

Poverty, Environmental Degradation and Sustainable Development: A Discourse

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6

7 **Abstract**

8 This paper is a contribution to the ongoing debate on the topical issues of poverty,
9 environmental degradation and sustainable development by highlighting the divergent views
10 and attempting an explanation of the diversity. Poring through the literature, the authors
11 observed that there are three discernable debaters on the trajectory between poverty,
12 environmental degradation and sustainable development namely: those who argue that the
13 poor (the South) is the major cause of environmental degradation as a result of high
14 population and increased pressure on environmental resources; those who contend that the
15 high consumption propensity of the rich (the North) is the main factor in environmental
16 degradation; and, those who argue that both the rich and the poor, in varying capacities,
17 contribute to the unsustainability of the environment. The authors believe that quantitative
18 data are required to ascertain whether the poor (South) more than the rich (North) degrade
19 the environment, or not. Until such evidence is found, the North-South dichotomy on
20 ecological issues will persist. One common thread that runs through the various views is that
21 there is continued degradation of the environment the negative impact of which affects both
22 the poor and the rich. As such, the quest for sustainable development should be utmost
23 concern of all.

24

25 **Index terms**— Poverty, environmental degradation, sustainable development, north-south dichotomy,
26 debtresource hypothesis.

27 **1 I. Introduction**

28 The concern about sustainable development to a large extent stems from the universal concern about environmental
29 degradation arising from natural resource exploitation and utilization. Although high consumption propensity
30 of the affluent has been fingered as a factor in environmental degradation, so much weight has been given to the
31 social problem of poverty as a major factor in environmental degradation especially among developing countries.
32 Indeed, the intertwining relationship between environmental resource exploitation, the problem of sustainable
33 development and poverty is crucial as it is paradoxical.

34 Exploitation and extraction of environmental resources that are not sustainable can lead to environmental
35 degradation which will in turn impoverish the people. On the other hand, the clamour for environmental
36 conservation without alternative means of livelihood for the vulnerable group who solely depend on exploiting
37 the environment, will result to further impoverishment.

38 While we still lack reliable data on the extent of environmental degradation caused by both the rich and
39 the poor, the bottom line is that both are variously affected by the ecological problems resulting from it. The
40 paradoxical relationship between these variables is made more evident as we pore through the literature in
41 subsequent sections of this paper.

42 2 II. Poverty and Environmental Degradation

43 It is becoming increasingly accepted in academic quarters that there exists a relationship between accelerated
44 exploitation of environmental resources and poverty (Heady, 2000; Neumayer, 2005). Commenting on the nature
45 of this relationship, Anijah-Obi (2001) observes:

46 It has been widely acknowledged that poverty, a deplorable state of human welfare, is closely linked to
47 environmental degradation. The poor are both victims and agents of environmental damage.

48 Poverty may be created by negative and unjust social conditions such as structural inequality. The concept
49 of equity and meeting the needs of the citizens is central to sustainable development? Those who are poor and
50 hungry will often destroy their immediate environments in order to survive. They are responsible for tilling tired
51 soils and cutting down forests. They live in slums and throw waste into gutters and streams, because they lack
52 the basic necessities of life.

53 They lack resources and materials necessary for living within a minimum standard conducive to human dignity
54 and well-being. Heady (2000), and Anijah-Obi (2001) also contend that, there is a relationship between poverty
55 and environmental resource exploitation. Buttressing his argument, Heady (2000) puts it thus:

56 There are important links between natural resource management and poverty. Many poor people, particularly
57 in developing countries, rely on natural resources for their livelihood, and these people are very vulnerable to
58 deterioration in the resource. This has been demonstrated tragically by the recent famines in sub-Saharan
59 Africa, and less dramatically by the declining living standards of fishing communities in Britain and Canada.
60 Okunmadewa (1997) cited in Anijah-Obi 2001:188) expressed his view on the relationship between environmental
61 resource exploitation, poverty and the problem of sustainable development by observing the closeness of the rural
62 poor to environmentally fragile natural resources and higher levels of resources decline via soil degradation and
63 loss of tree cover, among others.

