

The Role of Geography Education in Natural Resource Conservation

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Abstract

The paper discusses the role of geography education in natural resources conservation. It takes a look at the concepts of conservation, natural resources as well as a closer look at the role geography education plays in natural resources development. It recommends that Sustainable development should be thought from the secondary schools to make it a way of life, Conservation of resources should be given a more serious attention and that the notion that natural resources are free gift of nature therefore can/should be used without discretion should be discouraged. The study concluded that measures need to be taken at all societal levels, from international to individual, to protect nature hence the position that geography education can also support the drive to conserve and manage the available natural resources.

Keywords: Conservation, Natural Resources, Sustainable development, Geography Education

Introduction

Natural resources could be said to be God's free gift to man. It ranges from forest, water, animals, to minerals like petroleum and gold. However as wonderful as these resources are, they are unfortunately depleting. Air have been polluted to some areas, water inaccessible, Forest resources going into extinction, and so much more. The question now becomes what should we do? So many things have been done already yet there's no head way in the fight of stemming the exploitation of natural resources. So many conventions have been held, such as the United Nations convention on environmental resources held in Stockholm, Sweden where the famous declaration was made that resulted in the Brundtland commission and many protocols too have been followed like the Kyoto protocol. So many declarations have been made too and many countries signatories, still the problem of environmental exploitation persists.

However, it has been proven beyond reasonable doubt that what is learnt at an early stage sticks for life therefore the need for geography education in natural resources conservation. This paper will take into consideration the role of geography education in natural resources conservation. It will also look at what geography teachers can do to groom the students to imbibe early the need for natural resources conservation.

Natural Resources Conservation

People in rural and remote areas exploit without mercy the natural resources for their own energy needs (fuel, food, feed, and fiber). According to the United Nation Development Programme (UNDP) more than a billion persons every day go to bed hungry. Billions of dollars spent for agricultural research annually, but problems persist. In countries like China, food production increases fast while

income does not. For many of the 1.1 billion people living in severe poverty, nature is a daily lifeline - an asset for those with few other material means. This is especially true for the rural poor, who comprise three-quarter of all poor households worldwide. Harvests from forests, fisheries and farm fields are a primary source of rural income, and a fallback when other sources of employment falter. But programmes to reduce poverty often fail to account for the important link between environment and the livelihoods of the rural poor. As a consequence, the full potential of ecosystems as a wealth-creating asset for the poor - not just a survival mechanism has yet to be effectively tapped. Natural resources conservation is considered as the New Observation/approach because it emphasizes on Rationality in the utilization of natural resources i.e. utilizing while thinking of the future. It emphasizes on ethics over economics when utilizing the natural resources, this means that we should not aim at making profit only, but the quality of resources to be reserved for future use. Think of the sustainable use of natural resources through abiding to the principle and standards set (policies, laws) for natural resource use. It emphasizes on Ecological conservation over engineering activities meaning that we have to use the resources within the ecological limitations posed by the environment in a way that we do not deplete the available resources. Resources conservation emphasizes on the protection of environmental quality and its enhancement (i.e. the natural resources existing in the environment). Natural resources are resources that exist without actions of humankind. This includes all valued characteristics such as magnetic,

gravitational, and electrical properties and forces. On earth it includes: sunlight, atmosphere, water, land (includes all minerals) along with all vegetation and animal life that naturally subsists upon or within the heretofore identified characteristics and substances. Particular areas such as the rain forests in Nigeria are often characterized by the biodiversity and geodiversity existent in their ecosystems. Natural resources may be further classified in different ways. Natural resources are materials and components (something that can be used) that can be found within the environment, Mensah and Castro (2004). Every man-made product is composed of natural resources (at its fundamental level). A natural resource may exist as a separate entity such as fresh water, air, and as well as a living organism such as a fish, or it may exist in an alternate form that must be processed to obtain the resource such as metal ores, petroleum, and most forms of energy. There is much debate worldwide over natural resource allocations, this is particularly true during periods of increasing scarcity and shortages (depletion and overconsumption of resources) but also because the exploitation of natural resources is the basis for many economies (particularly for Nigeria). Some natural resources such as sunlight and air can be found everywhere, and are known as ubiquitous resources. However, most resources only occur in small sporadic areas, and are referred to as localized resources. There are very few resources that are considered inexhaustible - these are solar radiation, geothermal energy, and air (though access to clean air may not be). The vast majority of resources are theoretically exhaustible,

which means they have a finite quantity and can be depleted if managed improperly. We need to make serious attempts to use natural resources in an efficient manner, or else they would be depleted as the result of careless use of the Resources.

