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Poverty-Environment Linkages: An Appraisal of Issues Based on Available Literature

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Abstract

This article is an attempt to present an appraisal of issues in poverty-environment linkages, a burning topic in environmental discourse, based on the available literature. It deals with the issues involved in the debate of the linkages. Both conceptual as well as empirical arguments and evidences are collected and analyzed, including Nepalese context. What is found is that the debate is not only an academic exercise but rather an ideological issue as the so-called mainstream literature place the blame of environmental degradation on poor ignoring the political economic and historical realities that frame the access and availabilities of resources to the stakeholder. So, the appraisal reveals that the study of the linkages should be done in a broad political economic framework rather than just choosing the techno-centric and causation approach, which may also be applicable in Nepalese context.

Introduction

The linkage between poverty, environment and development has been a hot topic in the contemporary literature on development. The issue has drawn attention of the large number of diligent scholars around the world over the last three decades. The issue came up at the forefront of development discourse after the Stockholm Conference on Environment and Development in 1972 which got momentum after the publication of the World Commission Report on Environment and Development entitled 'Our Common Future" in 1987 and formed the basis for the first Earth Summit at Rio De Janeiro, Brazil. The Summit acknowledged the serious challenge faced by the earth and its inhabitants in general and underdeveloped countries in particular and put forward the future course of action in the form of Agenda 21. This development also gave impetus to the researchers to conduct research on the various facets of sustainable development, which shout to integrate the problems of poverty, environment and development. The literatures on the linkages are enormous although it is rather a new issue in development discourse. However, there is no consensus among the researcher about the forms and mechanism of the nexus. This paper attempts to review the existing literature around the issue of poverty, environment and development linkages.

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Concepts and Definition

Poverty

Poverty is a multi-dimensional concept, comprising the notions of lack of access to resources and opportunities, illiteracy, poor health, and lack of sanitation, deprivation of basic rights and security, and powerlessness. In general, poverty can be defined as "a state of economic, social and psychological deprivation occurring among people or countries lacking sufficient ownership, control or access to resources to maintain minimum standard of living" (World Bank, 1990). This definition mainly focuses the economic dimension of poverty. However, poverty has also been viewed in a broader context of human development, that is, as a state in which "opportunities and choices of basic human development are denied- to lead a long, healthy, creative life and to enjoy a decent standard of living, freedom, dignity, self respect and respect for others" (UNDP, 1997). These concepts clearly suggest that poverty is more than an economic issue. One should conceive the concepts of 'capability' and 'social exclusion' in addition to basic needs while dealing with poverty.

Environment and Environmental Degradation

Environment refers to the "surrounding or the set of circumstances or conditions, especially the physical conditions, in which a person or community lives, works, and develops, or a thing exists or operates". It is the external conditions that affect the life of a plant or animal. So, it includes the whole universe in general and the earth in particular. The environment often put into stake due to the external effects of physical, economic and social actions and interactions. The process of loss of the quality of the environment, including both biotic and abiotic, is called **environmental degradation**. There are many forms of environmental degradation which includes pollution, deforestation, desertification, loss of environmental resources such as water, mineral, fishery, biodiversity, climatic change etc. which cause damage to the life supporting systems of the man, plants and animal. Poverty itself is considered as a worst form of pollution.

Development vs. Sustainable Development

Conventionally, development refers to the increase in the real income (GDP, GNP or Per capita income) over a long period of time. It does not capture the aspects of composition of production and distributional justice of growth of income and wealth across classes within nations and across the nations and also plight of persistent poverty faced by the masses. So, it just covers the narrow concept of growth rather than overall development. Since nineteen seventies the definition of the development has been changing rapidly highlighting the new dimensions of development such as 'growth plus change', fulfillment of basic needs, 'attainment of life sustenance, self steam and freedom' and development as human development. Even these definitions fail to recognize the externalities, and intergenerational and intra generational equity in benefit of development, which is the essence of sustainable development. Sustainable development is the most recent concept of development in which the well being of present the

present generation is reconciled with the need and right of the future generation.

3. Linkages between Poverty and Environmental Degradation

The deep concern on the issue of poverty- environment linkages stems from the observation that: (1) poverty and environmental degradation have same or related causes; (2) the general belief and consensus is that poverty reduction is a prerequisite for sustainable development; (3) the past attempt to address these issues have mostly suffered from the lack of integration; and (4) the conventional development approach failed to recognize the pervasiveness of social and developmental externalities, especially in the underdeveloped countries (Dasgupta and Maler1991, UNEP 1995, Jodha 1999, Nadkarni 2000).