64 Since the Stockholm conference of the early 70s, the North has insisted that the population explosion in
65 the South (that is, developing countries) is the major factor in environmental degradation while the South
66 argued that it was the high rate of consumption of the North (that is, developed countries) that degrades the
67 environment. Essentially, mankind's survival and standard of well-being depends on the environment which ought
68 to be exploited and managed efficiently. Pointing out the relevance of the environment for mankind's existence
69 as well as its role in environmental degradation, Animashaun (2002) observes thus:

70 Man depends on the natural environment for his multifarious needs. His food, shelter and clothing are
71 products of the natural environment. Man exploits swamps, forest, grassland, rocks, the atmosphere, water
72 and other resources of his natural environment to satisfy these basic needs? Because of its crucial role to life,
73 man has intervened inadvertently in the natural environment and has caused serious disturbance to its natural
74 equilibrium? Today, the rate of exploitation of natural resources is faster than the time it would take nature
75 to replenish them. Nonetheless, in the process of exploiting environmental resources to satisfy increasing needs,
76 mankind has utilized culture and technology that have caused untold imbalance to the ecosystem. The use of
77 dams and irrigation as well as soil additives, chemicals and other non-natural techniques of improving yield have
78 also contributed to environmental degradation.

79 Most studies on the poverty linkage of the problem of sustainable development have concentrated on the
80 conventional definition of poverty -living below certain income level and inability to provide the basic necessities
81 of life. So defined, the indices of poverty include the percentage of persons in specific category who are below the
82 poverty income threshold. Thus, the larger the percentage of those living in the defined poverty situation, the
83 more complex the management of the environment towards sustainability as poverty degrades the environment
84 thereby creating environmental stress (Anijah-Obi, 2001).

85 Indeed, environmental resource exploitation and the problem of sustainable development have multidimensional
86 causes and effects. Government's deliberate effort at development has directly or indirectly resulted in
87 impoverishing a segment of the population especially the rural poor. Thus, social engineering or "politically"
88 designed progress has its own share of the blame of the environmental degradation that is causing severe hardship
89 to the poor. One of such development problem was captured by Enloe (1975) in a story by a 10 year old daughter
90 of Japanese fisherman thus:

91 When my father pulled in the net faded seaweeds hung down from his hands, His lips moved slowly when he
92 said, "This is the last time I'll pull the net this year" The highway runs across the pools where the seaweeds
93 grow. Everybody likes the highway but it's made a crack between the ocean and my father and my mind. This
94 anguish of the Japanese girl is shared by many.

95 As the environment becomes increasingly degraded due to government deliberate policies and resource
96 exploitation mechanisms which make the quest for sustainable development very unstable, more people are
97 impoverished as many others recklessly exploit the environmental resources due to their poverty situation. On
98 the other hand, Animashaun (2002) presented the relationship between poverty and environmental degradation
99 thus:

100 The justifiable fear is that because a majority of the present world population is living a precarious life
101 characterized by malnutrition and poor health, the human race may through its own making, become extinct in
102 the future except man is judicious in his use of the environment?.

103 That the poor depend extensively on firewood for fuel is no more news. What is news is the increasing
104 demand for this resource propelled by the burgeoning population of the country (Anijah-Obi 2001). This view

105 of environmental degradation is essentially that of the developed countries as evidenced in the North -South
106 dichotomy in the debate on environmental degradation and ozone layer depletion. The stand of the North and
107 South on environmental degradation and sustainable development is, no doubt influenced by their world view and
108 ideology as evident in the work of Uchendu (1965) cited in . However, since globalization, the rate of consumption
109 of environmental resources has gained momentum on both sides of the divide -the North and the South.

110 However, the poverty-degradation-sustainability scholars did not consider the other dimension of poverty
111 whereby the poor bear the burden of pollution and other

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113 Year deadly emissions emanating from the consumptions of the rich/affluent. Poverty as conceptualized in this
114 paper goes beyond the conventional, everyday -life definition to look at the issue of social justice and distributive
115 justice. This dimension focuses on the issue of equity and fairness in terms of reaping the benefits of environmental
116 resource exploitation as well as shouldering the burden of environmental degradation. The authors argue that
117 inequity leads to the feeling of relative deprivation which, oftentimes, culminates into social crises/upheavals such
118 as the prevalent situation in the Niger-Delta Region of Nigeria (Nwagbara, 2008). Thus, in the face of crises
119 occasioned by the problem of inequality and distributive justice, the clamour for sustainable development will be
120 elusive.

