A Geographical Perspective on Poverty-Environmental Degradation

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Abstract

Environmental degradation is a process in which the natural environment is negotiated by declining environmental health and the biological diversity. The environmental health problems and urban poverty has a strong bond between them. The high use of non-renewable resources and the destruction of key renewable resources are the major contributors of environmental degradation. The poor people alone cannot be blamed as the key contributors of environmental degradation. In many areas the poor people are more aware about the proper use of natural resources like land, forests and water resources, as they get their livelihood from these resources. This paper focuses on the understandings prevalent on the topic of poverty and environmental degradation and cross-examines the geographical literature available on the subject. The broad objective of this paper is to examine the various contributors which acts vital role in the environmental degradation. The article provides a particular attention towards the poor as one of the elements of environmental deterioration. The analysis depicts that the institutional and market failures encourage unsustainable actions which pushes some income groups into poverty. The conflict among different income groups are the main culprit of poverty-environment degradation nexus. The environmental degradation, on the one hand, contributes to poverty through different agents which effects the human health and depletes the productivity of those natural and manmade resources upon which the poor are dependent, on the other hand, the poverty restricts the poor to perform such activities that will lead to damage the environment.

Keywords: Poverty; environmental degradation; income groups; poverty-environmental degradation nexus; institutional and market failure.

Introduction

Global poverty is the persistent challenge in the contemporary times with more than 33 % population of the world living in a condition of absolute poverty. Many countries have got remarkable achievements in eradicating poverty by improving the livelihood of people and the quality of life (United Nations, 2002). The poverty-environment relationship shows that there is still lack of awareness among the thinkers to understand how poverty and environment are linked to each other and how to include environmentally sustainable programmes within the environmental ministries in the national and district development programmes (UNDP-UNEP Poverty Environment Initiative, 2009). The idea that there is a link between poverty and environmental degradation is a long-standing concept being rediscovered and reinvented. The poor people are usually more engaged in deteriorating the
environmental behaviour due to their inefficiency and incapable of thinking beyond their next meal (Malthus, 1798). The same idea was further hugged by the colonial powers in Asia and Africa to identify the poor local peasants as significant causes of deforestation, soil degradation, water and environmental pollution and other wasteful burning practices (Baker, 1983; Fairhead and Leach, 1996). Numerous disciplines have contributed more to the poverty and environmental debate in which probably the economics being the most prominent discipline (World Bank, 1992; Dasgupta, 1995; Reardon and Vosti, 1995). The dynamic of poverty–environment degradation has also been studied in every most important region of the world, from Africa (Logan and Moseley, 2002; Moseley, 2001 & 2004), to Asia (Broad, 1994; Parikh, 2003), and then to Latin America (Bebbington, 1999; Ravenborg, 2003; Swinton et al., 2003; Swinton and Quiroz, 2003). The geographical perspective on poverty–environment interaction has produced a remarkable amount of literature related to factors which influence the resource management and human–environment interactions (Lambin et al., 2001). The political economy approach of human environment interaction (Blaikie and Brookfield, 1987), is particularly used for the assessment of poverty–environment interface that provides the focus on power, scale and discourse. With this approach much work on poverty–environment interactions moves away but brings a new view on agency, contingency and on globalized processes.