An Appraisal of Conceptual Issues

There are broadly two schools of thoughts - one termed as mainstream and other alternative, regarding the explanation of the poverty- environmental degradation (P-ED) linkages. In this section we will presents the views and explanation of these schools.

Mainstream View

The mainstream school argues that the poor are both agents and victims of environmental degradation, because they directly depend on natural resource and often very vulnerable to environmental hazards such as deforestation, soil erosion and the floods. So, the mainstream strongly asserts that poverty alleviation must be taken as prerequisite and central focus to address any environmental issues. This line of the thinking is found in the reports and discussion papers of the international institutions such as World Bank, Asian Development Bank, UNEP, and in the writing of many scholars from the west. Including the declarations made by world conferences on environment and development (especially the Stockholm conference 1972 and the Earth Summit 1992) and the influential report of World Commission on Environment and Development (WCED, 1987), there seems to be a general consensus that poverty is the main cause of environmental degradation i.e. there is a direct linkage between these problems (WCED 1987, WB 1992, Beckerman 1992, Jalal 1993, Mink 1993, Rao 1994, UNEP 1995, Prakash 1997).

The lead line of reasoning behind the 'vicious circle' thesis is that poverty (and scarcity) causes desperation, which in turn promotes over extraction of resources leading to resource degradation and still greater extent of poverty. The basic premises of this thinking are listed as follows:

(i) The poor people are preoccupied with daily survival needs and their ability to plan ahead (such as to conserve resource or to accumulate for future) is often restricted to a critically short time horizon, measured in days or weeks; or they have high rate of time preference.

(ii) The poor people tend to be risk averse, because they face higher risks than better off. That is why, the poor people's interest in longer-term investment such as conservation and/or productive activities are likely to be diminished leaving them resource dependent.

(iii) The poor are ignorant of both limitations of their natural environment and consequences of their extractive usage practices.

(iv) The over- extraction of resources is the only and preferred means of sustenance for the poor.

(v) The poor have little stake in the health and productivity of natural resources.

(vi) The poor's exposure to environmental degradation is high because the locations inhabited by them are often environmentally vulnerable or degraded and lack of resources makes them difficult to invest in alleviating the causes of degradation.

(vii) Environmental degradation lowers the poor's productivity affecting their health and capacity to work and earn; diverting their labour time to routine household tasks i.e. fetching fuel-wood, fodder, litter and water; and decreasing productivity of those natural resources from which they wrest their livelihood.

Almost similar arguments and explanation on poverty - environment linkages are found in the writing of Dasgupta and Maler (1991), Beckerman (1992), Rao (1994), Maler (1997), Dixon (1997), Lapez, (1997) Habito(1997), Vincent (1997)and etc.

Alternative View

There is a rising trend in economic literature that disputes the conventional arguments. The alternative school argues that the mainstream generalization is too simplistic, exaggerated and misleading. Their main points of dispute are as follows:

(i) It would be injustice to blame the poor to have short time horizon. Several studies indicate that the poor too have a concern for the future and conscious of their stake in the sustainable use of natural resources. Where the poor appear to degrade the environment, it is basically due to the lack of incentives appropriate institution including the lack of clarity in property rights (Jodha 1987,1990, 1998; Nadkarni et al 1989, Nadkarni 2000)

(ii) Not all the environmental degradation is due to pressure from the poor. Historical fact shows that the deforestation of forest during the 19th and early 20th in developing areas was mainly on account to the pressure to meet the requirements for the developmental activities such as rail way construction and the demand for the urbanization (Nadkarni et al., 1989).

(iii) Similarly, not all poverty can be attributed to the environmental degradation. Rather, most of the poverty in underdeveloped countries is due a history of colonial exploitation and continuing feudal structure and the biased development process against poor class (Nadkarni, 2000).

(iv) Even if poverty and environmental degradation may be positively correlated, it does not imply causation. This linkage cannot be reduced to simple unidimensional cause-effect relationship (Barbiar, 1999).

(v) The fundamental premise of mainstream thinking of P-ED links has completely ignored the deeper socio-political changes (such as land reform) or changes in cultural values (such as over consumption by affluent and North) and only has focused on electrically chosen few techno- economic factors. While blaming the poor for deforestation they overlook the real causes of poverty, colonial exploitation, indigenous forest management practices and like to legitimize the view that current development policies can (and should) continue unabated (Barbier 1999, Jodha 1998).

