

## **IMPACTS OF POVERTY AND AN INABILITY TO MANAGE THE ENVIRONMENT**

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**Keywords:** Natural resources, poverty, environment, environmental degradation, overpopulation, market failure, inequality

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### **Summary**

When the public begins to question why our environment continues to be degraded, another related question should also attract public attention: the link between poverty and environmental degradation.

It was taken for granted that poverty led to environmental degradation: poverty is related to massive consumption of raw materials, to overpopulation, and thus to overconsumption of natural resources, and so on. But more recent studies have shown that the poverty–environment link was caused by a combination of several factors. Traditional societies used to have their own system of preserving the environment, but when they came into contact with more modern nations, their efforts to develop often led to a depletion of natural resources, and thus to environmental degradation. In other words, the institutional weakness of traditional communities in poor countries is no longer adapted to development. As markets do not always take into account the cost of environmental protection, some policies and government decisions may lead to unintentionally disastrous results for the environment.

If we proceed to more cautious studies on the poverty–environment link, we may find some sophisticated relationship. The poor are devoted to depleting natural resources, not because they do want to but because they don't have access to capital markets and, because they lack knowledge, they cannot use more advanced techniques to improve their lot.

Public authorities in different countries, particularly international organizations, seem

increasingly aware of the link between poverty and environmental degradation, so they began to invest and attempt to alleviate poverty in order to relieve pressure on the environment.

## **1. Introduction**

The environment has become an increasingly important concern for modern society, because people are aware that if we do not do everything in our power to stop environmental degradation (water pollution, air pollution, increasing carbon dioxide (CO<sub>2</sub>) emissions, deforestation, soil erosion, etc.) our future as well as that of generations to come will be seriously threatened.

Among the factors that put our environment in jeopardy, poverty is often mentioned as a significant cause of environmental degradation. The very influential Brundtland Commission stated: "Poverty is a major cause and effect of global environmental problems."

Why is poverty closely related to environmental degradation?

It has been taken for granted by most development analysts that poverty is related to environmental deterioration. However, the poor are in most cases very dependent on natural resources, particularly on biological resources, because they lack the means to buy them. For instance, small-scale farmers are inclined to derive additional sources of income from wild fruits, nuts berries, herbs, medicinal plants, etc.; herders on dry lands often derive essential nutrients from similar wild flora and fauna in marginal areas; ill-equipped fishermen may hope to derive a variety of coastal and marine resources such as shells, seaweed, coral, and fishes, which provide food, building material, cultural artifacts, and cash income.

Why, then, do poor people not give too much importance to the conservation of the environment, even if their livelihood is directly dependent on it? It seems that poor people are likely to fall into several poverty traps related to environmental degradation. Many theories suggest that poor people are compelled to exploit their surroundings for short-term survival, and it is assumed that they are more exposed to natural resources degradation.

In the cities as in the countryside, poor people are often located in environmentally vulnerable areas because they lack resources to relocate from these areas. Urban squatters are commonly exposed to polluted air, contaminated water, and solid waste. Poor urban populations are often crammed in shantytowns where basic services like safe drinking water, access to clean air, functioning sewerage and waste collection are not ensured. So they resort to all kinds of expedients to better their own lives but sometimes at the expense of the whole living environment. Lack of community organization, weak political representation in public authorities, all these make shantytowns a vulnerable living environment that deteriorates with population growth.

In rural areas, poor populations often have no access to land tenure. Property rights to land in the form of land titles are costly, and poor farmers can barely afford to obtain a

title. So they are forced for their survival to settle on marginal lands and cultivate poor soils, which could result in soil erosion.

Poor people have little income, so they are compelled to use increasingly natural resources for their survival, which again diminishes the natural resource base. A lower resource base then reduces the flow of services generated, which worsens poverty. Thus poverty could be interpreted as a cause of high valuation of the present versus the future. Several empirical studies seem to show evidence of this link from Ethiopia, Indonesia, or Zambia.

Problems of poverty, population growth, and environmental degradation are believed to be inter-linked. Some studies have presumed that environmental degradation and population growth may exacerbate one another in a vicious circle in which greater population leads to a worsening environment and a worsening environment leads to more rapid population growth.

## **2. The Poor: Victims and Agents of Environmental Degradation**

Statistics show that poor people tend to have a lot of children. An increase in the poor population may cause the environment to deteriorate, while a deterioration in the environment causes population to increase. For example, as forests recede up the mountainside, and poor households find it harder to have firewood, they need to have an additional child to gather firewood. As children grow, so does the need in the house for firewood, and poor people are compelled to collect more firewood at the risk of aggravating the deforestation in progress. This example can be generalized to other sectors where poor populations are merely dependent on a natural resource base. It is obvious that poor households have lower productivity, which provides incentives for them to raise large families. This mutual interdependence sets off a downward spiral: the poorer a household is, the more children it will need to secure a livelihood; the larger the family is, the more resources it needs; the higher the resources demand, the bigger the pressure on the fragile surrounding natural resource base; the more degraded the environment is, the more children the family needs to secure old age and provide essential goods and services; the more time children spend on collection, the less time is available for education and human-resource development; the less time for education, the greater the possibility to see poverty perpetuated into the next generation.

