donated Services to Local Communities

S/No	Category of respondents	Mining companies donated services to local communities	Mining companies did not donate services to local communities	Neither	Total No. of respondents
1	Artisanal miners n=16	8(50%)	08(50%)	00	16(100%)
2	Mining Companies Respondents n=6	03(50%)	03(50%)	00	06(100%)

3	Ordinary citizens n=52	22(42.3%)	30(57.7%)	00	52(100%)
4	Total No. of responses	33(44.6%)	41(55.4%)	00	74(100%)

Source: Field data, July, 2021

The findings presented in table 4 indicate that a slight majority of respondents 41(55.4%) were of the view that mining companies did not donate services or any other support to the local communities surrounding them. On the other hand 33(44.6%) were of the view that mining companies donated services and other support to the Local communities.

Donations are thought to be integral part of CSR whereby all mining companies contribute to the development of their host communities to a smaller or larger degree. In Tanzania, the companies' investment in social development is registered by the Ministry of Minerals and incorporated into the calculations of the total revenue contributions of the sector under the rubric "donations". Also a break-down of the donations to community development by the largest mines in the period 1999 to 2017. Of the US$ 17 million donated by the companies in the whole period, US$ 12 million, or 70 percent, was spent on water and roads [27].

However, critical voices from the citizens and non government organizations argue that the companies' investment in these sectors is simply for their own benefit. They typically repair roads leading to the mine only, and draw water pipes that they themselves need. People's suspicion

about the “selfish” motives of mining companies when it comes to community development is partly confirmed by the fact that such donations have gone markedly down after the initial infrastructure for the mining companies was in place. Donations in 2017 were only one fifth of the level in 2016 [27]. On the positive side, donations to education projects have increased over the years and were the largest post in 2019.

The Ministry of Minerals also registers how much the various companies spend on human resource development, i.e training of their employees. Since 1997, the major mining establishments have spent more than US$ 7 million on training of approximately 7 500 people. Training may range from providing basic training in machine operation to sponsorship of professional levels [26]. The long term effect of this human resource development is hard to quantify, but it will last even after the closure of the mines.

In other cases where the management of Geita Gold Mine is concerned about CSR, and of creating a positive image of the mine in Tanzanian society. Since 2017, the mine has spent close to US$ 4 million on development projects. Almost half of this amount, US$ 2 million, was spent on a 22 km. long water pipe which was drawn from Lake Victoria [27]. Three villages along the route have been provided with water taps on the condition that they protect the entire pipe from damage and sabotage [20]. People in Geita town are bitter because they have not benefited from the pipe and they presently have an acute water situation. GGMs US$ 1 million rehabilitation of the Geita–Ilogi road, on the other hand, benefits a large number of people since it has facilitated transport to Dar es Salaam substantially. In addition to their investments in roads and water, the

company has supported a number of development projects within health, education and income generating, as well as more ad hoc donations to various organizations and events.

The most interesting aspect of Geita Gold Mining's community support, however, is their yearly support directly to the District Council. Since 2002 to 2019, Geita Gold Mining has agreed to support the District with Tsh. 150 million (US$ 137 614) per year [27]. According to the District Officer, the company agreed to do this when requested by the Council at the Investors Forum Meeting to contribute to development. The council had referred to the practice of another foreign investor to convince GGM to follow their example.

The Geita Gold Mining development fund is managed by a committee made up of the District Commissioner, the District Executive Director, three members of parliament, the Chief Councillor, and the Human Relations Officer of GGM [28]. Through the fund, as well as other development projects, the company has managed to build a comparatively good reputation in terms of CSR. Just looking at the amount of money donated is misleading. According to a number of informants argued that considerable sums of money have been lost due to corruption. One of the respondents from Geita region said this:

*" After our thorough study … the money provided by GGM for the projects which pass through the District Council is not fully utilized for the intended projects, instead (it is used) to promote individual projects … strategies to curb this negative effect by the government are not seen". The people cannot do anything about the corruption because they are not informed of the money, neither the projects"(*Interview, April, 2021).

According to 55.4% respondents said that money has not only been lost, but projects that were intended for certain villages have been redirected to villages where central officials had their personal interests. As a result of the irregularities, GGM has now decided that they will no longer let the Tsh. 150 million supports go through the District Council. Instead, the council is asked to come up with a concrete building project that they need funding for, and then GGM simply provides the building, using its own contractors. Several stake holders criticize this solution, as the local communities are not involved in the process and are not given the chance of neither employment nor voluntary participation. The findings corroborate with [20] who noted that key leaders in the local communities who were neglected in the CSR decision making process viewed the projects as redundant or irrelevant. In fact, these donations were not benefiting the local communities because of irregularities and corruption associated to them. Also, the measure taken by Geita Gold Mine suggests denying local people's participation in their development projects. The findings are contrary to Stakeholder theory which includes local people, artisanal miners, and employees of mining companies who are viewed as corporate stakeholders because they are taxpayers to the government which provides Mining Companies with enabling environment such as policies, regulations, and national infrastructures such as roads, electricity, and security in which companies operate. In exchange, they expect companies as corporate citizens to enhance, not to degrade, their quality of their lives.

5.1.4 Mining companies Compensation to the Citizens relocate/displaced

This question examined whether mining companies provided compensation to their surrounding communities fairly and timely. The findings are presented in Table 4.

Table 4: The responses on whether mining companies compensated the surrounding communities

S/No	Category of respondents	Mining companies compensated citizens on time	Mining companies did not did not compensate citizens on time	Neither	Total No. of respondents
1	Artisanal miners n=16	8(50%)	08(50%)	00	16(100%)
2	Mining Companies Respondents n=6	02(33.3%)	04(66.7%)	00	06(100%)
3	Ordinary citizens n=52	18(34.6%)	34(65.4%)	00	52(100%)
4	Total No. of responses	28(37.8%)	46(62.2%)	00	74(100%)

Source: Field data, July, 2021

The findings presented in table 4 indicate that majority of respondents i.e 46(62.2) were of the view that mining companies did not compensated the surrounding Communities after being relocated due to the commencement of the mining activities. On the other hand, 28(37.8) of respondents had the view that Mining companies compensated the communities relocated on time.

The documentary findings indicated that the re-opening of Geita Gold Mine in 1999, a village called Mtakuja had to be relocated. The company paid the money for compensations, but left it to the government and District Council to deal with the practicalities. It turned out that at least 857 people who were entitled for compensation never received their money [28]. Apparently, the lists contained fake names, while people who were actually living in the village were never registered. Some people were also said to be fooled to sign for money that they never received: Mining officer at Geita said as follows,

"An elderly man was supposed to be compensated with Tshs. 20 millions (US$18 348). The officials had the money ready in 500 shilling notes. When the old man spent a long time counting at the counter, they told him that he was wasting their time and ordered him to just sign and then move on. He did so and later realized that he had been paid 5 million only. He lost 15 millions!".

The government's Prevention of Corruption Bureau investigated the case in 2002. Two GGM employees and a number of civil servants were found guilty. In February 2004, it was decided that the government should offer Tsh. 600 million (US$ 550 458) to those who had not been properly compensated. People in Geita still have the feeling that the "big fish" got away with their

crime, and there are all kinds of speculations as to what levels of government were involved and who benefited from the compensation money [20,30]. Similar problem of inadequate compensation to local people occurred in Nyangoro village where by African Mashariki Gold Mines carried out the campaign to force Nyangoro villagers to accept inadequate compensations which actually is against human rights and good CSR.

Poor compensation is also against environmental Management Act of 2004 which provides for the compensations to persons or communities who will have been victims of corporation's actions and also it is the violation of human rights particularly property rights. The findings also are supported by [5] which noted that:

"Assessment for the compensations is usually done without heeding the key issues identified in the law (i.e disturbance, transport and value of properties) depending on where they are .Many people have been displaced without being paid compensation".

Therefore, this study found that the corporate social responsibility in Tanzania with regard to fair compensation to local communities was not entirely realized by the local communities because of corruption of local officials and poor enforcement of the laws particularly environment management Act and Anti Corruption laws.

5.1.5 Relationship between Large Scale Mining Companies and the Artisan Miners in Tanzania

The findings indicate that large scale mining operations have impoverished Tanzanians far more than that artisan mining. For instance, it is claimed that the country's six major gold mines excluding Buzwagi Mining namely Golden Pride Mine, Bulyanhulu Gold Mine ,Geita Gold Mine, African Mashariki Gold Mine,Buhemba Gold Mine and Williamson Gold Mine employ total of 7,135 people. However, large scale mining has made many more unemployed. Before the arrival of multinationals companies, small scale artisan miners dominated gold mining; they used simple tools and techniques, providing large income for a large number of people who were generally uneducated and poor [21]. One study estimated that by late 1990s, the sector employed between 500,000 and 1.5 million people. By 2006, a report commissioned by World Bank estimated that there were around 170,000 small–scale miners in Tanzania [24, 25]. Comparing these figures, large scale mining may have made around 400,000 people unemployed. The findings indicate that the coming of multinational companies have increased unemployment to artisan miners in Tanzania. This is contrary to corporate social responsibility dimension of promoting good wellbeing of the people.

