Environmental Sustainability: Key to Achieving Other Millennium Development Goals (MDGs).

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Abstract

Millennium Development Goals are grounded in the recognition of the role played by the environment and natural resources in providing the material and environmental basis, the ecosystems, and the energy on which economic processes depend. This study sets out to establish an association model between environmental sustainability (MDG 7) and the achievement of the Millennium Development Goals. This study stems from the fact that environmental sustainability is the key to the achievement of all the MDGs which focuses on the environmental impacts of urban agglomerations, as it aims to improve the lives of 100 million urban slum dwellersby 2015. The study adopted a descriptive research design and was guided by seven research questions. 637 respondents were randomly sampled and analyzed using regression. The results show that there is a relationship between Environmental Sustainability (ES) and the achievement of the Millennium Development Goals. The study recommends that population growth should be linked to environmental sustainability for the achievement of Millennium Development Goals (MDGs).

Keywords: Environmental Sustainability; Population Growth; MDGs.

1.0 Introduction

The *Millennium Development Goals* (MDG's) according to Wikipedia (2010) are the eight goals agreed on by 192 countries that are members of the United Nations along with 23 other international organization. The goals are MDG1: Eradicate extreme poverty and hunger, MDG2: Achieve Universal Primary Education, MDG3: Promote gender equality and empower women, MDG4: Reduce child mortality, MDG5: Improve maternal health, MDG6: Combat HIV/AIDs, malaria and other diseases, MDG7: Ensure environmental sustainability and MDG8: Develop a global partnership for development.

MDG 7 cannot be analyzed out of the general context of the MDGs as an integrated development strategy, with specific priorities. Sustainable development is grounded in the recognition of the role played by the environment and natural resources in providing the material and environmental basis, the ecosystems, and the energy on which economic processes depend

(ECLAC, 2000). MDG 7 is connected, for example, to MDG 6 as the combat of malaria is a health priority, which is related to the environment, housing, and settlement patterns. In all of this, the implications of demographic factors must be considered, either because population growth impacts on environmental sustainability and produces environmental vulnerability, or because migration and other components of demographic change influence the growth of urban slums and deforestation of rain forests, to mention a few of the relevant interactions. One of the overarching priorities is the sustainability of development, not only in an environmental sense, but also over time.

Moreover, sustainable development should be viewed under the lens of international cooperation. This is to say, environmental sustainability is associated with the building of global partnerships, given that, in today's world, all countries are interconnected and interdependent. The global scale of pressure on the environment epitomized by problems such as global warming and the depletion of the ozone layer, underscores the fact that countries are becoming increasingly interdependent and vulnerable. Sustainability of the environment (MDG 7), therefore, depends on global partnerships for development (MDG 8).

Relationships with poverty (MDG 1) and, to a lesser extent, gender (MDG 3) is also evident. In the case of poverty, these are clearly bi-directional, as environmental degradation can be either the cause or the consequence of the poverty of the population residing in environmentally vulnerable areas. A somewhat unexpected link between MDG 2 and MDG 7 is the finding by some researchers (e.g. Pichón, 1997) that settlers with higher levels of education tend to cause more deforestation than those with less education, possibly because they can leverage more resources for the economic exploitation of the land they occupy. Conversely, there is also a link from Target 11(share of women in wage employment in the nonagricultural sector) to MDG 2 in that children living in slum areas often do not have access to education, for lack of a legitimate address for registration (UNFPA, 2007: 28).

Although the notion of a strong linkage between environmental sustainability and population processes is intuitively appealing, historically it has proven difficult to act upon this idea. Young (2005: 93) notes the lack of mutuality between population policy and other aspects of developed particularly issues of sustainability:

> "The population lobby sets out clearly and forcefully the effects of population increase on environment, food security, poverty, and sustainable development. The institutions and agencies responsible for the latter concerns, on the other hand, do not explicitly recognize that population increase are integral to their policies. The ethically acceptable package of population and reproductive health policies set out in 1994 at the UN Conference on Population and Development must be applied to the objectives of the World Conference on Sustainable Development in 2002. Institutions concerned with poverty, hunger, and environment needs to follow the policy road from Cairo to Johannesburg."