Sustainable Use of Natural Resources

The sustainable use or let me say the management of natural resources has been a recurring challenge to Nigeria. Oil and natural gas in particular have been notoriously precarious. Not many countries have succeeded in turning the revenues from these natural resources to enduring economic benefits, and this phenomenon has been described as the “resources curse.” For instance, it was coal that fired the industrial revolution in the 18th century, Flavin (2002). Even though oil was discovered first in 1859 in Pennsylvania, it was about a century later that it took a central stage in firing production. The formation of OPEC in 1960 brought oil to the fore of the international arena, and the sharp rise in the oil prices, following the 1973 embargo, paved the way for the “resource curse.” Oil prices resonated with international political crises, making the oil market more volatile than the market would suggest. Ekong (2017). Volatility in revenue often translates to volatility in expenditure, resulting into the “boom-bust cycles.” This “curse” has manifested itself in different shapes and forms. The more recent manifestation is called the “Dutch Disease.” The pattern of the disease is straightforward. A sudden rise in the value of natural resource exports produces an appreciation in the real exchange rate. This, in turn, makes the exporting of non-natural resource commodities more difficult and competing with imports

across a wide range of commodities almost impossible (the spending effect). Foreign exchange earned from natural resources may be used to purchase internationally traded goods, at the expense of domestic manufacturers of the goods. Simultaneously, domestic resources such as labour and materials are shifted to the natural resource sector (resource pull effect). Consequently, the price of these resources rises on the domestic market, thereby increasing the cost to producers in other sectors, Zaharia and Suteu (2010). Resources are the backbone of every economy. In using resources and transforming them, capital stocks are built up which add to the wealth of present and future generations. However, the dimensions of our current resource use are such that the chances of future generations to have access to their fair share of scarce resources are endangered. Moreover, the consequences of our resource use in terms of impacts on the environment may induce serious damages that go beyond the carrying capacity of the environment. These effects risk being aggravated once Nigeria has taken up growth and resource use similar to the industrialized countries. The country’s economic activities are placing a great deal of pressure on the Earth’s resources. As the demands increase and the rate at which these demands need to be met also increases, the Earth is not being given the chance to replenish its resources. It can be said that the present levels of human consumption are unsustainable. Sustainability refers to the capacity of the biosphere (the part of the Earth and atmosphere in which living organisms exist) to meet the needs of the present generation, without hindering future generations from being able to meet

their need to ensure that the environment is not destroyed forever, humans need to start living in a way which reduces their impact on the environment and helps to preserve the Earth's resources for the future (ecologically sustainable development), Addeh (2016). This means that humans not only need to avoid destroying the environment any further, but also attempt to repair the resources which have already been damaged. Non-renewable natural resources are diminishing and need to either be managed more carefully or conserved by using renewable resources. Everyone can assist in conserving the nation's natural resources hence the role of geography education. To do this, there is a need to discontinue activities such as excessive grazing land, over-fishing waterways and polluting the air over exploiting the oil reserves etc. students can be taught to make a difference by turning off lights when they are not being used, recycling newspapers after they have been read and walking or taking public transport rather than driving. Certainly, in Nigeria we are all witnesses to how we allowed oil and gas to destroy our agriculture and elicit monumental corruption, which in turn supplanted our development, bringing about the grinding poverty, which triggered a wide range of social crises. We need to tarry a little to understand the nexus between oil and the crises we are going through. Countries that generate revenue mainly from oil and gas are less reliant on their citizens, and when taxes from these citizens don't add up to much in the state's coffers, the citizens become less relevant to government.