Also another critical issue in artisan mining in Mererani, Geita, Kahama gold mine just to mention few is safety. After the 1988 flooding disaster, where at least 200 miners died, a number of new regulations were imposed on mine owners. Reports one year after revealed that many of the regulations were not adhered to [18]. Also since 2002 to 2017, there was another major mining accident:" Thirty nine small-scale Tanzanite miners at Mererani, near Arusha, suffocated after an air compressor which was providing oxygen to one of the mines broke down. When the government stopped mining operations at Mererani in July (a few days later) and gave small-scale miners 30 days to fulfil new conditions to improve safety, some 4,000 miners went on rampage

looting goods worth millions of dollars. They asked why one mine accident should lead to the closure of 300 other mines. Police arrested 15 miners before order was restored."[6,7]. According to the Zonal Mines Office, there were 10 accidents in small scale mines in Mererani in the first half of 2004, and one in the AFGEM mine. All together 20 people were hurt, and 11 killed. The Ministry is currently addressing the situation by arranging seminars focusing on safety, environment, and mining laws. One such four days seminar was conducted in May 2004 for 80 active claim holders and their blasters [21].

5.1.6 Environment Management Compliance of the Mining Companies in Tanzania

The environment is the top agenda in the most economic and social activities in the World today. Tanzania adopted a policy on environment back in 1997.This was followed by establishment of an institution to deal with the environmental issues in the country namely the National Environmental Management Council (NEMC) in 1983.The latest instrument of protection of the environment is the environment management Act, 2005.The mining companies are required to play a significant role to protect environment in Tanzania. This is due to the fact that the mining company's mission is not just the excavation of minerals for their benefits. The company is fully aware of the need to compensate for the natural sources it exploits by cleaning up the consequences of its mining activities. The thorough preparation and implementation of re-landscaping and restoring environmental stability on completion of mineral mining is one of the company's basic areas of activity. This study investigated whether the mining companies were complying with environment management in Tanzania as required by the environment management Act, 2005. The findings are presented in Table 4.

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Table 4: The responses on whether Mining companies complied on Environment Management

S/No	Category of respondents	Mining companies complied on environment Management	Mining companies did not Comply on Environment Management	Neither	Total No. of respondents
1	Artisanal miners n=16	10(62.5%)	06(37.5%)	00	16(100%)
2	Mining Companies Respondents n=6	06 (100%)	00	00	06(100%)
3	Ordinary citizens n=52	17 (32.7%)	35(67.3%)	00	52(100%)

4	Total No. of responses	33(44.6%)	41(55.4%)	00	74(100%)

Source: Field data, July, 2021.

The findings presented in table 4 indicate that a slight majority of respondents i.e 41(55.4%) were of the view that the mining companies did not comply with environment management Act of 2005 in Tanzania because these Mining companies polluted water in rural communities, soil erosion was experienced and the houses were getting fracture on their walls. On the other hand, 33(44.6%) respondents said that the Mining companies complied with Environment Management Act of 2005.

The findings on poor environment management were further revealed that many Companies do not compensate environmental damages resulting from the activities. For example, in North Mara where Barrick has a mining site, the tailings dam was freely running into the pastures and fields, and heavily contaminated waters from the processing plant adversely affected the local people by leaking into their water sources [2]. The report further found that chemical spill in the Tigithe river in Kibasula Ward caused 2534 households were affected and four heads of the cattle died after drinking water. This was contrary to the Mining Act of 1998 section 96 which states that "*The license offered shall be utilized without causing any harm to the land owners or the rightful residents*". The findings give the impression that environmental pollution presupposes that the question of CSR specifically the mining company's responsibility on environment and local people protection has not been adequately realized in Tanzania. Therefore, the findings indicate

that stakeholders identified within stakeholder theory such as citizens, local communities, employees and government were not fully benefiting with CSR of the Mining companies.

6.0. The Challenges faced by Tanzania in enforcing corporate social responsibility

This section tries to unfold the setbacks hindering effective mining CSR in Tanzania. In fact, the challenges emanate from weak enforcement of the laws, lack of the government share (stake) in mining companies and lack of transparency and disclosure of the mining companies performance and operations**.** These setbacks are discussed as follows:

i. Government ownership of the share in the mining companies

This paper notes that lack of the government stake in the mining companies in Tanzania could explain to why corporate social responsibility in Tanzania has not been done. In this case, Tanzania does not own any share or stake in the mining companies as such the multinational companies own the stake by 100%. Thus the question becomes how government can hold the companies accountable while it has neither financial share nor constituted to the management team of the company. This study recommends that the government should increase its share in the mining corporations as it has been the case in Botswana where the government retain 51% of the share so that accountability and transparency can be more practiced in the mining companies. This fact is further shared by [26, 27] which posit that in case of Tanzania, ownership concentration of the government is not found in the mining companies, and the ownership structure provide shareholders with the responsibility to monitor the management and appointment of the board of directors which undermines the government on holding accountable and making multinational companies accountable to the local community and nation at larger.

The findings indicate that irregularity in companies management is not only to mining corporations but also it is seen in companies listed in Dar es Salaam stock exchange that control anywhere from 20%-75% equity stake of the shares [2]. This stake suggests that large shareholders are assuming control and monopoly; hence boards of directors are accountable to the shareholders as opposed to government of Tanzania. The government of Tanzania needs to increase its stake in these companies so that accountability as integral part of CSR of their management and is made feasible based on the shareholding autonomy and stockholding.

ii. Weak enforcement of the laws in Tanzania

The findings indicate that the challenge in Tanzania is weak enforcement of the laws and regulations. The respondents in this study had the view that "corporations may also not act ethically because they know that even if they did not behave ethically, they will be still safe". So the Business Registration and Licensing Authority (BRELA) is one of the institutions that is said to have limited capacity as overseer of the company's operations. The weak enforcement of laws is seen in the environment laws and anti-corruption strategies that have caused rampant corruption in mining contracts and local government leaders who are bribed to convince the villagers to accept inadequate compensations. In this case, this study recommends strengthening institutions such as Prevention and Combating Corruption Bureau and BRELA so that companies that do not follow laws and regulations are heavily sanctioned.

Also, the effort to create acceptable ethical practices are undermined by collusion, rent seeking behaviours, corruption and lack of corporate integrity. Such factors have undermined for example

parliamentary select committees in the case of defective and expensive energy contracts such as Buzwagi contract, misappropriation of government funds from the Bank of Tanzania and the controversial Kiwira Coal Mine allegedly involving high dignitaries making appropriation by use office-a sheer conflict of interest.

iii. Inadequate oversight mechanism is another limitation.

This is construed to mean low level of awareness of stakeholders among the affected communities. Stakeholders hardly know their rights with regard to what companies do in their neighbourhoods, and how they should relate their interest to the companies. [2] opines that some respondents of the government for example were of the opinion that it is the responsibility of the government to take care of the environment rather than the corporations. Many of the corporations think that once they have paid the required taxes, the rest is hardly their responsibility. Therefore, there is a need to educate citizens on the rights and obligations of the Companies as well as the local people should be made aware of the rights in these companies given the fact that "information is power".

The governance of the mining companies should be adequately transparent to its shareholders and other relevant stakeholders and market participants. Transparency is essential for sound and effective corporate governance. The objective of transparency in the area of corporate governance is therefore to provide these parties, consistent with national law and supervisory practice, with key information necessary to enable them to assess the effectiveness of the mining companies. Such disclosure should be proportionate to the size, complexity, structure, economic significance of the mining sector.

7.0. Conclusion and Recommendations

7.1 Conclusion

This study is broadly based on assessing the CSR of the mining companies in Tanzania. This study analyzed the CSR of Mining Companies from liberal economy (1980,s) up to the contemporary period (2021) in Tanzania. Throughout this period, it has been found and learned that CSR of multinational mining companies in Tanzania is weak as such it has turned this Country into resource curse. The Multinational mining companies have caused the environment pollution and hazardous common in North Mara gold mine and Mererani in Arusha respectively before the reforms commenced from 2015 to 2021. Similarly, the tax compliance particularly the corporate taxes have not been paid as it is expected. This is because few companies were paying taxes at their own wishes not as the laws require them to comply. This observation is in line with [5] which states that:

"which found that Tanzania does not benefit sufficiently from multitude of natural resources in the land as it further states that small scale miners were demoralized because of being left out in law and protocol enforcement in the mining industries, this group of people has been in fight with multinational Mining Companies "

Also this study found that there is inadequate compensations to local communities who are evicted from the mining areas as well as those affected by Mining companies' malpractice such as environment pollution as the case in Nyamongo village in Mara region. Therefore, it is imperative to note that there is weak CSR in Tanzania.

Based on the findings of this study, it is concluded that the CSR of the mining corporations is hardly implemented because mining companies have been given too generous conditions as such the Country is turned into resource curse. Therefore, the government need to establish corporate governance legal framework, increase government stake in the mining corporations, as well as strengthen organizational and social capital so that local people and their government can hold accountable the companies as well as be able to harness the CSR of the Mining Companies in Tanzania.

7.2 Recommendations

There is a need to have comprehensive legal and regulatory frameworks so that mining companies assume an elaborate, transparent and programmatic social responsibility to complement the existing corporate governance frame work that take into account local priorities and local needs and national interests.

Government should encourage better practices of corporate governance regarding business society relationship by abolishing the involvement of senior government officials and members of the parliament in the corporate boards of directors so as to deter conflict of interest and political entrepreneurship. This is the corporate practice that currently large corporations tend to recruit senior public figures in the board of directors to provide advice, but they can potentially be used to undermine accountability of business to the large society because of their vested economic or political interests.

