

Impact of migration on environmental degradation in palamu division of Jharkhand: A geographical appraisals

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Abstract

The rapid population growth and economic development in Palamu division are degrading the environment through the uncontrolled growth of migration. One of the significant reasons for environmental degradation in the study area could be ascribed to quick development of population which is antagonistically influencing the natural resources and condition. The developing population and the ecological weakening face the test of maintained improvement without natural harm. The presence or the nonattendance of ideal characteristic assets can encourage or hinder the procedure of economical development. Population is an important source of development, yet it is a major source of environmental degradation when it exceeds the threshold limits of the support systems. Unless the connection between the multiplying population and the existence emotionally supportive network can be settled, improvement programs, howsoever, imaginative are not prone to yield wanted outcomes. Migration impacts on the environment primarily through the use of natural resources and production of wastes and is associated with environmental stresses like loss of biodiversity, air and water pollution and increased pressure on arable land.

Keywords: economic development, environmental degradation, migration, biodiversity

Introduction

Environment and international migration and their relationship with development are among the most pressing issues on the contemporary global agenda. As populations grow, and as economies grow, people move from one place to another in order to avail themselves of opportunities, to make a better life and to avoid undesirable risks and harm. Migration is therefore a significant social and economic phenomenon in historic and contemporary societies. With growing mobility and growing human population, there is now a greater stock of migrants in the world than at any point in the past, with the dominant flows of people being from rural areas to urban settlements over the past decades. At the same time, and for related reasons, the world is in the throes of global changes to land use, pollution loading, and systemic change to biodiversity climate and other earth system processes. Yet many accounts of this global environmental change, from discussions of the great acceleration, the anthropocene, planetary boundaries or extinction crises, fail to systematically account for the role of people moving from one place to another as either a cause or consequence of emerging environmental risks. Hence this special issue of Environmental Research Letters sets out a number of research challenges and new findings on issues around (a) the processes linking migration with environmental risks and (b) the broad empirical and policy trends in this area. The set of papers forms part of a resurgence of interest in migration and environmental risks, with international research programmes, international scholarship, and increasing policy focus. These include the UK Foresight project on Migration and Global Environmental Change (Foresight 2011), from which much of this set of papers was first initiated. The field is expanding rapidly with major international comparative

research projects (Afifi and Jäger 2010, Warner and Afifi 2014, Pigué *et al* 2011). For the first time the Intergovernmental Panel on Climate Change has directly engaged and assessed migration as both impact and adaptation to climate change.

Location of the study area

Palamu division is one of the five divisions of Jharkhand state in eastern India. This division comprises three districts: Garhwa, Latehar and Palamu^[1]. Medininagar (formerly known as Daltonganj) town is the administrative headquarters of the division. This division was created on 2 May 1992. The area of the present Palamu Division is conterminous to former Palamu District. "The district of Palamau, which forms the north-west corner of the Chotanagapur Division (present Jharkhand State), lies between 23°20' and 24°39' north latitudes and between 83°22' and 85°00' east longitudes. It contains an area of 4,921 square miles. The administrative headquarters is Daltonganj, situated on the Kiul River in 24°3' north, and 84°4' east, which has taken its name after Colonel Dalton, Commissioner of Chotanagpur in 1861" The district is cut into two approximately equal parts by the river Kiul. The landscape is undulating and hilly. "The divided terrain of the district of Palamau has added in inimitable geographical personality which composes it a distinct natural region to focus the economy of the broken and divided land. Total population of the Division in 2001 was 31, 33,823 persons or 11.63% of the total population of Jharkhand State. It increased to 39, 84,379 persons in 2011 or 12.09% of the total of the State. Tribal population was 5, 51,284 persons or 2.05% of the total population. Main urban centres are Daltonganj (M: 71,422: 2001), Garhwa (M: 36,686: 2001), Hussainabad (NA; 23,441; 2001), Latehar (NA; 19,082;

2001). Daltonganj is the divisional as well as district headquarters of Palamu Division and the district of the same

name. Garhwa and Latehar are the district headquarters of the same names.