**Poverty, Concept and Definition**

The definition of poverty varies as per situation it is placed in, and usually references a state in which a community or an individual lacks the essential amenities and financial resources for a certain standard of living. According to United Nations, poverty is the violation of human dignity, it is the inability of having choices and opportunities. Poverty is the lack of capacity to participate in society by not having enough to feed and to clothe a family. Poverty means not having a school to go or a clinic to go, not having the land to grow food or not having a job to earn money. Poverty means insecurity, susceptibility to violence and living in fragile environment without access to clean water and sanitation (Gordon, 2005). The World Bank defines poverty as deprivation in well-being, low incomes and the inability to acquire the basic needs and services vital for survival with dignity. Poverty means low levels of health and education, lack of voice, inadequate physical security, poor access to clean water and sanitation, and insufficient capacity and opportunity to better one's life (World Bank, 2022). In the European Union poverty is measured in relation to the distribution of income with respect to each member country by using relative income poverty line (Dvorak, 2016). Broadly speaking poverty may be absolute or relative poverty. The absolute poverty is measured by comparing the income against the amount needed to fulfill the basic needs of life such as food, clothing, and shelter. The relative poverty is measured by comparing the existing condition of a person who cannot meet a minimum level of living standard of life when compared to others in the same time and place. Another measurement of poverty is condensed in Amartya Sen’s entitlement concept, used to discuss to a person’s legitimate rights to available food. The Sen’s entitlements are claims on resources that can be changed into food, fluctuating from crops in the ground to cash on hand for food purchases and from social relations to provide food in times of need. Dearth of entitlements, that is the ability to entrance resources, means that people can go starve even though food resources may be abundant (Sen, 1981). The African context distinguishes two types of poverty as structural and conjunctural poverty, which have diverse suggestions for how a household deals with shocks. The structural poverty is long-term in character because of social and personal circumstances, while conjunctural poverty denotes such type of poverty in which an ordinary people can be temporarily thrown in times of crisis. Structural poverty can be obvious as a lack of land or labour, while conjunctural poverty is produced by specific shocks such as climate or political insecurity. (Hagberg, 2001). In the Indian country poverty rates are measured based on its Planning Commission's data derived from so-called Tendulkar methodology. This methodology defines poverty in terms of spending or consumption per individual but not in terms of annual income over a certain period for a basket of vital goods. This methodology also sets different poverty lines for rural and urban areas. Since 2007, India has set its official threshold at ₹32 per day ($0.53) in urban areas and ₹ 26 per day ($0.43) in rural areas (Panagariya & Mukim, 2014).