8.0. The scope of the future research

Many studies are still needed in mining companies in Tanzania. In this regard, other researchers may wish to conduct the same study and focus on mining companies from 2020 to gain insights into experience of the implication of CSR in Tanzania. Another study may be carried out on accountability in the mining companies in Tanzania.

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Rethinking Disaster Impact Assessment: A Study of Cyclone *Fani* in Odisha

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Abstract

Studies on the impact of disasters, as done in scholarly literature, are more in bits and pieces and there has been a lack of framework for comprehensive assessments. Practitioners have been doing impact assessment, but still a few important elements are left out. To fill this gap, this study undertook an integrated impact assessment of cyclone *Fani* in Odisha, which hit the state in May 2019. There were issues such as changes in labour market, frustration among people, switching of political affiliations in the aftermath of the cyclone, which went largely unnoticed in the available assessments. Information on the overall losses and damages are acceptable but there were discrepancies in the individual household level assessments. This paper highlights the need for including social, political, and psychological impact indicators for a realistic impact assessment on natural disasters.

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1. Introduction

Washington Post, a renowned American newspaper, carried a story in May 2019 on the cyclone which hit Odisha, India, earlier that month. The article titled 'Why did India's devastating cyclone Fani kill only 40 people – not 10,000? Thank democracy and technology', appreciated the state government's efforts on preventive steps (*Washington Post*, 17 May 2019). However, the focus of the headline could be interpreted in such a way that everybody expected that thousands of people would die due to the cyclone, and the casualty of 40 could probably be written off without much fuss! It is not our point to cite it as an insensitive statement. The field of disaster impact assessment has some lacunae, and this paper argues that the above statement is one such gap in the body of knowledge.

It is known that natural disasters have become more frequent and deadlier than they used to be in the past (Bahinipati, 2014; Chittibabu, et al. 2004; Gaiha, et al., 2013). Climate change has also contributed to the increasing frequency of disasters (World Bank and United Nations, 2010). Disasters (particularly natural disasters) occur without warning and play havoc in the area. If the impact of these disasters is not understood correctly, it can have serious implications. A well-executed disaster impact assessment could help in better preparation, effective response, recovery, and mitigation.

There is a plethora of literature on the impact of natural disasters. But most of them focus primarily on the mitigation part, and the scholarly papers are sector specific. Barring a few studies, such as Looney (2012), the existing literature does not deal with the impact of disasters

comprehensively. While mitigation of disasters should be of utmost importance, a lack of understanding of their nature and magnitude can lead to faulty policy decisions. Further, impact assessment papers are available in bits and pieces. There is hardly any effort to make a systematic assessment in an integrated manner. Practitioners have of late been doing impact assessment a little more extensively such as the one done by the Government of Odisha (2019) and Inter Agency Group (2019), but these too focus primarily on the mitigation and recovery aspects. Thus we do not have a robust framework for assessing the impact of disasters.

A case in point is the cyclone *Fani* that hit Odisha (a state located in the eastern coast of India) on 3 May 2019. This cyclone was unique. It occurred when summer was at its peak, which was unusual (Government of Odisha, 2019). Also, it occurred during elections to both Parliament and the state assembly. While the pre-cyclone evacuation efforts were largely appreciated, the post-cyclone relief operations were not entirely effective (Economic Times, 2019; The World Bank, 2019; Washington Post, 2019). Apart from the physical, economic, and social impacts the cyclone had, it rippled the political space in the state.

In this context, the paper argues that the method in which the impact of disasters is assessed needs to be rethought. The objectives of this study are:

- to understand the impact of the cyclone on the infrastructure, society, and economy; and
- to understand how the assessments influenced the restoration and mitigation efforts.

The paper does not intend to question the quantitative assessments undertaken by the existing studies. Given the size of the area affected, and the intensity of the damage, there could be

variations in assessments. Whether such assessments are correct representations of reality is the fundamental question that the paper wants to address.

2. Literature Review

The impact of disasters has been assessed on various counts – loss of life, destruction of infrastructure, disruption in livelihoods, disruption in services, adverse effects on health and education, and many other such aspects. In the following section findings of the impact of disasters have been summarised.

2.1. Impact of Disasters

The first and foremost loss that occurs due to disasters like cyclone and flood is that of life and damage or destruction to the physical and natural resources such as roads, buildings, bridges, and dams (Jonkman and Vrijling, 2008). There also had been loss of infrastructure such as those related to transport, communication, and energy (Looney, 2012).

It is not just the human habitation and physical infrastructure that are affected by weather shocks. The ecosystem as a whole in the area is affected. Woesik, Ayling, and Mapstone (1991) found that the tropical cyclone *Ivor* created a physical disturbance on the Carter Reef, which led to a decline in small planktivorous fishes due to damage to their habitats. Cyclones can damage and change the ecosystem by altering the composition of flora and fauna. This happens due to the destruction of forests resulting from high-speed wind and associated storm (Lewis and Rakotondranaivof, 2011). It can change the forest structure, biomass and stem density, which in turn changes the dynamics of the forest (Lewis and Bannar-Martin, 2012). In the Kingdom of

Tonga, the cyclone *Issac* in 1982 other than damaging crops and buildings, damaged shores, formed a sand cliff, and resulted in loss of vegetation (Woodroffe, 1983).

Loss of livelihood and damage to the economy is another significant impact of disasters. Das (2013) discussed the various kinds of impact cyclone *Phailin* in Odisha had in 2013, that included loss of energy infrastructure and crops, as well as human casualty. Dewan (2015) categorised the impact of floods into loss of personal security (death due to drowning, health hazards like diarrhoea, snakebites, loss of income, and unavailability of fuelwood), buildings, infrastructure, and crops and livestock. A study conducted by Views Odisha (undated) pointed out that *Phailin* destroyed the livelihoods of fishermen in several ways such as damage to fishing boats and nets.

Disasters also affected the mobility of people. Gray and Muellerb (2012) found that in Bangladesh, flood-induced migration was substantial, but in the long run, such displacement was only moderate. Sakai, et al. (2017) found that typhoon *Milenyo* of 2006 in rural Philippines affected the rich and poor differently. Poor people were adversely affected due to the increase in food prices. The decrease in prices of products such as fish did not benefit them because they did not use much of those. A World Bank study (2008) found that in Aceh, Indonesia, the incidence of tsunami increased poverty among the residents (Carter, Little, Mogues, and Negatu, 2007) found that in the aftermath of environmental disasters, the poorest households struggled most in coping with the situation. Klomp and Valckx (2014) found that developing countries were more vulnerable to climate-related shocks. Dercon (2004) found that in rural Ethiopia, rainfall shocks

reduced consumption, and this negative effect continued in the long run (four to five years), which resulted in welfare loss.

Floods can have different health impacts on different occasions. In the short run it can cause problems like drowning, injury, hypothermia, animal bites, etc. In the medium term, infections, poisoning, starvation, and communicable diseases can occur. In the long run, chronic diseases, malnutrition-related diseases, and poor mental health may occur (Du, et al., 2010).

In macroeconomic terms also, impacts of disasters have been studied. Felbermayr and Groschi (2014) found that disasters adversely affected GDP growth. Based on a cross-country panel data analysis, Schumacher and Strobl (2011) found that disaster-prone countries incurred economic losses more intensively than those which faced low hazard of disasters. Baker and Bloom (2013) found natural disasters as one of the causes of negative growth.

2.2. Coping, Mitigation, and Policies

Sawada and Takasaki (2017) studied how insurance helped offset the effect of disasters to some extent. There was a non-market coping mechanism like crop diversification also. In this case, developed countries had an edge over the developing countries because of their higher insurance coverage. However, there were still substantial losses of lives and property that insurance could not compensate (See Sawada and Takasaki, 2017 for further discussion on this topic). Das and Vincent (2009) and Das (2009) found that the presence of mangroves significantly decreased the death toll during the super cyclone that hit Odisha in 1999. Hence conservation of mangroves could be taken up as a part of the disaster mitigation policy.

Sometimes people in the disaster-affected areas also benefited because of the response programmes. In China, people became better off because of the response programmes in the aftermath of Wenchuan earthquake (Park and Wang, 2017).

Brown, et al. (2018) studied indigenous Fijian and Indo-Fijian groups and found that natural disasters affected risk perceptions and risk attitudes of the latter more, while it did not have a significant impact on the former. Both the groups over-inferred the predictions of the impact of the disaster. However, it was higher among Indo-Fijians than the other group. This resulted in focusing more on risk management measures and decreased focus on productive measures. The paper also found that different cultural backgrounds resulted in different risk perceptions.

The importance of institutions in disaster management has also been studied. Even after the devastating experience of the super cyclone of 1999 in Odisha, there was widespread vulnerability and weak institutional support in ensuring a robust recovery in the event of future calamities (Chhotray and Few, 2012). Local governance played a key role in disaster management in the aftermath of the super cyclone of 1999 (Panigrahi, 2003). Analyzing the large scale disruption in six coastal blocks of Odisha, Yadav and Barve (2017) advocated state intervention to reduce socio-economic vulnerability and development of nature-specific coping strategies for people exposed to such threats.

The community's role and the importance of people's participation have also been highlighted by existing literature. Kurosaki (2017) found that the pattern of recovery was heterogeneous among

households in the floods in Pakistan in 2010. Further, the process of recovery was non-linear and hence snapshot assessment would not have been useful. Local communities need to be studied. Their strengths need to be assessed and augmented to increase their disaster preparedness and resilience. People in resilient communities attain higher social capital by realizing their social responsibility and better manage the aftershock realities (Imperiale and Vanclay, 2016).