The Role of Geography Education in Natural Resources Conservation

Conservation is the planning and management of natural resources in order to secure their wise use and continuity of supplies while maintaining and enhancing their quality, value and diversity, Cunningham, Cunningham & Saigo (2005). Howe (2009) opines that Conservation is a process that links the environment, both human and natural, and inputs and outputs to produce desired outcomes. These outcomes may be achieved using a variety of conservation tools, (one of which is geography education) the choice of which depends on background factors such as the species being conserved, the culture of those dependent on that species, and funding available. Geography education could expose the students to the need for conservation. This include:

- To prevent destruction of natural environment or to allow for continued use of natural resources for man's benefit.
- To preserve rare and valuable species of flora and fauna for future generations and to save them from extinction or permanent destruction.
- To prevent the destruction of natural ecosystem as this will allow the organism in the ecosystem to survive. Etc.

With a well-grounded geography teacher, the students can appreciate the immense importance of natural resources that abound in the environment and grow with the believe that one cannot exploit these resources because they are free gift of nature as widely believed rather that these resources are not evenly distributed and

most are not renewable. The geography education can also inculcate into the students the desire to encourage sustainable development in their daily relationship with the environment. From the foundation laid in the students' subconscious, the creed will live and grow with and in them that they are not masters of the environment rather they are part of the environment hence the use the available resource in such a way that the survival of the present and future generations are not compromised. Geography education helps the student recognize that people and their livelihoods rely on the health and productivity of our landscapes, and their actions as stewards of the land play a critical role in maintaining this health and productivity, Thakadu, (2005). Geography education can also expose the students to the satisfaction of needs, for both individuals and societies as a whole, depends on various resources from which we are able both to derive a great variety of amenities (buildings, forms of transport, household equipment, etc.) and to satisfy our basic needs for survival, such as food, housing, clothes and health, UNEP, (2006). Geography education can within the natural resources sector also provide useful cross-disciplinary information. In the field of renewable energy and energy efficiency, an important area of sustainable development, geography education could act as one of the most powerful tools in raising the awareness of the need for rational energy use. This is particularly true since Agenda 21 considers education to be a veritable tool in natural resources conservation drive (UNESCO, 1992). However Howe (2009) further argued that for an education programme to achieve a

more long-lasting effect and consequently, conservation success, a change in attitudes, behavioural intention, and ultimately behaviour has to occur.

Conclusion

Natural resource abundance and human capital accumulation are two vital elements that affect economic development. Natural resources can be linked with economic development through the low-rent competitive industrialization model and the high-rent staple trap model, Bugaje (2015). In this work, the role of geography education was discussed. In 1982, the UN developed the World Charter for Nature, which recognized the need to protect nature from further depletion due to human activity. It states that measures need to be taken at all societal levels, from international to individual, to protect nature hence the position that geography education can also support the drive to conserve and manage the available natural resources. It discusses natural resources conservation, the need for sustainable use of natural resources, and the role of geography education in natural resources conservation suggesting that the protection of resources should be incorporated into the secondary school curriculum. To look at the importance of protecting natural resources further, the World Ethic of Sustainability, developed by the IUCN, WWF and the UNEP in 1990, set out eight values for sustainability, including the need to protect natural resources from depletion, Adawo (2008). Since the development of these documents, many measures have been taken to protect natural resources including establishment of the scientific field and practice of conservation biology and habitat conservation, respectively. And geography education will help imbibe into the students while still you the need for and importance of resources conservation.

Recommendations

From the study, the following recommendations are made:

1. Sustainable development should be thought from the secondary schools to make it a way of life.
2. Conservation of resources should be given a more serious attention.
3. The notion that natural resources are free gift of nature therefore can/should be used without discretion should be discouraged.
4. Student especially should be thought how to see the world not only in terms of wants and needs rather in terms of being a composite constituent of the environment realizing that one wrong action against the environment will result in a catastrophe.

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