121 **4 III. The Issue of Debt-Resource-Hypothesis in Environmental 122 Degradation, Poverty and Sustainable Development**

123 Another dimension in the explanation of the relationship between the problem of sustainability, environmental
124 degradation and the social phenomenon of poverty is the debt-resource-hypothesis. In the debtresource-
125 hypothesis, "many environmentalists believe that the high indebtedness of developing countries triggers increased
126 exploitation and more unsustainable use of their natural resources" (Neumayer 2005). Accordingly, George (1989)
127 posits that repayments of high debts are implemented "by cashing in natural resources".

128 In the same vein, De la Court (1992) cited in Neumayer (2005) observes that the Philippine's Freedom from
129 Debt Coalition believes that the country's indebtedness leads to destroying their "forests to export wood, ruining
130 our coral reefs to export fish, and exhausting our soils by applying heavy pesticides and chemical fertilizers to
131 facilitate export-oriented agriculture".

132 As Neumayer (2005) noted, the debt resourcehypothesis gained currency even in the official quarters of world
133 organizations. Neumayer cited the example of the World Commission on Environment and Development (WCED)
134 as a crucial one. The Brundtland Commission, as the WCED is popular called, attested to the debt-resource-
135 hypothesis in its landmark report entitled "Our Common Future" when it pointed out that "debtors are being
136 required to use trade surpluses to service debts, and are drawing heavily on nonrenewable resources to do
137 so" (WCED, 1987). Pointing out the situation of African countries, Neumayer (2005) quoted the Brundtland
138 Commission as stating that "debts that they cannot pay force African nations relying on commodity sales to
139 overuse their fragile soils, thus turning good land to desert".

140 Following the WCED, the World Wide Fund for Nature (WWF) of the United States contended that "demand
141 for foreign exchange to service debts ? has provided an impetus for developing countries to mine their natural
142 resources" (WWF-US, 2000:5). Other environmentalist groups have followed suit in the worry and warning about
143 poverty or indebtedness-induced unsustainability and environmental degradation. These include Friends of the
144 Earth (FoE), the Worldwatch Institute, and the Global Legislators Organization for a Balanced Environment
145 (GLOBE).

146 According to Neumayer (2005), FoE asked governments in the run-up to the World Summit on Sustainable
147 Development in Johannesburg in 2002 "to note that external debt fuels the depletion of natural resources".

148 In an earlier observation, the Worldwatch Institute (2001) noted that "debt pressure has spurred increases in
149 export-oriented mining and logging in developing countries". Re-iterating the above view, the GLOBE, made up
150 of members of parliament from more than 100 national parliaments in their Johannesburg resolution (Neumayer,
151 2005), observed that "pressure of debt repayments often causes overexploitation of natural resources" ??GLOBE,
152 2002).

153 This debt repayment and/or servicing commitment of developing countries has made them, according to
154 Calvert and Calvert (1999), to give priority to what they can easily produce such as primary products that sell
155 at low prices on the world market as well as use every incentive for "intensive agriculture to produce cash crops
156 and to exhaust mineral resources as quickly as possible". In a simple but picturesque manner, Neumayer (2005)
157 presented the scenario thus:

158 The most common explanation of why high indebtedness might trigger increased resource exploitation and
159 more unsustainable resource use seems to be that high indebtedness is seen as forcing countries to earn more and
160 spend less in order to finance their debt obligations -if not a reduction of their debts, then at least servicing the
161 interest on their debts. This observation supports the earlier views including that of George (1992).

162 Confirming the predicament of developing countries with indebtedness George (1992) pointed out the vicious
163 circle attendant with this unwholesome attitude to natural resource exploitation, "with so many jostling for a

5 IV. SUSTAINABLE DEVELOPMENT

164 share of limited world markets, prices plummet, forcing governments to seek even higher levels of exports in a
165 desperate attempt to keep their hard currency revenues stable" (George, 1992).