Practitioners' efforts in carrying out impact assessment have been relatively extensive in scope – for example, the Government of Odisha report (2019) made detailed assessment of various sectors such as agriculture, housing, education, health, infrastructure, and so on. Inter-Agency Group (2019) assessed various parameters such as shelter, livelihoods, food security and nutrition, health, water, sanitation and hygiene, education, and protection. However, these reports primarily attempted to assess the loss or damage from the point of view of undertaking the rehabilitation and mitigation efforts. Given that these reports were done immediately after the cyclone, the focus was more on the visible damages and losses. Latent issues and softer issues, particularly those related to social aspects, were not highlighted.

2.3. Gap in Literature

In short, the impacts of disasters could be loss of life and livelihood, damage and destruction to physical infrastructure, destruction of natural resources, and overall loss to the economy. However, the existing literature does not provide a holistic understanding of the impact of disasters. In the absence of such comprehensive studies, the mitigation efforts would be half-cooked, which is dangerous. The practice of impact assessment should not just include loss of life and property, it should focus on every area affecting the existing conditions such as price

hike of necessary goods, changes in social relationships, and psychological aspects of traumatic experiences.

An integrated impact assessment could be comprehensive and can address some of the above issues. However, impact assessment methods are often sector-specific, such as environmental impact assessment, social impact assessment, or economic impact assessment. Over time, more specific methods, such as health impact assessment, have also come up. Morrison-Saunders, et al. (2014) compiled a list of more than 40 types of impact assessments. Integrating all these methods have their problems as these methods have been initially designed for different purposes (Mishra and Saxena, 2009). However, there have been some efforts at integrated impact assessments (Birley, 2003; Bond, et al., 2001; Ravetz, 1998). Mishra and Saxena (2009) used a framework that also integrated policy dimensions in impact assessments. Ordinarily, integration in impact assessment is based on three criteria: consistency across different methods, cross-disciplinary issues, and procedures (Bond, et al., 2001).

2.4. Towards a Conceptual Framework

A comprehensive impact assessment of disasters calls for a new conceptual framework. While the assessment of different kinds of losses due to disasters is one aspect, it needs to be embedded in the overall disaster management approaches, which ordinarily is undertaken in different phases such as preparedness, response (rescue and relief), and rehabilitation (CRS, 2002; UNICEF, 2016). The larger policy framework also affects the disaster impact assessment. Fig. 1 provides a diagrammatic representation of the proposed conceptual framework.

3. Methodology

The study followed a composite method including survey, key-informants' interview, and review of newspaper reports. We conducted the survey in four sparsely located villages of Sakhigopal and Nimapada blocks, with 33 participants (26 men, and 7 women). The sample respondents were selected from different strata of society considering caste, income, occupation, age, gender, education, and political inclination. Other than that, informal discussions were conducted by the author with 16 respondents from the villages and eight respondents from organizations such as government agencies, financial institutions and NGOs operating in and around Bhubaneswar and Puri. The respondents ranged between the age group of 25 and 85. We also reviewed various newspaper reports to understand the situation. The respondents were primarily from rural areas, and hence the observations of this study would be more appropriate for rural areas.

4. Impact of Cyclone *Fani*

4.1. Environmental Impact

The landfall took place in and around the Balukhanda–Konark Sanctuary Area. About 2.2 million trees, including 1.4 million coconut trees, were uprooted or damaged in the cyclone (Abraham, 2019). According to another estimation, 0.9 million trees in the forests and sanctuary areas were damaged or uprooted, while the rest were from outside forest areas (Beuria, 2019). The Government of Odisha estimated that 1.231 million coconut trees and 1.43 million cashew trees were severely damaged (Government of Odisha, 2019). Wildlife loss was considered to be minimal as animals had moved to the relatively safer parts of the forest. However, animal movement was seriously affected because forest paths had got blocked. The cyclone caused four new openings in the sea mouth of Chilika Lake (a large estuarine lake having an area of about

1165 sq. km). This is expected to bring in more saline water to the lake thus changing the estuarine biodiversity. In the aftermath of the cyclone, it was found that huge debris of trees and other wastes (including plastic, dry wastes of households, animal wastes, carcasses, etc.) lay scattered in forest and non-forest areas. Some of it also fell in the water bodies and polluted their water (Government of Odisha, 2019).

4.2. Economic Impact

This cyclone affected at least 16 million people in the state, which is around 30 per cent of its total population. Initial estimation of the loss due to the cyclone was INR 93.36 billion (about USD 1.3 billion) (OrissaPOST, 2019, June 6). A more comprehensive report prepared by the Government of Odisha (2019) estimated the damage and losses to be to the tune of INR 241.76 billion (USD 3.45 billion). The breakup of the assessment was: damage - USD 2.35 billion, loss - USD 1.10 billion. Recovery cost was estimated to be USD 4.188 billion. A summary of the losses and damages is given in Appendix I.

The entire summer crop got ruined in the areas of the landfall (in Puri district) and alongside. The state lost an estimated 188,000 hectares of crop. About 6000 heads of cattle and five million poultry birds were perished. Fishery activities were hit hard. Ninety per cent of boats and nets of fishermen were severely damaged. Horticultural crops like mango, coconut, and cashew were also damaged (ICAR, 2019).

4.2.1. Housing

About 400,000 houses were damaged fully or partially because of the cyclone. Our study area had *kutcha* (thatched), semi *pucca* (partially concrete), and *pucca* (concrete) houses. Invariably every respondent reported the loss of or damage to house property. In rural areas of Puri district, where we conducted our sample survey, about 70 per cent of people would be homeless unless they took up major repair works. In the sample survey, the average loss or damage to the respondents' houses reported by them was INR 217,000.

Loss or damage to houses was the visible impact of the cyclone, but it is only the tip of the iceberg. The real problem was in estimating the loss of household accessories (Table 1). Reportedly, no exercises were done to estimate such losses. These losses were considered to be of citizens, which they had to bear personally.

4.2.2. Coconut Trees

An age-old practice in this region has been the planting of coconut and betel nut trees that provided economic benefits and also demarked and fenced the landholdings including the homestead areas. According to reports, about 1.2 million to 1.4 million coconut trees were uprooted or severely damaged (Abraham, 2019; Government of Odisha, 2019). As a good number of trees were in the boundaries of the homestead areas, they fell on the houses and severely damaged them. This added to peoples' sufferings. According to a Government of Odisha report (2019), the losses due to damage to coconut tree were to the tune of INR 0.98 billion. In its face value, these estimates were not wrong, but it did not represent the real value of coconut trees that supported the livelihoods of hundreds of thousands of families in the area. Coconut trees are commonly found in every household, particularly in rural areas of Puri district

and nearby areas, where the landfall occurred. In our study sample, households on an average owned 87 trees (majority had about 30 to 35 trees each). Leaves and other residues of the trees were used as cooking fuel in rural areas. The loss, if calculated for ten years, would be valued at INR 11 billion for about 1.2 million coconut trees (Table 2).

Similarly, betel nuts (areca nut) trees provided an average earning of INR 1000 per year. Mango, jackfruit, jamanu (*Calophyllum inophyllum)* trees also provide significant earnings. All these trees were either uprooted or faced severe damage. According to residents, after *Fani*, not even 10 per cent of such assets remained in these villages. The respondents in the sample survey reported an average loss of INR 1.71 lakh from loss or damage of various kinds of trees. In Nimapada area, betel vines were also severely damaged causing livelihood stress for people.

4.2.3. Loss of Occupation

People with high dependence on the primary sector were clueless about how to recover from their condition. They had to search for alternative income opportunities. Even before the cyclone, 30 per cent of the young population had migrated to other states in search of job. After the cyclone, however, migration of people almost doubled. The increased migration also had implications on the local labour market. For example, the rate for coconut plucking, which was INR 25 per tree, went up to INR 50 per tree. Plucking of coconut is a specialized skill, and only a few people do it. These people now have very few trees to cover, and even after the increase in wages, it might not be enough to cover their loss of income. The owners of coconut trees have to incur a higher cost in future while the price of coconut remains the same. Wages of agricultural labourers have also gone up by 10 to 20 per cent. As a result, cost of farming has increased, and

activities like sharecropping would not be profitable any more. This may result in many people quitting agriculture altogether. These kinds of changes can in the long run alter the local economy. It may also increase the probability of people going into *dadan* (a kind of contractual arrangement where contractors take advantage of their distress and make them work outside the state. On several occasions, this turns into exploitation. It has been criticised as a kind of bonded labour).

Loss of occupation dries up the long-term cash flows. Moreover, the fear of long-term loss results in tension for them. A woman respondent, whose husband worked as a carpenter, said that her shelter, crop, and trees got completely damaged. Her daughter, an undergraduate student, was an excellent student and was presented with a laptop through a government scheme in 2018. She was not sure whether she would be able to afford her daughter's hostel fees any more. She said: Seeing the number of trees uprooted and broken, I wonder how we can survive as carpenters. We are in our late 50s. I am puzzled as to what to do to get back our home, to continue my daughter's education without disturbance, and also, to get a healthy social security assurance. How will my daughters get married?"
That is a question that nobody can answer (Personal communication, 18 May 2019)!