The alternative explanation of the nexus is found in the writings of Jodha (1990,1998), Nadkarni (2000), Lele (1991), Duraiappah (1998), Barbier (1999) and Reardon and Vosti (1995) etc. Although these studies are few and isolated, they have been trying to formulate alternative explanation. The main argument of the alternative school is that a more complex web of factors comes into play to form such nexus. That is, demographic, cultural and institutional factors are more important variables in P-ED linkages. Sets of these factors plus feedback loops from environmental degradation to poverty shape the process of identifying causality links (Duraiappah, 1998). Similarly, the economic distortions arising from policy and market failure, underlying labour and capital endowments and constraints; access to alternative income-earning opportunities; institutional and legal conditions such as tenure security, property rights and delivery system etc. influence people's perception of environment and their behavior towards natural resources and management. These factors and conditions often affect the incentive mechanism and redirect capital and labour flows between sectors and regions, with adverse consequences for the poor and their ability and willingness to manage resources sustainably (Babrier, 1999). Moreover, entitlement loss also force the poor at the edge of fragile areas and consequently into absolute poverty. It often happens through various process such as displacement by developmental activities; appropriation by richer claimants; sale off the pieces of assets to cope with crop failure, illness and to meet the social obligation or subsistence; loss of productivity due to excessive use of their resources and the division of family assets during breakdown (Kates, 1990 quoted in Babrier, 1999).

Various writers also outline the fact that there are many possible relationships in poverty environment nexus. Far example, Duraiappah (1998) presents five such relationships as follows:

(i) exogenous poverty causes environmental degradation (ED);

(ii) power, wealth and greed causes ED;

(iii) institutional failure primary cause of ED;

(iv) market failure primary cause of ED;

(v) ED causes poverty; and endogenous poverty causes ED.

He also argues that while analysing poverty environment linkges all these relationship should be considered. Nadkarni (2000) indicates some other patterns of nexus such as: trade

off between poverty alleviation and conservation of environment; necessary conservation which hearts the poor, at least in the short run; development which aggravates both poverty and environmental degradation; and persistent poverty helping the cause of the environment. He also argues that if the institutional mechanisms were so developed we would have good possibility of a 'virtuous circle' operating instead of a vicious one. Similarly, Reardon and Vosti (1995) introduce the concept of 'investment poverty' as an analytical tool of the linkage. According to them investment poverty means inability to make minimum investment in resource improvement to maintain or enhance the quantity and quality of the resource base, to forestall or reverse resource degradation. Households below this line are termed as 'investment poor'. Jodha (1998) argues that current pattern of natural resource use and degradation in many poor areas is only the manifestation of erosion of the past arrangement at grassroots level. The traditional resource management systems were based on strong community stake, local control over local resources and the local functional knowledge of the limitation and usability of their diverse resource use resulting from close physical proximity and access to the resources.

An Appraisal of Related Studies

A large number of studies have been conducted on the issue of use and management of natural resources. The studies that deal with the poverty- environment nexus, directly or indirectly, with respect to underdeveloped countries of Africa and Asia will be of some help to conceptualize the present study. So, a brief survey of some of the empirical studies addressing the issues of poverty –environment linkages in general and the use and management of forest resources in particular has been presented in this section.

The context of underdeveloped countries

Whitney (1987) has analyzed the energy use pattern, cost and benefit of the same and the impact of fuel wood extraction on deforestation in Sudan. He reports that ecological cost of deforestation was high and irrational but they can only be rationalized with viable alternative energy source are available. Southgate et al (1991) have done a statistical analysis on causes of tropical deforestation in Ecuador. The study has analyzed the links of deforestation with proximity of urban area, soil productivity, access to market, demographic pressure and tenure security and found that population pressure, tenure insecurity, prospect of capturing economic rents are significant variables.

Reviewing the findings of the studies in forest sector Duraiappah (1998) reports that commercial agents were the dominant group pursuing logging and the agricultural/ pastoral activities and the institutional and market failure were the main incentives driving both the agents to adopt unsustainable (deforestation) activities. He found no clear evidence that could establish direct links between poverty and deforestation. Likewise, after reviewing more than 140 economic model dealing with causes of deforestation, Angelson and Kaimowitz (1999) also have reached in similar conclusion.