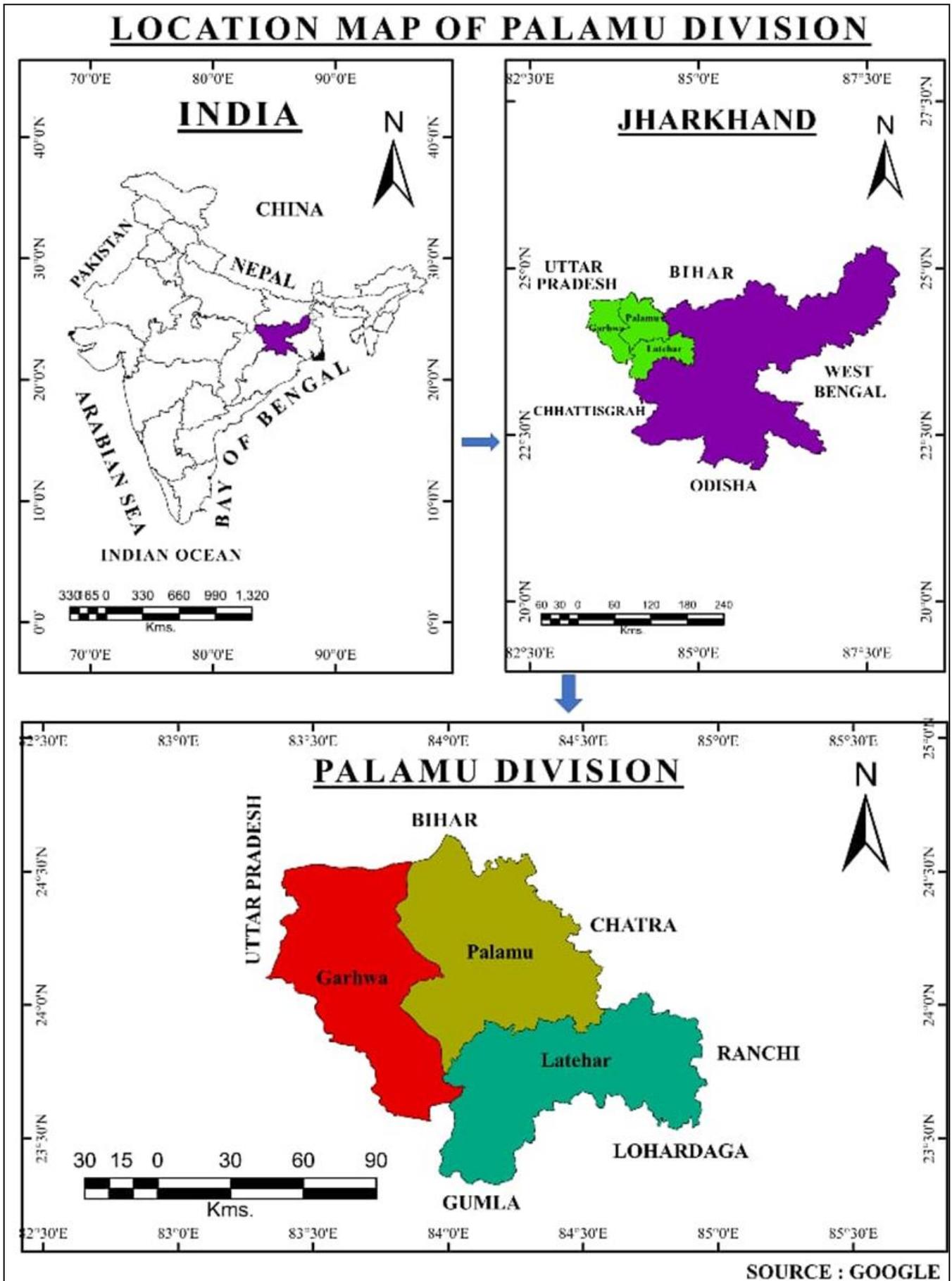


Fig 1: Location Map of the study Area

Aims and Objectives

In view of the foregoing discussion, the main purpose of the present study is to identify some of the major issues, and factors which are considered as the major causes of the problem of environmental degradation. It is intended to concentrate on socio-cultural factors which relate primarily to the environmental degradation at all levels. The main objectives of the study are as follows

- To define the Concept of migration and Environment degradation
- To explain the relationship between the migration, development and environment
- To analyze nature of migration in the study area.
- To investigate the population growth impact on environment degradation

Research Methodology

For such a study as this, the required information is based on government publications issued by various departments in the state, particularly by the Directorate of census for both the state and for the districts as well. The other source of information includes the published books and articles from various authors and sources. But the primary information and data especially for the case study of urban and rural areas has been collected through personal participation and observation

Result and Discussion

Concept of migration

Migration (human) is the movement of people from one place in the world to another. People can either choose to move ("voluntary migration") or be forced to move ("involuntary migration"). Migrations have occurred throughout the past, beginning with the movements of the first human groups from their origins in East Africa to their current homes throughout the world. Migration occurs in a variety of ways: Migration can occur between continents, within a continent, or within a single country. Migration can even occur when people move out of the city and into the country. The most important thing about migration to remember is that it occurs when groups of people move for the same reason.