Perhaps the most evident consensus regarding population among scholars and policymakers is that long-term environmental sustainability cannot be achieved without the stabilization of population growth. Some MDGRs have also argued for the limits to the consumption of essential

non-renewable natural resources. However, these ideas have not necessarily translated into a systematic concern with population factors as integral elements of environmental policy. Opinions on the importance of population trends compared to other determinants of environmental depletion vary greatly, particularly when one moves from the global to the local level and from the long run to more immediate policy interventions.

In light of the above, the objectives of the study is to establish an association model between environmental sustainability (MDG 7) and Environmental Sustainability (ES) and Poverty Eradication (PE), Universal Primary Education Achievement (UPEA), Gender Equality and Women Empowerment (GEWE), Child Mortality Reduction (CMR), Maternal Health Improvement (MHI), Malaria and HIV/AIDS combating (HAC), and Global Partnership Development (GPD).

2.0   LITERATURE REVIEW

2.1   Poverty alleviation

Poverty is often defined based on income or money. The poor are often considered as those earning below a particular income recognized as minimum amount needed to provide the basic necessity for a living. This is put at US$275 and US$370 per annum (Levy, 1991) for the extreme poor and for the moderate poor respectively. However, poverty is more than income; it entails lack of access to a range of basic services and infrastructures which include, education, health and farm inputs. However, with high rate of unemployment in the country, the global economic recession and global food crisis, the trend will change negatively. For instance, the devaluation of the naira may lead to a serious unemployment and aggravate poverty level. A Similar action in the 80s, witnessed massive job cut, company closure and rationing of essential commodities. In short there may be increase in unemployment rate and high level of poverty looms.

2.2   Universal Primary Education

While most of the Millennium Development Goals face a deadline of 2015, the gender parity target was set to be achieved a full ten years earlier - an acknowledgement that equal access to education is the foundation for all other development goals. Yet recent statistics show that for every 100 boys out of school, there are still 117 girls in the same situation. Until equal numbers of girls and boys are in school, it will be impossible to build the knowledge necessary to eradicate poverty and hunger, combat disease and ensure environmental sustainability. And millions of children and women will continue to die needlessly, placing the rest of the development agenda at risk.

Meeting the Education Goal will speed progress toward every other Millennium Goal. Educating children helps reduce poverty and promote gender equality. It helps lower child mortality rates and promotes concern for the environment. It is inextricably linked to Goal 3 – gender parity – as universal primary education by definition requires gender parity. Gender parity in primary education, meanwhile, is of limited worth if few children of either sex participate.

Further, education – specifically free primary school for all children – is a fundamental right to which governments committed themselves under the 1989 Convention of the Rights of the Child.

UNICEF advocates quality basic education for all, with an emphasis on gender equality and eliminating disparities of all kinds. In particular, getting girls into school and ensuring that they stay and learn has what UNICEF calls a "multiplier effect." Educated girls are likely to marry later and have fewer children, who in turn will be more likely to survive and be better nourished and educated. Educated girls are more productive at home and better paid in the workplace, and more able to participate in social, economic and political decision-making.

School also offers children a safe environment, with support, supervision and socialization. Here they learn life skills that can help them prevent diseases, like how to avoid HIV/AIDS and malaria. They may receive life-saving vaccines, fresh water and nutrient supplementation at school. Educating a girl also dramatically reduces the chance her child will die before age five.

Conversely, denying children access to quality education increases their vulnerability to abuse, exploitation and disease. Girls, more than boys, are at greater risk of such abuse when they are not in school. For many villages, a school also provides a safe haven for children, a place where they can find companionship, adult supervision, latrines, clean water and possibly meals and health care.

2.3   Promote gender equality and empower women

Women and men are often differently affected by local and regional environmental degradation because the tasks and work patterns of women and men (in both the workforce and the household) are likely to differ. For instance, men often suffer more from exposure to environmental hazards related to their employment (e.g. driving to work, working in mining or other potentially hazardous industries, even participation in armed conflict), while women often suffer more from environmental hazards in the home environment (e.g. exposure to gas or wood-fire stove smoke).

Degradation can also lead to the implementation of environmental protection policies that can drastically affect livelihoods, and the effects are often different for men and women. For example, certain sectors of the work force have undergone radical change in order to protect fragile, abused or depleted natural environments. These sectors include:

• forestry
• mining
• fisheries
• agriculture

Many of these sectors are heavily dominated by male labourers, and apart from the obvious economic crisis such change can bring, the psychological crisis wrought by loss of livelihood is not insignificant. This crisis can also influence the way that men view environmental protection overall, and may make them less responsive to environmental protection or clean-up policies in other spheres of their lives.