Several regional studies sponsored by the World Bank tend to support the population growth and environmental degradation hypothesis. For instance, the Senegal Poverty Assessment explains how poverty interacts with environmental deterioration and population growth:

In order to preserve the long-term natural resource base (and income base) in the rural sector, progress is urgently needed in controlling population pressure, and in implementing an incentive structure conducive to sound and locally driven natural resource management. The collision course between managing the meager resource base, providing for food needs, and supporting a growing population is now at a critical stage. As can be seen . . . declining availability of arable land lies at the heart of this collision, and is being driven over the long-term by population growth, the increased

demand for food production for an increasingly urbanized population, and declining rainfall patterns.

The Burkina Faso Country Assistance Strategy report also asserts that there is a vicious interaction between population growth, poverty, and environmental degradation.

Zhang Zhiliang studied environmental degradation in China's Northwest, and he believes that there is a vicious circle between poverty, overpopulation, and environmental degradation. The Northwest region in China has always had a fragile ecological environment composed of dry lands, desert, and semi-desert. Before large-scale emigration at the end of the Qing dynasty (1614–1911) and the beginning of the Republic (1912–1930), natural vegetation could maintain a dynamic balance of ecosystem in the region. But rapid increase in population and intensification of human activities destroyed this fragile balance, resulting in rapid environmental degradation. Affluence of natural resources gave new emigrants the illusion that they could use these resources at no cost and their rudimentary technique of exploitation particularly affected the region's regenerating capability, while overexploitation and overgrazing accelerated the desertification already in progress. Zhang has estimated that the desertification in this region is due to an accumulation of human factors: agricultural overexploitation 25.4%, overgrazing 25.3%, over-collection of firewood 31.8%, misuse of water resources 9%, and other human factors 8.5%. In an extensive and unsustainable development model, increase in population is synonymous with ecological degradation. Zhang Zhiliang's study unintentionally shows a link between political and social stability on the one hand, and environmental degradation on the other hand. Originally, China's Northwest was sparsely populated, which suited the region's fragile natural resources. When the Qing dynasty collapsed, most of Chinese richer provinces were involved in incessant civil wars. To escape these wars, many people moved to the Northwest where few people had wanted to go because of its poverty. But confronted with war and an uncertain future, many people opted for migration to more secure, although more poor, regions. Civil wars were succeeded by Japanese invasion in the east, emigrants to the northwest escaped Japanese occupation and became permanent residents, which put an additional pressure on the fragile environment.

Today, some Sub-Saharan African countries are facing a similar situation. Civil wars have provoked massive migration towards regions that are ecologically fragile, reinforcing the vicious circle between population, poverty, and environmental degradation.

Although this population–environment relationship is not accepted by all as direct cause and effect and leads sometimes to much debate, a World Bank study has established several facts related to the vicious circle between environmental degradation and fertility. It indicates that firewood is an important part of the consumption bundle of rural households; in many rural regions firewood is often collected from open access or common or quasi-common property. Poor households are more likely to collect rather than purchase firewood, and children in these poor households are relatively specialized in collecting firewood, especially at a young age.

Whatever the cause, in Sub-Saharan Africa the heavy dependency on wood for fuel and

building material has combined with rapid population growth to accelerate forest and woodland destruction. This phenomenon is particularly severe around major urban centers where some concentric rings of deforestation are emerging. The degradation and destruction of forests and woodland accelerates soil erosion, eliminates wildlife, causes loss of biodiversity, and has significant implications for local and regional climates and hydrological regimes. For local poor people who mainly live on natural resources provided by forests, destruction of the forest threatens not merely their lifestyles and livelihood systems, but their very survival.

Furthermore, poor people often live in extremely hard environments, and the deterioration of their living environmental conditions sometimes forces them to migrate, sometimes against their wishes, to seek survival elsewhere. This long-range migration may be on a large scale, aggravating environmental stress and resource scarcity. Myers and Kent have studied the environmental migration problem, and indicated that there are approximately 25 million “environmental refugees” in the world. They consider environmental refugees to be persons who can no longer gain a secure livelihood in their traditional homelands because of environmental factors of unusual scope, notably drought, desertification, deforestation, soil erosion, water shortages, and climate change, but also natural disasters such as cyclones, storms, and floods. Most environmental refugees are in Sub-Saharan African countries, but a significant proportion of environmental refugees also appears in the Indian sub-continent, China, Mexico, and Central America.

The apparent coexistence of poverty and environmental degradation could easily lead to the conclusion that poverty limits people’s options and induces them to deplete resources faster than is compatible with long-term environmental sustainability. So poor people will aggravate automatically the process of environmental degradation. However, several recent studies attempt to demonstrate that the concomitance of poverty and environmental degradation does not mean that poverty leads naturally to environmental degradation; neither are poor people devoted to depleting automatically natural resources by their short-term behaviors. Rather, poverty and environmental deterioration occur when several factors are working jointly.

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### **Biographical Sketch**

**Yifan Ding**, deputy director of the Institute of World Development, Development Research Center of the State Council, People's Republic of China, graduated from Beijing Foreign Language Institute (now Beijing University for Foreign Studies). He was awarded a Ph.D. in political science from Bordeaux University in France before returning to teach at Beijing University for Foreign Studies as assistant and associate professor. He later moved into journalism, becoming editor of Xinhua News Agency, and was sent by *Guangming Daily* to Paris as bureau chief for more than five years. Returning once again to China, he was appointed to his present position.

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