Types of Migration

- **Internal Migration:** Moving to a new home within a state, country, or continent.
- **External Migration:** Moving to a new home in a different state, country, or continent.
- **Emigration:** Leaving one country to move to another (e.g., the Pilgrims emigrated from England).
- **Immigration:** Moving into a new country (e.g., the Pilgrims immigrated to America).
- **Return Migration:** When groups of people move back to where they came from.
- **Seasonal Migration:** When people move with each season (e.g., farm workers following crop harvests or working in cities off-season)

Concept of Environmental degradation

Environmental degradation is an umbrella concept which covers a variety of issues including pollution, biodiversity loss & animal extinction, deforestation & desertification, global warming, and a lot more. Environmental degradation

is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable. Environmental degradation is one of the ten threats officially cautioned by the High-level Panel on Threats, Challenges and Change of the United Nations. The United Nations International Strategy for Disaster Reduction defines environmental degradation as "The reduction of the capacity of the environment to meet social and ecological objectives, and needs". Environmental degradation is of many types. When natural habitats are destroyed or natural resources are depleted, the environment is degraded. Efforts to Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems; habitat destruction; the extinction of wildlife; and pollution. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable. As indicated by the I=PAT equation, environmental impact (I) or degradation is caused by the combination of an already very large and increasing human population (P), continually increasing economic growth or per capita affluence (A), and the application of resource-depleting and polluting technology (T).

Relationship between the migration, development and environment

It is an underlying premise of this paper that there are not only complex two way interrelationships between migration and development on the one hand and environment and development on the other but also, as Figure 1 shows, significant inter link ages between migration and development. Environmental degradation is one of the ten threats officially cautioned by the High-level Panel on Threats, Challenges and Change of the United Nations. The United Nations International Strategy for Disaster Reduction defines environmental degradation as "the reduction of the capacity of the environment to meet social and ecological objectives, and needs". Environmental degradation comes in many types. When natural habitats are destroyed or natural resources are depleted, the environment is degraded. Efforts to counteract this problem include environmental protection and environmental resources management.

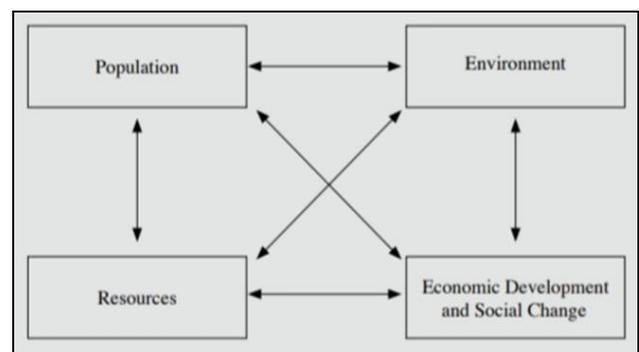


Fig 2: A Complex Interrelationship: Migration, Environment, Resources and Development