The goals of gender mainstreaming here are thus:

• to ensure that men and women are afforded equal protection from environmental hazards;

• in the context of environmental clean-up, to consider the diverse needs of and effects on men and women.

WHY BOTHER?

Justice and Credibility: Women and men have the right to equal protection from environmental pollution and degradation. Policy-makers need to ensure this equal protection not least as a human rights imperative. Furthermore, if governments only "partially protect" their population or remain indifferent to the needs of either men or women, their credibility is damaged.

Quality of Life and Efficiency: The health and economic consequences of pollution and environmental hazards on human beings has been well documented. These consequences also have strong links with chronic poverty. Apart from the major barrier this poses to quality of life of men, women and their families, this also has broader implications for the nation's economic growth.

Furthermore, a strong case can be made for the fact that it is often cheaper to prevent pollution and environmental degradation than it is to clean it up afterwards. A gender mainstreaming approach can help to more precisely and accurately identify environmental hazards that affect men and women.

Chain reaction: Adopting a participatory approach to assessing environmental degradation (which includes making an effort to understand the needs and concerns of both men and women in terms of environmental clean-up programmes) will build trust and credibility, which in turn may elicit more commitment to environmental protection from the population in general.

2.4 Reduce child mortality

Prenatal care and the ability to avoid high risk births (e.g. those to very young women and those spaced closely together help prevent infant and child deaths. Children in large families are likely to have reduced health care, and unwanted children are more likely to die than wanted ones.

3.0 Research Methodology

The study was a descriptive survey of relationship between environmental sustainability and other goals of the new Millennium Development Goals. It used degree students undergoing in-service training, small scale enterprises, medical patients and health workers. The population consists of all degree students, SMEs, patients, parents, health workers and governmental agencies. From this, the researchers purposively randomly sampled the study population taking the course to complete the 21 item structured questionnaire developed for the study. Out of the 700 questionnaire distributed only 637 were found useable. The data were analyzed using SPSS specifically multiple regression analysis.

Statement of Hypotheses

H1**:** there is no relationship between Environmental Sustainability (ES) and Poverty Eradication (PE)

H2: there is no relationship between Environmental Sustainability (ES) and Universal Primary Education Achievement (UPEA)

H3: there is no relationship between Environmental Sustainability (ES) and Gender Equality and Women Empowerment (GEWE)

H4: there is no relationship between Environmental Sustainability (ES) and Child Mortality Reduction (CMR)

H5: there is no relationship between Environmental Sustainability (ES) and Maternal Health Improvement

H6: there is no relationship between Environmental Sustainability (ES) and Malaria and HIV/AIDS combating (HAC)

H8: there is no relationship between Environmental Sustainability (ES) and Global Partnership Development (GPD).

4.0   Data Analysis and Results

The data analyzed were done using regression statistical tool of analysis. The tables are showed below.

Table 4.1   **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.914(a)	.836	.754	175.137
2.	.586(a)	.343	-.314	448.762
3.	.965(a)	.932	.898	112.910
4.	.996(a)	.993	.985	47.676
5.	1.000(a)	1.000	.	.
6.	.492(a)	.242	-.138	376.573
8.	.522(a)	.272	-.092	368.961

a Predictors: (Constant), MDG1, MDG2, MDG3, MDG4, MDG5, MDG6, MDG8
Source: Field Survey, 2011.

Table 1 above displays R, R squared, adjusted R squared and the standard error of the relationship between other millennium development goals and MDG 7 (Environmental Sustainability). R, which is the multiple correlation coefficient between the observed and the predicted values of the dependent variable (MDG7). A strong relationship existed among the