Cavendish (2000) has documented a study of poverty- environment relationship of the

rural households of Zimbabwe. He reports seven empirical regularities of the relationship as:

(i) Environmental resources, in aggregate, contribute significantly to the rural household income (roughly 35%).

(ii) Rural household generally use wide variety of natural resources.

(iii) There is a negative relationship between the aggregate environmental income share and household total income indicating the fact that poor households are more resource dependent than the rich.

(iv) Aggregate total resource demands still rise with income level that reveals better off households, in quantitative terms, are the most significant users of environmental resources.

(v) At disaggregated level, since environmental goods are heterogeneous, the resource demand very differently with income changes and socio-economic variables such as age, sex, composition of the family.

(vi) Environmental resources are important for key economic activities, such as cash generation and fertilizer provisions.

(vii) Both the use and value of environmental resources are likely to very substantially for year to year in response to climatic and other economic parameters.

Using both conceptual and empirical materials, a study by Prakash (1997) has examined some of the major linkages that are believed to exist between the processes of poverty and environmental degradation with a focus on the Western Himalayan Regions of India. In particular, the study has investigated whether the relationship is functional or causal and assessed the role of other factors, particularly institutions and social and cultural influences. His findings suggest that the linkages between poverty and degradation depends greatly on the particular strategies poor communities adopt for coping with prevailing conditions, which in turn depend the nature of options open to them, on the policy frameworks of national and local governments and on macroeconomic factors. Thus, the proper relationship between poverty and environmental degradation should largely be seen as one of coincidence rather than of the spiraling chain of causes and effect implied by the poverty trap thesis.

Similarly, a large number of studies on the various dimensions of degradation of common property resources (CPRs) are found in Indian context. Nadkarni et al (1989) have discussed about the use and management of forest resource of Karnataka in political economy perspective. Jodha (1986, 1990 &1998) provides explanation of contribution, crisis and management of CPRs of dry land areas of Rajasthan. Pasha (1991, 1992) has examined the sustainability of the CPRs in micro and local level perspective and links the analysis to poor's livelihood. Somanathan (1991) extend analysis of deforestation problem of central Himalayas focusing the property rights and incentive mechanism. Rao (1994) has documented a macro level analysis of the relationship between, agriculture growth, poverty and environmental degradation. G.B. Rao (1998) has examined the grazing related environmental problem in Andhra Pradesh. Kohlin and Parks (2001) have investigated the spatial variability and disincentives of

deforestation with the help of spatial household model using data from Orrisa.

Although all these studies provide some interesting insights and conclusion about the use and management of CPRs, very little explanation is available focusing the poverty-environmental degradation linkages. Some of them indicate the clear presence of direct linkage (Rao 1994, Kohlin and Parks 2001). But others studies reveal that not only the poverty but also several factors such as institution, infrastructure, state policies, market, demographic and other political economic factors comes into play in the mechanism of poverty environment linkages.

Nepalese Context

Nepal is considered to be one of the appropriate places for the study of various issues in environmental discourse. Eckholm (1976) has pointed out the fact stating,

"There is no better place to begin an examination of deteriorating mountain environments than Nepal. In probably no other mountain country are forces of ecological degradation building so rapidly and visibly" (quoted in Thapa and Weber, 1990).

During the 1970s and 1980s a perception developed that because of the rapidly expanding population in he hills of Nepal and farmers' high dependence on forest products forest were declining rapidly in both area and density. Following this concern many researcher attempted to look upon different facets of this apparent focusing Nepal, specially the mountains region. Henceforth, the reviews of some of the important studies are presented.

Eckholm (1975) presented a study on energy crisis and ecological stress faced by mountain areas including Nepalese Mountain highlighting gravity of the ecological degradation problem of highland Nepal and pointing out its consequences for the same area and whole Gangetic plain in the light of the growing pressure built on land and forests. A World Bank report gave added poignancy to the perceived crisis by predicting that by 1993 there would be not trees left in the hills of Nepal (Quoted in Gilmour 1991). The articulation of such scenario was dubbed in "The Himalayan Dilemma" (Ives and Messerili, 1989), which received wide attention and debate. In the process, many researchers, Nepalese as well as foreigners, have accomplished and documented a large number of studies on environmental concern of Nepal exhibiting both pessimistic and optimistic scenarios. A brief review of some of the relevant studies is given in this section.

Pandey (1982) has analyzed the linkage between forest and animal husbandry in Nepal. He has revealed that animal husbandry, which contributes about 25% of agricultural GDP, is highly depended on forest. He also states that there is a close interdependency between animal number, fertilizer production, fuel requirements and uses and deforestation.