166 In his study, Neumayer examined a few existing attempts by scholars that tried to formally model the debt-
167 resource-hypothesis and observed that there is, indeed, lack of systematic empirical evidence in its support. One
168 of the advocates of the debt-resourcehypothesis George (1992) observed that there was no(D D D D) C

169 Year need for empirical or systematic quantitative analysis, noting that the facts and figures with regards to
170 deforestation speak for themselves and suggested as follows: ? Third world countries that deforested the most
171 or the fastest in the 1980s were also, on the whole, the largest debtors. ? In a number of smaller countries with
172 less significant forest reserves, the fastest deforesters were also the most heavily indebted. ? Countries with the
173 highest 'debt service ratios' or subject to the highest levels of IMF 'conditionality' also tend to be the largest
174 and fastest deforesters.

175 In spite of all these, Neumayer (2005) maintains that "not all qualitative empirical evidence supports the
176 debt-resource-hypothesis". Most of the existing quantitative analyses are based on deforestation while other
177 environmental resources are ignored. This observation was confirmed by Pearce et al (1995) when they stated
178 that "the impact of indebtedness on other environmental indicators such as pollution, biodiversity or depletion
179 of other resources has not been tested".

180 In terms of quantitative econometric analysis, some scholarly findings reviewed by Neumayer (2005) support,
181 while some others do not support the debtresource-hypothesis. One of such studies that provide evidence in
182 favour of the debt-resource-hypothesis is the one done by ??cDonald (1994, 1995). By using the ordinary least
183 squares estimation, these scholars found a statistically significant effect of the debt service to export ratio on
184 deforestation rates in the period 1981 to 1985.

185 However, using the same methodology in the study of Latin America, Kant and Redantz (1997) did not find
186 any statistical significant relationship between indebtedness and deforestation. Also, Neumayer (2005) using
187 panel data analysis did not find any correlation in support of the debt-resourcehypothesis.

188 5 IV. Sustainable Development

189 Scholars have observed that the concept of sustainable development is not an entirely new one (Barrow,
190 1995;Harwood, 1990;Pretty, 1990;Dasmann, 1985). As ??arrow (1995:369) puts it, "sustainable development is a
191 goal for a world under growing stress". Prior to the currency gained by the concept of sustainable development
192 (SD), a sister conceptodevelopment -was highly promoted in the 1970s by scholars and organizations such as
193 Dasmann et al, (1973); Sachs (1979); and Riddell (1981).

194 Although the concept of SD has taken the centre stage of most national and international conferences on
195 environment, development and other related issues in the past two decades, there is no generally accepted
196 definition of the term. Barrow (1995) observes that the concept was first used by Barbara Ward while international
197 organizations such as UNEP, WWF and IUCN, widely popularized its subsequent usage.

198 The lack of consensus and the seemingly imprecision in the use of the concept has been a source of concern to
199 scholars (The Ecologist, 1993; Esteva and Prakash, 1992). Indeed, part of the problem with conceptualization of
200 SD is the dichotomy between the North and the South on what should constitute its meaning. As White (1994)
201 observes,

202 The conflicts between rich and poor countries -the North and the -South are a major contributory element to
203 the confused nature of the debate. However, both parties have reasons for not wanting to clarify certain aspects
204 of this confusion?For the North, it is difficult enough to accept that the technological basis of its society will have
205 to undergo major modifications especially in terms of energy use, private means of transportation, and emission
206 reduction in general?.

207 In the main, individuals and groups use and interpret the term in various ways that reflect their varying
208 development ethics (Barbier, 1987;Brown et al, 1987;Caldwell, 1984;Tisdell, 1988;Shearman, 1990;Soussan, 1992;
209 ??edclift, 1991;Adams and Thomas, 1993) and biases. Barrow (1995) captured some of the attempts at defining
210 SD five of which are highlighted below thus:

211 1. SD is based on the moral principle of intergenerational (?bequeathing the same or an improved resource
212 endowment to the future), interspecies and inter-group equity; 2. Economic growth and development that
213 is complementary, not antagonistic, to environment and society?; 3. Development that satisfies the present
214 generation without compromising the ability of future generations to meet their needs (inter-generational equity);
215 4. Considering the future today; 5. Improving the quality of human life while living within the carrying capacity
216 of supporting ecosystems.