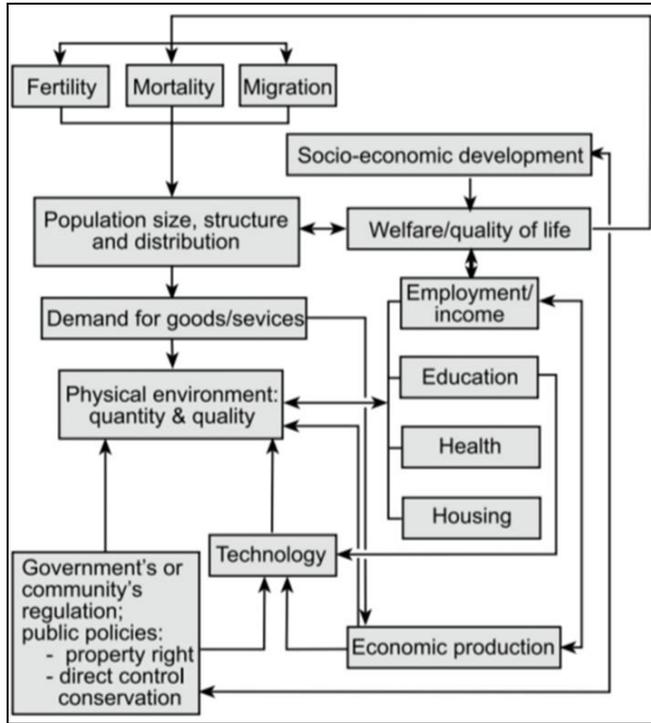


Fig 3: A Complex Interrelationship: Migration, Environment, Resources and Development

The starting point for discussions of relationship between migration and the environment is usually the formulations that link population processes generally (of which migration is one) with environmental change. Here the simple equation developed by Erlich and Erlich (1990) is relevant, namely.

$$\text{Environment Impact (I)} = \text{Population Size (P)} \times \text{Affluence (A)} \times \text{Technology (T)}$$

Where (P) = the number of people or population size
 (A) = the affluence of each individual or per capita consumption of goods and services

(T) = technology or quality of resources consumed and pollution generated during production and consumption of goods and resources (Green, Rinehart and Goldstein 1992, 3)

While this is a highly simplified expression of a complex relationship, migration clearly fits in as one of the key processes influencing changing population size and distribution within and between countries. Migration has been explicitly included in the elaboration of the basic I = PAT equation in Figure 2. This is an attempt 'to identify or speculate on, how population variables affect and are affected by the environment and how intervening factors or policies and measures could be introduced to cope with environmental as well as population problems' (United Nations ESCAP 1989). Moreover it also explicitly links population and environmental processes to development levels and well-being. Nevertheless, in the population literature on linkages with the environment (e.g. Green, Richard and Goldstein 1992; UNFPA 1991) most attention focuses on population per se and if the processes which influence population size and growth are explicitly taken into account at all, it is fertility which is most often considered. One of the few frameworks which explicitly mention the role of migration is reproduced in Figure 3 and was developed by the UNFPA (1991). Here two types of migration are seen as being significant. Firstly migration is

seen as being both a cause and consequence of environmental pressure although the example given is of environmentally induced migration reflecting the much greater concentration in the literature on environmental change causing migration while migration impact on the environment is little considered. It is interesting though that Figure 3 sees migration as being an important external influence on the environment and development through 'brain drain'. This is referring to the fact that the loss of skilled people from any area can have detrimental effect on both development and the environment in that origin community.

Nature of migration in the study area

The availability of virgin land in Palamau district had been one of the causes of the earlier incidence of immigration. The flow of immigrants to the district has never been very marked since 1901 but there has been a slow incidence through all the decades. Immigrants are mostly from the neighbouring districts of Gaya and Shahabad. In the recent years the various resources have attracted immigrants. A moiety of the immigrants consists of *mahajans* and business people. The recorded number of immigrants in some of the census years may be discussed. In 1901 the number was 38,838 representing 6.26 per cent of the population. Apparently this was due to the undeveloped state of the district and the large area awaiting reclamation which invited a large number of immigrants from the neighbouring districts. The total number of immigrants in 1911 was 35,758 while in 1921 the figure came down to 24,246. As an abbreviated census was done in 1941 immigration figures for this census are not available. In 1951 census the total number of immigrants was recorded as 35,425.

There used to be a regular recruitment of imported labour to the tea districts of Assam and Duars from Palamau district in the past. Emigration to the tea districts of Duars was not regulated but emigration to Assam was regulated under the Inland Emigration Act and was controlled by the Assam Labour Board. For decades there was an Agent for the Tea Districts Labour Association in Daltonganj who used to control the operation of the recruiting *Sirdars* for the district. The system of recruitment through *Sirdars* was substituted in place of a wholesale recruitment through any possible agency and even giving a false allurement. The Daltonganj depot of the Tea Districts Labour Association has been abolished since 1956 and the flow of emigration to the, tea districts has considerably decreased. Some recruitment of the men of Palamau is now done through Ranchi depot. It is reported that the figures were 142 in 1956, one in 1957 and 154 in 1958. There was in the past also a small flow of emigration to the neighbouring area of Mirzapur and Surguja.