variables (MDG1, MDG2, MDG3, MDG4, MDG5, MDG6 and MDG8) because of the large value indicated by the multiple correlation coefficients except for MDG6 which has a weak relationship with Environmental Sustainability (MDG7). This gave respective values of 0.914(MDG1), 0.586(MDG2), 0.965(MDG3), 0.996(MDG4), 1.000(MDG5), 0.492(MDG6) and 0.552(MDG8). The variation in the dependent variable (MDG7) is not really explained by the regression model as R Squared indicated a small value of 0.343 in MDG 2, 0.242 in MDG6 and 0.272 in MDG8, these three variables indicate that the model does not fit the data well as provided by randomly selected respondents. The sample R Squared also tends to optimistically estimate how well the model fits the population. Therefore, the model can correctly explain 83.6%, 34.3%, 93.2%, 99.3%, 100%, 24.2%, and 27.2% of the total population and this approximately gave an average total of 420 respondents (i.e. this means that 420 respondents out of the sampled 637 respondents equally agreed that environmental sustainability is the key Millennium development goal in achieving other millennium goals hence establishing a multiple regression associationship) With this, we accept our decision rule and the model provided by the population. There was a perfect positive relationship between improved maternal health (MDG5) and environmental sustainability (MDG7) as it gave a regression value of 1.00.

Table 2.0   **Correlations**

		MDG1	MDG2	MDG3	MDG4	MDG5	MDG6	**MDG7**	MDG8
MDG1	Pearson Correlation	1	.877	.946	.863	1.000(**)	.537	**.914**	.869
	Sig. (2-tailed)		.320	.054	.337	.	.351	**.086**	.056
	N	5	3	4	3	2	5	**4**	5
MDG2	Pearson Correlation	.877	1	.688	.514	1.000(**)	-.498	**.586**	-.003
	Sig. (2-tailed)	.320		.517	.657	.	.668	**.602**	.998
	N	3	3	3	3	2	3	**3**	3
MDG3	Pearson Correlation	.946	.688	1	.976	1.000(**)	.332	**.965(*)**	.581
	Sig. (2-tailed)	.054	.517		.140	.	.668	**.035**	.419
	N	4	3	4	3	2	4	**4**	4
MDG4	Pearson Correlation	.863	.514	.976	1	1.000(**)	.488	**.996**	.856
	Sig. (2-tailed)	.337	.657	.140		.	.675	**.055**	.345
	N	3	3	3	3	2	3	**3**	3
MDG5	Pearson Correlation	1.000(**)	1.000(**)	1.000(**)	-1.000(**)	1	1.000(**)	**1.000(**)**	1.000(**)
	Sig. (2-tailed)	.	.	.	.		.	**.**	.
	N	2	2	2	2	2	2	**2**	2
MDG6	Pearson Correlation	.537	-.498	.332	.488	1.000(**)	1	**.492**	-.023
	Sig. (2-tailed)	.351	.668	.668	.675	.		**.508**	.946
	N	5	3	4	3	2	11	**4**	11
MDG7	**Pearson Correlation**	**.914**	**.586**	**.965(*)**	**.996**	**1.000(**)**	**.492**	**1**	**.522**
	Sig. (2-tailed)	**.086**	**.602**	**.035**	**.055**	**.**	**.508**		**.478**
	N	**4**	**3**	**4**	**3**	**2**	**4**	**4**	**4**

MDG8	Pearson Correlation	.869	-.003	.581	.856	1.000(**)	-.023	**.522**	1
	Sig. (2-tailed)	.056	.998	.419	.345	.	.946	**.478**	
	N	5	3	4	3	2	11	**4**	16

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Source: Field Survey, 2011.

Table 4.2 displays the Pearson correlation coefficients, significance values, and the numbers of cases with non-missing values. The Pearson correlation coefficient assumes that the data are normally distributed and is a measure of linear association between environmental sustainability and Poverty Eradication (PE), Universal Primary Education Achievement (UPEA), Gender Equality and Women Empowerment (GEWE), Child Mortality Reduction (CMR), Maternal Health Improvement (MHI), Malaria and HIV/AIDS combating (HAC), and Global Partnership Development (GPD). N is the number of cases with non-missing value. In this table, the number of cases with non-missing values for the variables 2, 3, 4 and 5.

CONCLUSION AND RECOMMENDATIONS

The study critically explored the relationship between environmental sustainability and other millennium development goals. The study critically carried out questions on the millennium development goals (using the millennium development goals targets as the questions which are asked to be filled by the respondents). The data gotten were analyzed and the results showed that that there is a relationship between Environmental Sustainability (ES) and Poverty Eradication (PE), Universal Primary Education Achievement (UPEA), Gender Equality and Women Empowerment (GEWE), Child Mortality Reduction (CMR), Maternal Health Improvement (MHI), Malaria and HIV/AIDS combating (HAC), and Global Partnership Development (GPD). The study recommends that population growth should be linked to environmental sustainability for the achievement of Millennium Development Goals (MDGs).

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