217 Marshall (1998) noted the definition of SD as presented in the Brundtland Report as "development that meets
218 the needs of the present without compromising the ability of the future generations to meet their own needs". On
219 her own part, Anijah-Obi (2001) observed that "sustainable development is all about improving the well-being
220 of people of today and the generations of tomorrow".

221 Therefore, the central tenet of SD is the fact of intergenerational equity which means that the present needs
222 of the present generation should be met but not at the expense of the future generation who will need the
223 same or better resources. On this question of Central to the question of sustainable development is the issue of
224 intergenerational equity. This is so because of the belief that the resource base of the economy belongs to all
225 generations. Another issue that makes inter-temporal equity a serious one is that the resource base is controlled

226 and managed by one generation at a time, and this happens to be the present generation. Thus, by happenstance
227 arrangement of time, a future generation can be hurt by the present generation.

228 In the words of Agyeman, Bullard and Evans (2005), "a truly sustainable society is one where wider questions
229 of social needs and welfare, and economic opportunity, are integrally connected to environmental concerns".
230 Accordingly, these scholars observed that this emphasis upon greater equity as a desirable and just social goal
231 is closely related to a recognition that unless society endeavors for a greater level of social and economic equity,
232 both within and between nations, the long term objective of a more sustainable world is unlikely to be tenable.
233 They argued that the basis for this observation is that "sustainability implies a more careful use of scarce resources
234 and, in all probability, a change to the high-consumption lifestyles experienced by the affluent and aspired to by
235 others".

236 Attainment of attitudinal change appears to be a Herculean task. These scholars further expressed their
237 reservation on attaining attitudinal change this way:

238 It will not be easy to achieve these changes in behaviour, not least because this demands acting against short
239 term self-interest in favour of unborn generations and 'unseen others' who may live on the other side of the globe.
240 The altruism demanded here will be difficult to secure and will probability be impossible if there is not some
241 measure of perceived equality in terms of sharing common futures and fates.

242 There has been enormous literature on the issue of sustainability in the past few years and this may have
243 contributed to the divergent views in the conceptualization of the term. Accordingly, Agyeman, Bullard and
244 Evans (2005) observed that the swell in material in recent years dealing with the concepts of sustainability and
245 its action-oriented alternative sustainable development has led to opposing and differing views over what the
246 terms essentially mean and what is the most attractive means of achieving the goal.

247 In the view of Redclift (1987), sustainability as an idea can be traced back to the 'limits to growth' debates
248 of the 1970s and the 1972 UN Stockholm Conference.

249 Whatever be the divergence in its conceptualization, the single most frequently quoted definition of sustainable
250 development comes from the World Commission on Environmental and Development (WCED) (1987) who argued
251 that 'sustainable development is development that meets the needs of the present without compromising the
252 ability of future generations to meet their own needs' (WCED, (1987).

253 **6 V. Poverty, Environmental Degradation and Sustainable De- 254 velopment: A Discourse**

255 Reasonable attempt at a discourse on the relationship between poverty, environmental degradation and
256 sustainable development should begin by addressing the following questions: why has the debate continued?
257 When will the debate end?, and how will the debate end?

258 The reasons why the debate has continued are not far-fetched. One of the major reasons why the debate
259 has continued to rage on is the fact that the issues of poverty and environmental degradation are critical social
260 problems of the 21st century, affecting both the rich and the poor all over the world. Also, apart from being
261 at the centre of academic foraconferences, seminars, workshops, symposia, etcthey are at the front-burner of
262 national and international development policies and programmes. Again, the seemingly divergent views and lack
263 of consensus regarding the role of both the rich and the poor countries -the so-called North-South dichotomy
264 -in environmental degradation, will, not only perpetuate the debate, but also militate against forging formidable
265 remedial strategies.

266 On the other hand, the questions of when and how the debate will end depend on the sensitivity of both
267 sides of the divide to their respective roles on environmental degradation and admittance of joint responsibility
268 to 'right' the 'wrong' meted on the environment by humankind. Consequently, the povertyenvironmental
269 degradation-sustainable development debate will come to an end when the negative factors that predispose
270 them are dismantled. Any attempt at redressing the negative factors that does not take into account the part
271 played by the rich and the poor, will in fact, lead to distortions in policies and programmes toward sustainable
272 development.