The losses in crops and trees had a multidimensional impact. A 55-year old farmer says, "Along with my summer crop, four out of five of my cows also perished as a wall fell on them. Who will compensate for that loss?" He was not sure how he would survive. People not only lost summer crop and seasonal vegetation, but poultry and fishing also got severely affected. Many had

recently converted their lands into ponds for farming fish. A young farmer who had just entered into this venture said,

The trees fell in the pond itself. My priority was to make immediate arrangement for our survival. By the time I got the cutter machine and tried to clean the pond by cutting the fallen trees, dead fish had already started floating as the leaves got rotten and polluted the water in a day or two (Personal communication, 10 June 2019).

4.2.4. Financial Services

All communication channels, including telecommunications and Internet, were lost due to the cyclone. Hence banks and automated teller machines (ATMs) did not work for about 8–10 days. In remote areas communication could be restored only after two to three weeks. People could not withdraw cash, and there was a liquidity crunch. Financial institutions took extra measures to make cash available in the locality. A small bank allowed withdrawal of up to INR 5000 based on *adhaar* identification[1]. Microfinance institutions (MFI) extended cash advances of INR 2000 to 3000. Repayment holiday was also granted initially for one month, which was later extended to three months as suggested by the state-level body of bankers. No penalty was charged for this delay in payment. Some financial institutions provided food and grants to selected clients. One MFI distributed solar lights (as electricity restoration took more than a month in villages). People had to spend huge amounts of money to purchase materials to repair their houses. Rainy season was approaching, and houses had to be repaired immediately. However, majority of the financial institutions adopted a risk-averse stance and were conservative in disbursing any further loans. As a result, people had to contend with whatever cash was available and buy cheaper materials,

[1] *Adhaar* is the unique identification number given to all Indians.

which would not last for more than a season. A typical loss was that of the small shopkeepers, who not only found their shops damaged but also lost their materials such as groceries. It took about two weeks for them to resume their business. Meantime, they lost significant business to larger stores that could operate and meet the excess demand.

4.3. Social Impact

4.3.1. Psychological Impact

Cyclone was not new to this area, but people were shocked at the extent of damage caused by *Fani*. Almost all respondents mentioned that they lost hope of a secure life. They all wanted to share their traumatic experiences. People depending upon plantation crops were not willing to resume their activities. They feared for possible losses from future disasters. The dependable and prize assets, e.g. coconut garden, no more supplemented their income. Overall, there was a sense of loss and hopelessness among the people. People who lost their prime assets (such as shops, coconut gardens, sources of employment, etc.) also felt helpless. In particular, widows and those who needed medical care did not know how they would lead a dignified life.

As houses could not be repaired before the onset of rainy season, some people had to take shelter in their relatives' homes. This was done because there was no alternative. Such families often felt subservient and went through a phase of discomfort till they could go back to their own homes.

4.3.2. Impact on Social Relationships

Because of the loss of assured income, some people had to compromise with medical treatment and some others with organizing social events like marriages. Some people stopped meeting social obligations such as attending relatives' marriages. Safety and security concerns were also highlighted by people. A few respondents also apprehended that instances of theft would increase. Women-headed households' situation was even more precarious. Women, who used to work as daily labourers, told that they could not go out leaving children in the house, as the house was not safe anymore. In the aftermath of the cyclone, many women found that their spare clothes were no more usable. With houses damaged, and as it would take quite some time to repair, they were worried about their safety issues also.

Public policy in India has always emphasized on reducing socio-economic inequality between the rich and the poor. This cyclone turned many haves into have-nots in a few hours. Economic inequality had thus reduced, unfortunately however, in the wrong way. Earlier there used to be inequality in educational status of people but that situation has since changed and young men and women from all strata have access to basic education. However, the upper caste youth are not as skilled vocationally as their counterparts. Job opportunities in the locality had gone up, but the upper caste youth did not consider those jobs appropriate for their social status. They, therefore, have to remain unemployed or migrate to distant places where manual labour would not be considered as a stigma.

4.3.3. Political Impact

Fani hit the state just a week after the assembly and general elections. Declaration of election results was scheduled after 20 days. People expected that the damages would be assessed and

beneficiaries identified quickly. However, the field level assessment took place only after the results were declared. People had to manage with their cyclone-ravaged shelters till the authorities could come for inspection. There were allegations of irregularities in this exercise. According to newspaper reports, about 60 to 70 per cent of beneficiary identification was wrong (Dharitri, 2019; Sambad, 2019). A reassessment was, therefore, conducted. But, according to the respondents, results did not improve much even after that. People had to wait till the final report was released, and the entire process took five to six months. People had to spend rainy and winter seasons in their damaged houses only.

It was alleged that there were about 0.13 million fake beneficiaries who received compensation. In the Nimapara block, reportedly, some people who received compensation did not need it. Later when the issue was highlighted, their bank accounts were frozen leading to resentment among some sections of people (OTV, 2020). Later the bank accounts were opened. The district administration, however, clarified that the ineligibles' accounts would remain frozen (Sambad, 21 Jan 2020). It was evident that the identification and restoration works were inaccurate. The assessments, allegedly, were faulty because of undue favouritism. According to a respondent, 'If you belong to X party, your chances of getting compensation are high. It you belong to Y party you have no chance' (personal communication, 12 July 2019). In a discussion, it came out that several people switched their political affiliation hoping to get higher compensation.

From the above discussion, a few insights on what the indicators of disaster impact assessment are, could be drawn and are presented Table 3.

5. Assessment and Restoration Efforts

The state govt received accolades for taking up the unprecedented task of evacuation of hundreds of thousands of people. However, the affected people feel that they are alive because of the timing of the cyclone. Had the landfall occurred during the night, the causality would have been substantially higher. While the government did everything to save people's lives, no one thought of saving their livelihoods. For example, everybody knew that Puri's economy heavily depended on natural resources like coconut trees. Young trees were more vulnerable of being uprooted. Trees full of fruits were damaged more severely. A timely advice to offload the coconuts or prune the leaves could have, to some extent, saved many coconut trees. Those who did this could save some of their trees.

There were several discrepancies in the assessment that was used as the basis for recovery interventions and payment of compensations. People who had quality houses (like partially concrete houses) were ordinarily not considered for compensation. Various government and non-government agencies conducted post-cyclone assessments. At village level, assessments are based on the local revenue inspector's report. Assessments were not done for its own sake, but to decide on the compensation and restoration. At an aggregate level, the assessments were not necessarily very different. As seen above, losses due to destruction of coconut trees was calculated to be about INR 11 billion. However, it was officially estimated to be INR 985.2 million (Government of Odisha, 2019). This difference was primarily because the assessment considered current year's loss only. Some improvements could be made in the assessment methods. It would be useful to figure out and standardize such factors for each of the important trees available in the area so that the assessment of loss and damage becomes more realistic.

However, the problem lies not in the quantity but in the details. There was considerable discrepancy as to who received how much compensation. The compensation for partially thatched or partially concreted houses is a case in point. Some of the houses had the front part concrete, while the other part thatched. Some others had the front part thatched while the other part was concrete. The assessors, in some instances, categorized the latter as fully damaged, and the former as partially damaged. The implications were considerable: the fully damaged houses received up to INR 95,000, while the partially damaged ones received INR 5,000 only. Reportedly, the assessment was done in a hurry as there was pressure to submit the report. The discrepancy was noticeable in a few cases. It was alleged that people who did not deserve compensation also got the benefit. A few households who earlier received financial assistance through *government housing schemes* also received compensation for damage. In the words of a respondent, "X gets assistance, then X's both sons get assistance and see now X's grandson gets house loss benefit. Naturally, he would spend it the way he wants." Can this be deleted? Vague statement.

Another issue was the macro-level strategy of recovery. A Government of Odisha report says: As part of the recovery process, the Government of Odisha has emphasised the need for building resilience across all sectors into the plans and programmes of the state. The narrative for building a resilient Odisha also resonates with the civil society groups and development partners including the United Nations, World Bank and Asian Development Bank. The strategy for building a resilient Odisha is based on three pillars: resilient housing, resilient livelihoods and resilient infrastructure (Government of Odisha, 2019:187).

Thus, reconstruction was the main focus. While this is very much required, there was not enough recognition to the changing economic structure of the locality. Restoration efforts without the recognition of more significant changes in society may not have the desired impact.

6. Concluding Remarks

From the above observations, it can be found that the existing assessments were sound in some aspects of the conceptual framework of an integrated disaster impact assessment, while the following aspects were not covered.

Economic assessments have been done in an elaborate manner. However, livelihood assessments require a long-term approach. Losses will be much higher if the long-term impact is taken into account. There have been substantial differences in the way grassroots level entitlement were assessed. The psychological and social impacts of the cyclone were not given adequate importance in the assessment reports. This ranged from personal trauma, hopelessness, fear of loss of education to alteration in the migration pattern. There was political realignment after the cyclone. However, the political impact of cyclone has been one of the most unnoticed areas. It was, of course, not expected out of the disaster assessment exercises. We emphasize that this was an observable result of the cyclone.

The four phases of disaster management i.e. rescue and prevention, relief, restoration, and rehabilitation, were addressed to some extent. Rescue/prevention was effectively done, but it could have been better with a systematic approach. Localized models of loss assessment should be developed.

Relief and restoration assessments were done simultaneously. While relief assessment was for immediate needs, restoration assessment was for short-term (a few months) needs. These assessments were the basis for the compensation and mitigation efforts. At the aggregate level, there could be improvements such as estimating the long-term economic losses. Models of losses (such as standard costs for infrastructure, trees, and crop) could be developed, which could help in making more accurate estimation. It would also aid in mitigation efforts. Assessing grassroots level damages was a major problem. While the aggregate level assessment could be more or less acceptable, there were discrepancies on the persons who had suffered and those who were compensated.