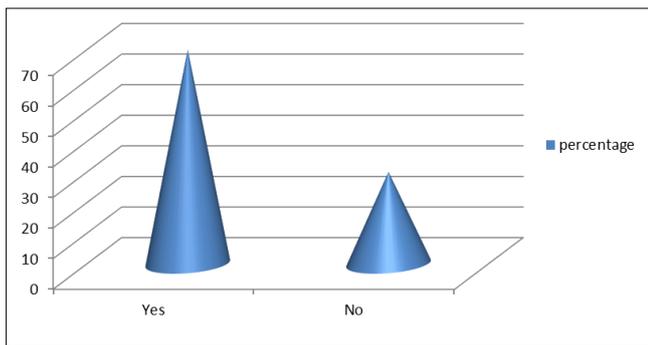
The number of emigrants, i.e., persons born in Palamau but enumerated elsewhere in 1901, was 32,210 or 5.19 per cent of the population. O'Malley thought that the figure was not correct as many people born in Palamau might have given out that they were born in Lohardaga, the name of the old district of Ranchi and had been returned as such.

The incidence of emigration in 1911 and 1921 was near about 5.5 and 4.81 respectively of the actual population. After 1921 the figure of emigration of individual district to other States of India was not compiled and emigration figures are available. Only for those who have been enumerated within the State. The incidence of emigration

from 1931 is not very marked. In 1951 census 23,327 persons born in Palamau district were enumerated in other districts of Bihar.

Impact of Migration

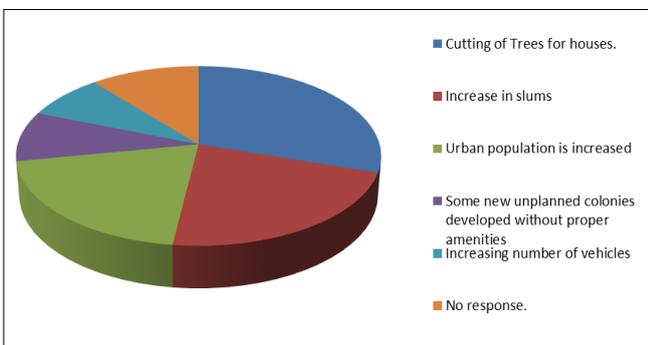
Migration also effects the environment because when people migrate to cities they need everything for their livelihood to fulfill their needs, on the other hand there is a pressure on natural resources. We always take from nature but never gave it back. So in the present study the researcher finds out that how migration from rural to urban degrades the environment. The researcher asked the respondents to mention that is there any impact of migration on environment and how it degrades the environment. The views and responses of the respondents have been shown in the following figur4



Source: Field survey

Fig 4: Distribution of respondents according to their views regarding migration degrades the environment

The Figure4 given above reveals that a vast majority of the respondents, i.e., 70% percent mentioned migration as a factor of environmental degradation. A very lesser proportion of the respondents, i.e., 30% mentioned "no" regarding migration as a factor of environmental degradation. Majority of the respondents mentioned "yes" this may be due to the fact that they had a lots of problems emerged in urban area like problems of housing. Overcrowding, pollution, slums etc. with migration. Further the responses of the respondents that how migration effects the environment is shown in the following figure5.



Source: Field Survey

Fig 5: Distribution of respondents according to their responses that how migration from rural to urban degrades the environment

The figure 5. Given above shows that 30 percent of the respondents mentioned cutting of trees for houses as a reason for environmental degradation. While 22 percent and 20 percent of respondents gave the response as more slums

and no proper sanitation. 9 percent and 8 percent mentioned that with migration some unplanned colonies developed without proper amenities and increased number of vehicles only 11 percent respondents had an indifferent view.

Conclusion

Migration is a logical and common immediate response to environmental degradation and disaster, but it is rarely a medium or long-term solution to environmental problems. This will only be attained via lower levels of population growth through substantial and sustained fertility decline and adopting ecologically sustainable ways of using the environment. Both of these goals are only going to be achieved through overcoming the poverty and powerlessness among the people living in regions subject to environmental disaster and degradation. Only through improving employment opportunities for men and women, health, education, human rights and enhancing the status and roles of women within such societies can long-term sustainability be achieved. Just as international processes have contributed to the creation of environmental problems in LDCs, long-term solutions will only be possible with significant involvement of the international community.

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