**Poverty-Environmental Degradation Nexus**

Poverty is one of the primary culprits leading to environmental degradation, other culprits such as wealth, power and greed are also responsible for environmental degradation in the developing countries of the world (Duraiappah, 1998; Boyce, 1994; Nunan et al., 2002; Ahmad et al., 2014; Peprah et al., 2017; Olinto et al., 2013). Environmental degradation is the outcome of high use of non-renewable resources and overexploitation of vital renewable resources such as soil and forests. The generation of wastes from the industrial sector that cannot be embraced or broken down by the physical and chemical processes of the nature are other agents that leads to environmental degradation (Hartmann, 1998). There is a strong bond between poverty and environmental health problems. It is thought that urban poverty is one of the major contributors of environmental degradation. The poor dwellers in urban areas mostly rely on public transport. They usually prefer to walk on foot or by bicycle, thus consume very low amount of oil consumption and electricity consumption on an
average level. So the poor use very little amount of fossil fuels that belongs to oil, gas and coal based power stations (Alder, 1995). The urban dwellers with low income have less consumption level than middle and upper income dwellers. They consume less freshwater as against their need or choice. They occupy less land area as compared to middle and upper groups in the city. The poor dwellers consume less diets containing less energy content. In certain cases they deplete renewable natural resources. The low income groups who settle around reservoir or who settle on slopes clear trees to build houses leads to deforestation and soil erosion. The poor urban dwellers living in the less developed countries of the world, use fuel wood or charcoal for heating and cooking purposes and thus contribute to deforestation (Leach et al., 1989). The poor dwellers living in villages generate less amount of waste as compared to rich and upper-class people. The urban poor ecologically plays an important role as they are the main re-users and recyclers of wastes which generate from industries, households, factories and workshops. The middle and upper class people consume most of the goods which generate toxic chemical and hazardous wastes whose rising concentration in the environment has dangerous ecological and health implications. The small-scale urban enterprises also contribute in the environmental degradation. The global water crisis and bad sanitation which is increasing in many places of the world are the main causes of environmental degradation (Hinrichsen et al., 1998). The low income dwellers consume less fossil fuels as compared to middle and upper class dwellers and generate less emissions of greenhouse gases to contaminate the environment. The low income groups in urban areas use coal and biogas in stoves for heating and cooking purpose, thus contributes in the carbon dioxide emissions that leads to environmental degradation (Leach et al., 1989). The national and International researchers offer some possible relationships between poverty and environment and concluded that both of them are complex and varied. The researchers contend that the local dynamics and human interaction with natural resources such as land and water support the claim that many other factors including institutional and market failures are the agents that further mediate the poverty-environment nexus. Some other factors particularly power, greed and wealth are the main culprits of poverty environmental degradation in the less developed countries of the world (Mink, 1993). Environmental-degradation caused by exogenous poverty then the poverty-induced environmental degradation concept would be accepted and the policy makers would follow the idea of environmental protection through poverty alleviation programmes (Duraipppah, 1998). In case poverty is endogenous that is itself caused by environmental degradation then the environmental degradation leads to more endogenous poverty. Hence this concept supports the “downward-spiral” view in order to demonstrate the relationship between poverty and environmental degradation (Barbier, 2010). As the global population grows tremendously, every human being consumes their resource share which leads more pressure on the environment (https://borgenproject.org). The global freshwater consumption rose more than twice the rate of population growth throughout the world with six fold increase between 1900 and 1995. The world’s one third of the population lives in water stressed countries. Hence the gap between the rich and the poor in these countries has been widened much as the living standard of people increases. The poor people and the poor nations are more adequate to environmental deterioration more than the rich nations of the world (Annan, 2006). The poverty population-environment nexus is a complex process. The poor people have more children than the rich and leads more pressure on the natural resources which results in the environmental degradation (Shaw et al., 1992). The increasing level of wealth does not reduce the growth of population but may alter it around. Similar relationship exists within different natural resources such as forests, land and water. The rising need of products in the developed countries of the world are the main culprits behind environmental deterioration in the developing countries of the world (Redclift and Sage, 1998). Poverty-environment-ecology relationship had been an instrument that illustrate the concept of discontinuity regarding the consumption of natural resources by the developed countries and the effect of their production in the poorer parts of the world.