Rehabilitation is a long-term process. It is too early to consider this problem, as the cyclone has taken place only recently. However, long-term needs (e.g. resilient infrastructure such as quality housing, underground cabling, etc.) have been mentioned elaborately in the loss and damage assessment reports (Government of Odisha, 2019). However, many such past suggestions are yet to be fulfilled. For example, after the super cyclone of 1999, underground cabling of electricity transmission was suggested. But it has not been carried out yet. Mangrove development was another intervention that could be followed in the long-term. Similarly, the changes in livelihood patterns must find a place in the mitigation efforts. With disasters becoming more frequent, readiness and action need to be robust. As discussed earlier, the local economy and labour market have been altered and disrupted because of the cyclone. Such issues have not been highlighted in the policy documents and assessment reports.

Local governance with respect to disaster impact assessment needs to be strengthened. Had the village level workers been sensitive and skilled, the assessment could have been more accurate. The role of government in disaster management is immense. It is in this sense that the paper highlights the need for improving disaster impact assessment practices. It is important to note that better modes for prevention and loss assessment, and mitigation and adaptation, need to be prepared. A cadre of people trained in the new tools and techniques should be built up. Given the dynamic changes in the society and the market, this is not going to be an easy task. However, with some efforts, it can be done effectively that will help in building a resilient and sustainable society.

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Appendix I: Damages and Losses due to Cyclone *Fani* in Odisha, 2019

Type of damage	Estimated damage/loss
Population affected	16.53 million (Indian Red Cross Society, 2019)
Houses damaged (fully or partially)	Estimates ranged from 0.36 million (Government of Odisha, 2019) to 0.51 million (Indian Red Cross Society, 2019)
Human casualty	Death of 64 people (Government of Odisha, 2019; OrissaPOST, 6 June 2019)
Livestock casualty	Death of 2638 large animals (cow, buffalo, bullock), 695 calves, 2924 small animals (goat/sheep) and about 5.3 million poultry birds. Also, 0.12 million cowsheds damaged. More than 2.45 million large animals and one million small animals were affected. (Government of Odisha, 2019). Another report suggests that 2650 large animals and 3631 small animals were dead (OrissaPOST, 6 June 2019).
Electric infrastructure	400 KV towers - 5; 220 KV towers - 27; 130 KV towers - 21; 220 KV Grids - 4; 33 KV lines - 5030 km; 11 KV lines - 38613 km, distribution transformers - 64304. LT lines - 79485 km (Indian Red Cross Society, 2019; Government of Odisha, 2019)

Fishing infrastructure	6389 traditional marine fishing boats, 7240 nets, 2524 fish ponds spread over 587 ha, three fishing harbours, six fish landing centres and five fish farms* (Pardikar, 2019), and 50 fishing settlements (including 0.15 million people) were affected (Government of Odisha, 2019).
Other infrastructure	National highways - 272 km, state highways - 5240 km, rural roads - 6251 km, public buildings - 6441, individual toilets in rural areas - 0.1 million.
Trees	2.19 million (Government of Odisha, 2019)
Cropped area	19734 ha (suffered from more than 90% crop loss) (Government of Odisha, 2019)

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Fig 1: Disaster Impact Assessment Framework

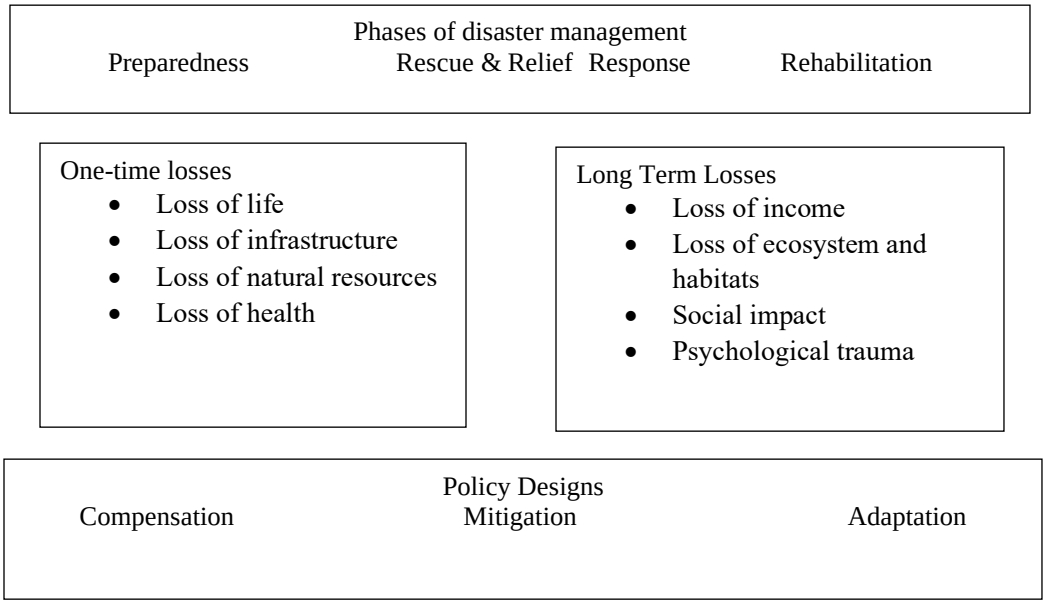

Table 1: Damages not Estimated in Public Assessments

Visible damage	Additional damage
Asbestos roof / tin shed was smashed / blown away	Damage to the electronic and electric utilities, wiring, food items, books, light weight utensils, cement, construction works in progress, medicine, household documents, bedding
Overhead water tanks	Pipe fittings
No visible damage	Uprooting of dish antenna, cables, breakage of glass windows and panels

Table 3: Indicators of Disaster Impact Assessment

Environmental	Economic	Social
Loss of trees Loss of wildlife Structural change in water bodies	Number of houses damaged partially Number of houses suffered major damage Number of houses damaged fully	Extent of helplessness Extent of frustration Traumatic experiences of people People becoming risk averse due to fear of loss

	Loss of livelihood assets (agricultural implements, dairy animals, goats, sheep, cow-sheds, fishing nets, boats, fishing ponds, poultry sheds, poultry, etc). Loss of cropped area – crop-wise Number of workdays lost Employment opportunities lost Number of days of businesses closure Number of days when financial services were not provided Extent of liquidity crunch Increase in indebtedness	in possible future disasters Absence from schools Absence from institutional works (like SHG meetings) Feeling of safety Feeling of social security Instances of theft Changes in occupation Attachment to land Vulnerability to disease Increased instances of snake bite Ability to meet medicinal expenses / healthcare Ability to afford educational expenses Ability to meet social obligation Opting for *dadan* (bonded labour) New alignment

	Incremental cost of interest paid Loss of telecommunication channels Loss of transport infrastructure	Favouritism

Table 2: Economics of Coconut Trees

Activity	Particulars	Amount in INR
1. Revenue	Per year (35–45 nuts, plucked four times a year, sold at an average price of INR 10 per nut)	1600
2. Expenses	15% for plucking nuts 15% for watch and ward Total 30% (INR 480) of sales	480

3.	Net profit	1120 per year
4. Present value of net income lost	50 years. Given a risk-free rate of 6% per annum	17653
5. Replacement cost	For 10 years: Cost of about INR 882 (cost of the sapling: INR 200, cost of fencing: INR 200, irrigation: INR 120 per year per tree for five years).	8243 per plant
6. Total loss estimated	Lower of point 4 and 5 INR 8243 each for 12 million trees	INR 11 billion

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Poverty De-Escalation as a Launchpad for Sustainable Development in Nigeria

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ABSTRACT

Sustainable development cannot be achieved without militating against the devastating and harmful effects of poverty. This paper examines the linkage between poverty and sustainable development by exploring the divergent views of scholars in this regard. *The paper adopted a conceptual approach in an attempt to discern how sustainable development in Nigeria could be achieved through poverty de-escalation.. Materials were generated via internet, textbooks and other documents relevant to the study.* The new 2030 Agenda for sustainable development highlights the strong commitment to ending poverty in all its forms and dimensions, including by eradicating extreme poverty by 2030. Progress in reducing poverty and hunger has been deeply uneven in different parts of the world and different geographic locations. Leaving no one behind will require a multi-dimensional view of poverty and hunger that addresses social, economic and environmental drivers. The terms poverty and sustainable development are not new in our daily parlance but when seen from the practical point of view, they call for the attention of man, especially those who are humane with the abuse of human rights. Ensuring sustainable utilization of environmental resources

calls for a holistic approach in tackling the problem of poverty in such a way that avoidable damages to the environment could be averted. Indeed, no society can address the social phenomenon of sustainable development in isolation of the twin problems of poverty and environmental degradation.

Sustainable development implies the utilization of environmental resources by the present generation of human beings in such a way and manner that the future generation of the human species will come and meet such resources in better qualities and quantities than their predecessors. In a world where more than half of the population lives below poverty line, and where the consumption propensity of the wealthy few is on the increase, the problem of environmental degradation will continue to be on the increase.

INTRODUCTION

The new 2030 Agenda for sustainable development highlights the strong commitment to ending poverty in all its forms and dimensions, including by eradicating extreme poverty by 2030. It also emphasizes the determination to end hunger and to achieve food security as a matter of priority and to end all forms of malnutrition.