Bajracharya (1983) has made a detailed examination of fuel wood/food dichotomy in relation to deforestation based on the extensive survey of a hill village *Panchayet* in eastern Nepal. The study concludes that deforestation is caused not so much by fuel wood demand as by the need to clear forest area for food supply. That is why, to control deforestation food production and distribution practices need to be improved, exiting forest need to be managed

to increase sustainable fuel wood supply and the direct participation of local people is indispensable to implement desired management of the forest.

Chapagain (1984) has documented a study on public land use in the hills of central Nepal on the basis of household survey of a village *Panchayat*. Making the distinction between open-access and common property resources he has analyzed the nature of extraction activities, perceptions and awareness of the local people, and prevailing system of property rights on land. The study reports that there was a consistency between individual and collective interest among the household toward the contribution to and expropriation from collective resources. The villagers were aware of the external effects of natural resources use and capable of devising the institutional rules to minimize these externalities, if entrusted with this responsibility. The study suggests that proper incentive by government, rather than introducing the rules, is essential for strengthening the existing institution building process in the villages.

Mahat et al (1986, 1987) published a series of articles on human impact on forests based on the study evidences of middle hill Nepal. These articles presented the issues of deforestation and degradation of forest in the contest of use and misuse of the forests resources and concluded that the deforestation of the Middle Hills of Nepal was not a recent phenomenon but has a long history and it was caused mainly by joint attack of government land-use policy and subsistence agriculture.

Wallace (1987, 1988) has analyzed the problem of deforestation in Nepal with reference to use and management of forests resources and examined the institutional and policy context in the face of inception of community forestry arrangement. The studies conclude that forest resource degradation in Nepal is related to many causes such as policy failure, growing population pressure and the lack of community participation. As the policy alternatives he has suggested to increase attention to private incentives for tree planting, implementation of energy efficient technology and promotion of favourable environment for local management of the existing forest resource.

Based on the survey of three the then village *Panchayats*- one from eastern Terai and two from western hills Shrestha (1986) has examined the socioeconomic factors leading to deforestation in Nepal. The study reports that the farm size, family size and the livestock population are directly associated with the act of unsustainable forest resource use.

Messerschmidt (1987) has analyzed the traditional indigenous knowledge system concerning forest management on the basis of his field experiences of a western hill district. He concludes that traditional forest management systems, which were based on the rich knowledge of the local people, should be essential to revive again with new innovative way to conserve the natural resource.

A more comprehensive analysis of the apparent environmental problems of hills of Nepal has been documented in the study of Thapa and Weber (1990). The study covers the analysis of the land use change, local forest resource use and management, household economic systems and suggests the framework for sound watershed management planning. Regarding the forest resource use the study states that subsistence agriculture has become the major causes of gradual degradation of watershed and as it keeps the majority of farmers in the state

of poverty and increases their dependency on forest resources. Population growth combined with miniaturized land holdings, increasing livestock heads tend to increase farmers dependency on forest resources for fuel wood and for fodder supply respectively and so leading to progressive degradation and destruction of forest. The study concludes that the objective of maintaining a sustainable development cannot be achieved under the subsistence farming system.

Based on the secondary information and available literature, Metz (1991) has examined causes and severity of the environmental crisis of Nepal. He states that deforestation, a major aspect of environmental crisis, has deep historical roots and has been profoundly augmented by state policies, population growth and the strategies of the small farmers to cope with the poverty. He further says that human uses of natural resources structure by social institutions, which are the manifestation of the power relation of various classes. Contrary to earlier claims, he asserts that most upland erosion and lowland flooding results from the characteristics of the geological and climetological environment rather than human conversion and degradation of the upland forests.

Saussan et al (1991) discusses the fuel wood crisis and planning exercises of Dhanusa districts of eastern Terai, Nepal. The production and utilization of biomass has been examined through their interrelationship with tenancy relations and proximity of the forest area. The study concludes that sustainable planning of fuelwood management is possible on the basis of local community participation at every stage of planning process and empowering the local people for decisions making.

A study report by Sharma (1991) deals with the issues of population, poverty and environment focusing the population problem of Nepal at macro level. The report indicates that high rate of population growth has been contributing to deepening the incidence of poverty and environmental degradation and highlights the need for an integrated policy to deal with these problems.