273 The rich and the poor alike, exhibit diverse traits of poverty behaviour -latent and manifest -which invariably
274 affects the environment adversely. The view of the authors is that the trajectory between poverty and
275 environmental degradation is glaring but has not been rigorously examined from the root to unravel the
276 multifaceted dimensions of the causal factors. Indeed, a holistic analysis of the causal issues involved in poverty
277 and environmental degradation will bring to the fore variables and the intervening factors that militate against
278 sustainable development.

279 Dealing with the problems of poverty and environmental degradation and sustainability would have yielded
280 better results if the qualitative arguments of

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282 Year the North and the South are substantiated with quantitative data on their relative roles in unsustainable
283 utilization of environmental resources. Thus, absence of hard-facts and figures -juxtaposing the respective
284 activities of the rich and the poor in degrading the environment -has impeded availability of data to construct

8 VI. CONCLUSION

285 an accurate index of environmental degradation. When available, such data would not only put an end to the
286 North-South dichotomy, but will also be a benchmark for policies and programmes on sustainable development.

287 In criticizing the Trump Index that attributes environmental degradation to the activities of the poor on
288 renewable and non-renewable environmental resources, Satterthwaite (online) observed thus:

289 If data were available to construct an accurate Trump index, it would greatly reinforce the point that it is the
290 high consumption lifestyles of most high income and many middle income groups and the production systems
291 that serve (and stimulate) their demands that threatens ecological sustainability. It is not each person's level of
292 resource use and waste generation that defines their contribution to ecological unsustainability but the level of
293 use of particular resources and the level of generation of particular wastes? For instance, for food consumption, it
294 is not so much the quantity of food eaten that needs to be considered but the ecological costs of producing and
295 delivering it including the amount of land and the quantity of energy and ecologically damaging chemicals used
296 to do so. The lentils grown and eaten by low-income farmers in India or the maize grown by an urban household
297 in Africa have a tiny impact compared to beef from feedlot raised cattle. For resource use in general, an accurate
298 index of contributions to ecological unsustainability would need to measure the extent to which each person's
299 consumption was products from eco-systems that were being degraded or threatened by over-exploitation or
300 products whose fabrication had serious ecological implications?.

301 The observation above is in consonant with the view of the authors of this paper. Even within particular
302 societies, the high consumption of the rich coupled with enormous generation of ecologically debilitating wastes
303 by the same rich class cannot in any way be compared with the meager and recyclable wastes generated by the
304 poor. For instance, the gas flaring and oil spillage in the Niger Delta region of Nigeria that have wrecked untold
305 havoc on land, water and air, were as a result of the activities of the rich Nigerians and their multinational
306 corporations' counterparts.

307 The poor whose means of livelihood were the land and water that are now hugely degraded by the rich are
308 poorer, having no other means to sustain them and their households. In fact, the restive activities and militancy
309 of the youth in the Niger Delta area were part of their resistance to this deprivation and marginalization by the
310 rich Nwagbara, 2008).

311 8 VI. Conclusion

312 Ensuring sustainable utilization of environmental resources calls for a holistic approach in tackling the problem
313 of poverty in such a way that avoidable damages to the environment could be averted. Indeed, no society can
314 address the social phenomenon of sustainable development in isolation of the twin problems of poverty and
315 environmental degradation. Sustainable development implies the utilization of environmental resources by the
316 present generation of human beings in such a way and manner that the future generation of the human species
317 will come and meet such resources in better qualities and quantities than their predecessors.

318 In a world where more than half of the population lives below poverty line, and where the consumption
319 propensity of the wealthy few is on the increase, the problem of environmental degradation will continue to be
320 on the increase. Appropriate legislations and political will to implement them will salvage the world from human
321 side of environmental problems and guarantee sustainability. Since development is about people -present and
322 future generations -the concern about sustainable development should take into cognizance critical factors that
323 influence its attainment. Twin factors of poverty and environmental degradation are paramount in that regard.
324 Government and nongovernmental organizations across the world should hire the services of experts to construct
325 appropriate index for measuring the part played by the rich and the poor on environmental degradation. 16,
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8 VI. CONCLUSION

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