Poverty is the oldest and the most resistant virus that brings about a devastating disease in the third world called under development. It's rate of killing cannot be compared to any disease from the genesis of mankind. It is worse than malaria and HIV/AIDS which are claimed to be the highest killer diseases.

It is a major cause and effect of global environmental problems stated the influential Brundtland Commission [17] in a sentence that captures widely held beliefs: Poor people are often seen as compelled to exploit their surrounding for short-term survival and are assumed to be the ones most exposed to natural resources degradation.

Progress in reducing poverty and hunger has been deeply uneven in different parts of the world and different geographic locations. Leaving no one behind will require a multi-dimensional view of poverty and hunger that addresses social, economic and environmental drivers. We have learned from the MDGs that poverty and hunger eradication can only be achieved when interconnected factors are addressed together. Such factors include inclusive growth, livelihoods and employment, access to basic infrastructure and services, food security, nutrition, health, education, and greater equality. When addressing these multiple dimensions together, interventions that emphasize the sustainable use of biodiversity and ecosystems will be critical.

Peaceful and just societies are a necessary precondition for success of SDG 1 “Ending poverty in all its forms everywhere”.

Encyclopaedia Encarta, defines poverty as the condition of having insufficient resources or income. In its most extreme form, poverty is a lack of basic human needs to sustain as useful and working efficiency such as adequate and nutritious food, clothing, housing, clean water and health services. According to the United Nations Human Development Report, (1998), poverty is defined as a complex phenomenon that generally refers to inadequacy of resources and deprivation of choices that would enable people to enjoy decent living conditions.

More than 700 million people, or 10% of the world population, still live in extreme poverty and is struggling to fulfil the most basic needs like health, education, and access to water and sanitation, to name a few. The majority of people living on less than $1.90 a day live in sub-Saharan Africa. Worldwide, the poverty rate in rural areas is 17.2 per cent—more than three times higher than in urban areas.

Having a job does not guarantee a decent living. In fact, 8 per cent of employed workers and their families worldwide lived in extreme poverty in 2018. Poverty affects children disproportionately. One out of five children live in extreme poverty. Ensuring social protection for all children and other vulnerable groups is critical to reduce poverty.

Poverty has many dimensions, but its causes include unemployment, social exclusion, and high vulnerability of certain populations to disasters, diseases and other phenomena which prevent them from being productive. Growing inequality is detrimental to economic growth and undermines social cohesion, increasing political and social tensions and, in some circumstances, driving instability and conflicts.

STATEMENT OF THE PROBLEM

Poverty has become a major source of crisis in the global area. No continent is spared. It has taken a calamitous dimension in Africa especially in Nigeria leading to the issues of unprecedented social vices.

More than 700 million people, or 10% of the world population, still live in extreme poverty and is struggling to fulfil the most basic needs like health, education, and access to water and sanitation, to name a few. The majority of people living on less than $1.90 a day live in sub-Saharan Africa. Worldwide, the poverty rate in rural areas is 17.2 per cent—more than three times higher than in urban areas.

OBJECTIVE OF THE STUDY: This study was to explore the possibility of employment and deployment of poverty deescalating tool such as entrepreneurship to upscale sustainable development.

RESEARCH METHODOLOGY:

The study adopted a conceptual approach in an attempt to x-ray the various strategies for achieving sustainable development in Nigeria. The justification for the adoption of this approach is because the study is exploratory in nature anchored on discovery of ideas and insights. Materials were generated via internet, textbooks and other documents relevant to this study.

WHY POVERTY DESERVES A SPECIAL ATTENTION

Poverty is persistent and widespread - there are 1.2 billion people living on less than one dollar a day, while about half of the world's population lives on less than two dollars a day. Hundreds of millions more live on the threshold of poverty. Poverty has various manifestations - poor people are prone to hunger, disease, illiteracy, joblessness, exclusion and social discrimination.

The core challenge for sustainable development is to ensure productive work and a better quality of life for these people, while sustaining ecosystem services and strengthening the social fabric that underpins development.

As we move into the 21st century, human institutions, from local to global, are facing many economic, social and environmental challenges. Sustainable development is that which is economically viable, socially acceptable and environmentally sound. Development is not sustainable if it does not integrate all three elements. It implies long term synergy through changes in business practices and lifestyles, as well as the adoption of environmental and social standards to stay within the limits of available resources.

ECONOMIC WELL-BEING AND POVERTY

The world is experiencing extremely rapid economic change, including powerful trends towards the use of market forces and market-based policies throughout the world; global economic integration driven by trade liberalisation; and increased economic interdependence among nation states and reductions in national economic sovereignty. At the same time, the disparity between rich and poor continues to grow, both within countries and between them.

Pressures to develop and achieve economic well-being through a primary focus on financial, human and physical capital is driving short-term unsustainable exploitation of the natural resource base and eroding social capital. This is occurring more rapidly and over larger areas than ever before. Such resource exploitation, while providing immediate benefits to some, imposes both short- and long-term costs on many others.

These "others" are often the poorest of the poor, who depend heavily on natural resource use and the maintenance of biological diversity. As a result, poverty reduction strategies are undermined by the breakdown of the social fabric and the loss of the environmental services upon which all life depends.

SOCIAL DEVELOPMENT

Many countries are struggling with the strains of poverty, rapid population growth and migration, the replacement of a subsistence by a market economy, and massive environmental impacts. In many developing countries faced with a rapid decline of traditional value-systems, a major challenge is the need to enlarge, strengthen, and empower a stable civil society that will build the trust and public self-confidenc ewhich enables participatory governance. Democratic, culturally diverse, and socially inclusive societies are essential parts of modern sustainable development.
High worldwide military expenditure is continuing to affect sustainable development.

ENVIRONMENTAL STABILITY

Environmentally, it is clear that much of our industrial, agricultural and other uses of renewable and non-renewable natural resources are unsustainable. It has been widely acknowledged, both during UNCED and subsequently by bodies such as the World Bank and the OECD Development Assistance Committee, that the current trends in environmental degradation are a major threat to the achievement of sustainable development

Poverty is often associated with degraded rural environments.

POVERTY AND HEALTH

"The biggest enemy of health in the developing world is poverty." - UN Secretary-General Kofi Annan, address to the 2001 World Health Assembly

There is a stark relationship between poverty and poor health. In developing countries, life expectancy is under 50 years, compared to 77 in richer countries. Lack of clean water, sanitation and hygienic living conditions cause about two million deaths every year - most of them among children. About 820 million people do not receive enough food to lead healthy and productive lives, while 160 million children are seriously underweight for their age.

POVERTY AND GENDER

Women represent as much as 70 percent of the world's absolute poor - living on one dollar a day or less. Women's unpaid work limits the range of paid economic activities they can undertake. Women often work in the informal sector where there is greater insecurity and lower earning capacity and the return to their labour is less than that of their male counterparts.

POVERTY AND ENVIRONMENTAL STRESS

Poverty and environmental degradation are closely linked. Over half of the world's poor live in rural areas where they depend on natural resources such as land, water, wood, and vegetation to meet their vital needs. Poor people often have no choice but to exploit resources available to them - resorting to low-input, low-productivity agricultural practices such as overgrazing, soil-mining and deforestation, with consequent land degradation.

POVERTY AND EDUCATION FOR SUSTAINABLE DEVELOPMENT

Although overall access to basic education has risen substantially over the last decade, the poor are still less likely to attend school and more likely to repeat grades and to have lower quality of education than those in higher income brackets. In 2000, around 325 million children were not attending school and more than 850 million adults were illiterate - almost two-thirds of them women[4]. Enrolment rates among the poor are low for several reasons including: long distances to schools; school costs (e.g., fees, books, transport); care-giving responsibilities including caring for family members with HIV/AIDS; and other opportunity costs (loss of labour in home production, farm work, household enterprise, etc.).

FACTS ABOUT POVERTY.

- More than 700 million people, or 10% of the world population, still live in extreme poverty. Surviving on less than US$1.90 a day.
- Having a job does not guarantee a decent living. In fact, 8 per cent of employed workers and their families worldwide lived in extreme poverty in 2018.
- Globally, there are 122 women aged 25 to 34 living in extreme poverty for every 100 men of the same age group.
- The majority of people living on less than $1.90 a day live in sub-Saharan Africa.
- High poverty rates are often found in small, fragile and conflict-affected countries.
- Poverty affects children disproportionately. One out of five children live in extreme poverty.
- As of 2018, 55% of the world's population have no access to social protection.
- In 2018, only 41% of women giving birth received maternity cash benefits.

GLOBAL TARGETS TO TACKLE POVERTY

- By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day
- By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
- Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
- By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
- By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
- Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions
- Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

AGENDA TO TACKLE POVERTY HEAD ON IN THE GLOBAL ARENA

- **Leave no one behind.** We must keep faith with the original promise of the MDGs, and now finish the job.. After 2015 we should move from reducing to *ending* extreme poverty, in all its forms. We should ensure that no person – regardless of ethnicity, gender, geography, disability, race or other status – is denied universal human rights and basic economic opportunities.

- **Put sustainable development at the core.** For twenty years, the international community has aspired to integrate the social, economic, and environmental dimensions of sustainability, but no country has yet achieved this. We must act *now* to halt the alarming pace of climate change and environmental degradation, which pose unprecedented threats to humanity.