**Poverty-Environment-Climate Change**

At the present time, climate change prevails throughout the globe encouraging severe droughts, storms, and blistering heat waves which threaten the most vulnerable populations of the globe. The rising global temperature increases the sea level, oceans started to get acidify and precipitation started to get rearranged which leads severe impacts on people living in poverty. Climate change affects everything from where a person can get his living access. The worsened environmental conditions further pushes millions of people into poverty. The world’s poorest communities which are politically, socially and economically marginalized frequently live on the fragile land are vulnerable to impacts of climate change. The frequent storms, drought conditions, flooding and change in rainfall pattern are the other factors which leads further impact on these vulnerable communities, making it difficult for them to live decent life. The communities settled in coastal areas comprises 37% of the global population are the hubs of commerce, culture and have powered global development. These areas are subjected to natural disasters as the sea level rises. It is depicted that more than 570 coastal cities could be affected by sea level rises by 2050 and near about 1 billion people could be displaced by environmental hazards which pushes a person towards more poverty by stripping them from their...
homes and profession. It is to be estimated that 100 million people living in developing countries could be pushed into poverty by climate change by 2030 (https://www.globalcitizen.org/en/content/climate-change-is-connected-to-poverty/). Climate change has an adverse impact on people living in low-income communities and developing countries across the globe. The communities under poverty experiences more ill-effects of climate change due to increased exposure and vulnerability. The low levels of human development and the high levels of poverty reduces the capacity of poor households to manage climatic hazards. The poor with limited incomes, meagre assets and poor infrastructures have to deal with climate-related shocks under highly abnormal conditions (IPCC, 2001). The climate change affected different communities and populations throughout the globe due to disparities in socio-economic status. The issues of climate change with respect to different communities that are in a vulnerability zone are not only limited to North America or the United States but there are several communities across the globe that face the same issue of people who are dealing with its adverse impacts in their areas. The rising sea level affects the poor areas such as Kivalina, Thibodaux, Louisiana, Alaska and other places throughout the globe. Many people have died and many are chronically ill due to toxic substances released from coal plants in Detroit, Memphis, and Kansas City and from other areas. The residents of Tennessee and West Virginia are frequently subjected to breathe toxic ash which releases due to blasting in the mountains for mining. Constant depletion of land and air quality, flooding and drought determine the health and safety of residents surrounding in these areas (Klinenberg, 2016). The increase of intense tropical storms due to warming of oceans not only affects the coastal landscapes but also damages the wetlands, forests, and mangroves that have been removed for land development. The settlement process in these areas further increased the destructive power of floods which pushes the residents more susceptible to extreme weather events. Wealthy persons have more resources to reconstruct their homes and possesses better job security, which boosts them to stay in their communities following extreme weather events. The highly vulnerable areas, such as slopes and delta regions, are sold to lower-income groups at a low price. After extreme weather events, the affected people have a difficult time to find or to maintain a job and to rebuild their homes. So many people prefer to relocate in search of job opportunities and housing (McLeman and Robert, 2013). In order to solve the global environmental challenges, one should consider the nature and scale of human need across the globe. Climate change, land degradation, pollution, biodiversity loss and other traits of global environmental change are not only environmental problems but also social and economic ones. In view of environmental perspective, poverty and unsustainable patterns of production and consumption are the key drivers of environmental degradation but at the same time, environmental degradation and climate change can drive the poverty (https://www.iisd.org/articles/merging-poverty-and-environment-agendas).