Shrestha (1996) gives the analysis of shifting cultivation on the basis of the study conducted in two VDCs of Kaski districts. The study reveals that shifting cultivation (popularly known as *Khoriya* in Nepal) is the last resort of livelihood for the poor, land less and marginal farmers. The major reasons of Khoriya practice in the study area are insufficient arable land, food insecurity and the lack of manure. The study found the declining trends of this practice in his study area.

Amacher et al (1996) have examined the household fuel wood demand and supply of Nepal applying household models of consumption and production of fuel wood. The paper attempts to look at the general belief that subsistence households are leading source of deforestation and addresses the issue with household evidence from the two major populated regions of Nepal that is Terai and hills. The paper reports that market prices, labour opportunities, the availability of substitutes, and measure of access to the basic resources are the most reliable predictive variables for fuel wood consumption and production; however, there are regional differences and important distinctions between the elasticity of fuel wood collecting or purchasing households with respect to these predictive variables. Similarly, another finding is that fuel wood is relatively scarcer (higher prices) in the mid- hills, and

both collecting and purchasing households in this region are beginning to respond to deforestation by using their own land for fuel wood production.

In another article by same set of others (Amacher et.al, 1999) have analysed the fuelwood consumption and production behavior of Nepali households using the data from both Terai and Hills regions. The household regressions yield coefficients and elasticities that are very different from and more reliable than a comparable assessment of market demand and supply. Their household demand and production models' results generally support the hypothesis that expenditures on fuelwood are a small share of total household activity and that fuelwood is not sufficiently scarce to alter household behaviour. Fuel wood was sufficiently scarce, however, to alter behaviour for those households in the Hill region that do not participate in market exchange.

Ghimire (1998) has documented a study on *Sukumbasi* problem of Western Terai. Based on the field survey of Nawalparansi districts the study offers a political economic analysis of the causes and consequences of poverty and land hunger. The study maintains that perpetuation of this problem is largely an outcome of government's failure on land reform, resettlement program and the historical legacy of socio-economic inequality and the vested interest of the different classes to forest protection. He also outlines the distress migration from the hills to Terai in search of livelihood owing to deteriorating natural resource base and pressure of the population growth is also a significant factor of illegal settlement problem.

Shrestha et al (1999), in their article, report a district level analysis of population pressure on land resources using 1991 census data. The study has estimated a population pressure index (PPI) for each districts taking into account the gross value of district level output from primary sector (i. e. agriculture, livestock and forestry) and ranked the districts accordingly to show whether a district is overpopulated or under populated. They found significant divergent between PPI and Simple population index. The study further reports that continuing pattern of population pressure is not merely a reflection of human land relation it is also a class-inequality issue, with poverty and immiseration at its hurt.

A recent article of Chakraborty (2001) offers an analysis of stability and outcomes of common property institution in forestry of Nepal Terai on the basis of the case studies conducted in two districts- Banke and Dhanusha. The study reports that despite the presence of inequality, ethnic heterogeneity and high rate of in- migration into the region, the common property institutions in the form of community forestry found to be stable. As far as outcomes are concerned, the institutions though emerge to be well to ecological sustainability; it did not show strong impact on poverty alleviation.

Conclusion

The debate on the poverty environmental degradation have led to shift to the new paradigm of developmental thinking, the sustainable development and forced to think of new ways and strategies which could reconcile the need of the present with the right of the future generation to sustain their life with justice and dignity. But due to the obvious antagonism in the heart of

thinking and diverse interest of different class, and unequal word the realization of sustainable development have been a matter of conflict to maintain and attain their own interest. Nevertheless, the review of studies reveals that the studies in and around the issue have certainly generated substantial evidence for debate and discussion leading to attain clarity in the issue.

Most of the reviewed studies no doubt highlight the issues of deforestation and degradation of forest resources in the face of growing population and existing subsistence economy of rural Nepal, and also outline the poverty environmental linkages to some extent. But these studies do not concentrate on the very dynamics of the poverty environment nexus. Mainly the studies are area specific and narrowly cover the issue of environmental problems. Except some studies most of them lack statistical rigour. These studies are largely conducted on segregated analytical framework and deals with limited dimension of household economy and variables. So, there is a need to bridge the gap in research and database regarding the issue of poverty and environmental degradation of different domain. The studies on this issue is the demand of the time to come owing to the fact that the reduction of poverty and environmental degradation have been the main thrust of the developmental discourse, not only in Nepal but also in global perspective. So any study attempts around the issue deserve appalling policy implication.

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