- **Transform economies for jobs and inclusive growth.** We call for a quantum leap forward in economic opportunities and a profound economic transformation to end extreme poverty and improve livelihoods. This means a rapid shift to sustainable patterns of consumption and production--harnessing innovation, technology, and the potential of private business to create more value and drive sustainable and inclusive growth.

- **Build peace and effective, open and accountable institutions for all.** Freedom from fear, conflict and violence is the most fundamental human right, and the essential foundation for building peaceful and prosperous societies. At the same time, people the world over expect their governments to be honest, accountable, and responsive to their needs. We are calling for a fundamental shift – to recognise peace and good governance as core elements of wellbeing, not optional extras. This is a universal agenda, for all countries.

- **Forge a new global partnership.** Perhaps the most important transformative shift is towards a new spirit of solidarity, cooperation, and mutual accountability that must underpin the post-2015 agenda. A new partnership should be based on a common understanding of our shared humanity, underpinning mutual respect and mutual benefit in a shrinking world. This partnership should involve governments but also include others: people living in poverty, those with disabilities, women, civil society and indigenous and local communities, traditionally marginalized groups, multilateral institutions, local and national government, the business community, academia and private philanthropy. Each priority area identified in the post-2015 agenda should be supported by dynamic partnerships.

SUSTAINABLE DEVELOPMENT

The concept of sustainable development arose from two main sources: increasingly worrisome evidence of ecological degradation and other biophysical damage, both despite and because of the greater wherewithal provided by economic growth, and the largely disappointing record of post-WWII 'development' efforts, particularly the persistence, and in some places worsening, of poverty and desperation in a period of huge overall global increases in material wealth. The United Nations and associated agencies worried about these matters separately for some decades before appointing the World Commission on Environment and Development (WCED) to address them jointly.

The concept of sustainable development become a topic of discussion at international level after the publication of the report "Our Common Future" in 1987 by the Word Commission on Environment and Development of the United Nations. This report is widely known as the Brundtland report where we find the most famous definition of sustainable development:

"development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UNWECED, 1987).

Todaro and Smith [2003:811] define sustainable development as a "Pattern of *development* that permits future generations to live at least as well as the current generation". This definition is similar to that of the World Commission on Environment and Development [WCED, 1987; Elliot, 1994:5] – the Brundtland Commission – namely: "development which meets the needs of the present without compromising the ability of future generations to meet their own needs". Elliot [1994:13] points out that the concept encompasses the interdependent goals of [various aspects of] development and environmental conservation.

OBJECTIVES OF SUSTAINABLE DEVELOPMENT

Griggs etal. (2013). Stated that sustainable development has six universal objectives in the realization of the 2030 vision which:

- Improving Individual Living Conditions In The Community.
- Maintaining Food Safety,
- Maintaining Water Safety.
- Makes Clean Energy Universally Accessible.
- Ensure Ecosystems Function In A Healthy And Productive Way.
- A Healthy And Sustainable Ecosystem

PRINCIPLES OF SUSTAINABLE DEVELOPMENT.

These include:

- Stable and long term economic growth
- Proportionate and balanced economic and social development
- Active employment policies
- Reduction of regional differences
- Growth of personal income and consumption
- Preservation of the environment for future generations and efficient usage and allocation of natural resources**.** They are also depicted below:

POVERTY AND ENVIRONMENTAL SUSTAINABILITY:

Due to lack of resources and their struggle just to ensure day-to-day survival, poor farmers are believed to offset concerns with the long-term sustainability of their resource management and to degrade already fragile resources, such as steeply sloping, erosion-prone hillsides.

This resource degradation, in turn, aggravates their poverty even more. Thus, poor people are seen both as victims and agents of environmental degradation.

The linkages between poverty and environmental issues are affected by how poverty is defined, by the type of environmental problem in question and by which groups among the poor are affected. Research and policy has tended to focus on the relationship between poverty and environmental degradation in terms of pointing out that the poor are both victims and agents of environmental degradation: victims in that they are more likely to live in ecologically vulnerable areas, agents in that they may have no option but deplete environmental resources thus contributing to

environmental degradation [66,101]. However, it is also acknowledged that the poor often have practices that conserve the environment. Great physical and spatial variability in natural resource endowments also seem to complicate the picture. Harrington [52] believed that unsustainability causes are complex and vague and are poverty, population growth, ownership/possession of national resources and national policies.

A researcher [94] said that population affected poverty and environment that impressible with Malthus theory.

Barros [10] indicated that Brazilian poverty did affected demand for environmental conservation in the Carajás region. Income concentration and difficulties in the access to education affect deforestation rates in Brazil, at least indirectly through their effects upon willingness to pay for conservation. They suggest that an increment of individual welfare, particularly in education, will have a positive effect upon demand for environmental quality. It seems that Grossman and Krueger[49] and Boyce and Torras[15] are correct in

POVERTY, SUSTAINABILITY AND STRATEGY FOR DEVELOPMENT

- The creation of a strong, competitive, stable and efficient private sector through a sound legal and regulatory environment.
- A stable macroeconomic framework that ‘reduces the country’s vulnerability to the inevitable shocks that are associated with global engagement’. In this regard he notes the possibly destructive impacts of short term international capital flows.
- Public provision of health, infrastructure and education services, and/or the creation of an

enabling environment so that the private sector can provide some of these services.

- Openness to trade and a liberalization of international trade in goods and services with, at the same time, increased opening of developed country markets to developing country exports and a more generous approach to sharing intellectual property rights on the part of the developed countries.

CONCLUSION

The linkages between population, poverty and environmental quality have long been the subject of debate and concern. The relationship could hardly be direct since, as some have argued, low living standards in the rural areas contribute to increased pressure on natural resources, which in turn aggravates poverty.

Alleviating poverty will not necessarily help reduce environmental pressures, and indeed may increase them. Appropriate measures need to be taken to handle the problems that emerge when such changes take place. On the other hand, protection of the environment will often have a pro-poor benefit, the more so when it relates to green issues than to brown ones. Again this should provide an added impetus for environmental protection in a poverty based strategy. sustained growth will contribute to the alleviation of poverty more than any other single measure. Sustainable Development will engender guidelines for Evaluating Policies and Programmes with respect to Natural Capital and Poverty .and also addressing the important international environmental issues.

Indicators of sustainable development have to take account of all types of assets, including natural, human and social capital as well physical capital. It is the sum total of these different forms that has

to be non-decreasing if development is to be judged as sustainable. Second we observe that societies that maintain, or increase, the level of output as measured by GDP are also societies that reduce the levels of poverty More specifically, we have noted that there are linkages between what happens to the stock of natural capital and poverty.

There is also a lot of casual evidence to indicate that when there is a loss of natural capital, perhaps as a result of natural disasters, the poor suffer disproportionately more than the rich. Hence policies that prevent such losses, particularly in relation to fuelwood, water and soil, will benefit the poor, as long as the costs of such policies do not fall heavily on them.

Ensuring sustainable utilization of environmental resources calls for a holistic approach in tackling the problem of poverty in such a way that avoidable damages to the environment could be averted. Indeed, no society can address the social phenomenon of sustainable development in isolation of the twin problems of poverty and environmental degradation.

Sustainable development implies the utilization of environmental resources by the present generation of human beings in such a way and manner that the future generation of the human species will come and meet such resources in better qualities and quantities than their predecessors. The concept of sustainable development suggests a potentially positive relationship between socio-economic development and environmental sustainability.Unsustainable use of natural resources inevitably causes poverty.

The World Bank proposes three-pronged strategies to reduce (not alleviate) poverty:

• **Promoting opportunity:** This entails securing jobs, credit, roads, electricity, markets for their produce and the schools, water, sanitation and health services that underpin the health and skills essential for work. This requires action by the state to support the buildup of human, land and infrastructure assets that poor people own or to which they have access

• **Facilitating empowerment:** This calls for the development of sound and responsive institutions that will remove the social and institutional barriers that result from distinctions of gender, ethnicity and social status. It recognizes that achieving access, responsibility and accountability is intrinsically political and requires active collaboration among poor people, the middle class and other groups in society

• **Enhancing security:** This call for reducing the vulnerability caused by economic shocks, natural disasters, ill health, disability and personal violence and requires effective national action to manage the risk of countrywide shocks and effective mechanisms to reduce the risks faced by poor people

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Enhancing Entrepreneurial Education for Entrepreneurial University: A Conceptual Framework

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Abstract
The development of entrepreneurship is increasingly recognized as part of the university mission. Universities can contribute as potential driver for entrepreneurship in different ways: the creation of new knowledge, its transmission through education, its dissemination through information and communication technologies, and its adoption in new industrial processes or services. The extent and nature of the role of the university in this context is still strongly debated in theoretical discussions concerning the entrepreneurial university paradigm, the "third mission", the "quadruple helix" model and "regional innovation systems". While these concepts have given rise to new models of university engagement in entrepreneurship, some issues are still open. With the exception of some general ideas about how entrepreneurship education should be conducted, it is difficult to find a common denominator for what makes education in entrepreneurship successful.

Against with this scenario, the study develops some considerations on the connections between Entrepreneurial education (EE) activities and their effectiveness for reaching Entrepreneurial University outcomes and impacting on the Entrepreneurial Ecosystem as a whole. The originality of the article employs a new vision of EE developing a taxonomy and systematization of EE

activities The main goal of this research is to offer an integrated framework and highlight directions for future inquiry about EE from strategic management theories lenses.

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