**Conflict-Poverty- Environment Nexus**

The national and international conflicts and their impact on environment vary greatly. Some international conflicts are brief and highly destructive in nature while some civil wars are fought at low intensity but remain for decades. The armed conflict between two regions may lead the adverse impact on environment. The conflicts between two countries consume vast quantities of fuel which lead to massive CO₂ emissions and contribute to climate change. The movement of large scale vehicles lead to widespread physical damage on landscapes and geodiversity. The use of explosive weapons in wars create vast quantities of debris and rubble, which contributes to soil and air pollution (https://ceobs.org/how-does-war-damage-the-environment/). The environment is damaged by wars and attacks that lead to water and soil pollution, and mostly land degradation. The remnants of wars degrade the water and soil quality, and harm the wildlife. The impact of conflict results in environmental degradation when natural resources are exploited to sustain war economies. Conflict can also contribute to climate change by destroying large areas of forests and damage to infrastructures such as big industries that releases large volume of greenhouse gases into the air. (https://www.icrc.org/en/document/climate-change-and-conflict). The scenario of conflict is a global concern as its impacts pose a great threat to global economy and sustainability of vulnerable nations. It is believed that more than 200 million people are thought to have been affected by violent conflicts from the past three decades (UNSC, 2011). The human-settlement problems takes place as a result of large scale and rapid displacement of people from the conflict affected areas. These displaced people and environmental refugees are forced to flee from their homes because of violent violence resulting from environmental conflicts. The effects of human displacement can be accentuated by the effects of global warming, deforestation, energy overconsumption, water and air pollution (Gosine, 1996). Conflicts also impose an environmental burden on ecosystems that were already stressed under severe challenges of pollution, resource depletion and poor environmental management strategy. The desperate people are forced to unsustainable consequences. The extreme pressure on resources causes overharvesting, exploitation, accelerated extraction and resource depletion. The individual pressure on resources threatened livelihoods and changes the survival strategies. Therefore, the impact of conflict on environment are subjected by a poor state of the pre-conflict environment. For example, in Liberia, mining,
logging, agriculture, fuel production and road building had taken a large toll on forests prior to conflict (Shabi, 2012). In the conflict and post-conflict environmental degradation nexus, forest resource exploitation is a major issue which arises. This may include illegal logging, use of trees as shelter, temporal housing, and exploitation of trees for fuel wood or charcoal. In most instances, timber is used as a conflict-sustaining financial resource due to the absence of sustainable forest management programmes. These activities exert pressures on forests from the short and long-term horizon of insecure communities. Moreover, forests have also been targeted during conflict such as in Sudan where, trees felled maliciously. This was likely to sever community ties to the land and reduce opportunities for resettlement. Post-war situations can be particularly devastating for forested areas. Wars often protect forests, discouraging investors and leaving people afraid to go into the forest. But when the conflict ends, governments may try to settle former insurgents and provide patronage to demobilized government forces by allowing them to extract timber and convert forested land for agriculture. After conflict, refugees and displaced people often return to areas of forest abandoned during war, and new people enter into forested areas where it was previously too dangerous to live. Demobilized armed people with limited employment opportunities often become involved in illegal forestry activities, which the weak governments emerging from conflict situations have limited ability to control (CIFOR, 2014; UNEP, 2006). Several countries of the world suffer from violent conflicts. Throughout the globe in conflict-affected countries more than 40% people are living in poverty. This conflict affected their livelihoods and discourage them from further investment in their communities. The extreme poverty rates nearly doubled in North Africa and Middle East between 2015 and 2018 encouraged by the conflicts in Syria and Yemen. The World Bank estimated that about 18 to 27 million people were also pushed into poverty in 2020 in conflict affected countries (World Bank, 2020). The continue conflicts lead to environmental degradation by using wood and charcoal for fuel and heating purpose as the communities are mainly dependent on them. Environmental degradation may also result from resource extraction such as oil, minerals and timber etc. which are used to finance conflicts. The displaced people and refugee’s campus may contribute in the environmental degradation especially when they lack vital services, like water, sanitation and waste management (Conflict and Environment Observatory, 2020).

Conclusion
To attain the goal of poverty decline and environmental protection there is the need of time to understand the link between poverty and environmental degradation and to apply policy measures to eliminate such major problems. The interaction between poverty and environmental degradation lead a self-perpetuating process in which communities destroy the natural resources on which they depend their survival. The different measures related to environmental problems include, to improve the living conditions of the poor, to enhance the resource productivity and to achieve the sustainable environment growth which is related to economic growth. An increase in poverty results an increase in the environmental degradation which itself results the need to improve the quality of life (https://www.ukessays.com). Some authors support the argument that the poor people do some activities that lead to environmental degradation, they support their argument by highlighting the crucial and pivotal role of market and institutional failure used by poor to adopt unsustainable activities. Some authors argue that the poor do not have the access to natural resources to adopt unsustainable activities. These authors also cite market and institutional failure as the main culprit variable on the poverty-environmental degradation nexus. There is a positive relationship between the poverty and the environmental resource degradation. It is not only poverty but also institutional failure that are the main causes of environmental deterioration (Dasgupta et al., 1994). The poor have no major role to degrade the environment as they do not have the resources but they are the rich who exploit the resource base at unsustainable rates (Jeganathan, 1989). The environmental degradation can be caused by the conflicts between the income groups which use the natural resources to adopt unsustainable activities which results in marginalizes some of the groups that fall into the poverty group. Generally, the poor are the victims of environmental degradation, therefore policies correcting the prices are in their interests. So, the government should implement such policies that would help to suppress the negative environmental externalities that would be good for both the environment as well as for the poor. Thus, it is concluded that poverty alleviation and environmental protection programmes are corresponding to each other and should be preserved both together as a central notion with a “win- win” strategy and with comprehensive programmatic approach.

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