

## Study unit 7: Poverty and the Environment

### 7.0 The relationship between Poverty and Environment

Poverty has been defined in various ways based on different people's situations. For example, the World Development Report 2000 defined it as; "to be poor is to be hungry, to lack shelter and clothing, to be sick and not cared for, to be illiterate and not schooled". The Poverty Eradication Action Plan (PEAP) 2004 defines it as low incomes, limited human development and powerlessness. It has also been defined by the local people from the Uganda Participatory Poverty Assessment Project started by the government in trying to implement PEAP; as being beyond the lack of an income and material assets. It includes absence of social aspects that support life (SoER, 2002).

Poverty has been classified into individual or household poverty and community poverty. Individual/household poverty is seen as a situation of perpetual need for daily necessities of life and the experience of powerlessness. Community poverty on the other hand, is regarded as the absence of basic physical infrastructure and services, productive assets and social harmony within the community (MoFPED, 2001).

With these definitions it can be concluded that poverty is the lack of basic necessities at household and community level.

### 7.1 causes of poverty

Poverty has been persistent in most developing countries in general and Uganda in particular due to the following reasons;

**Slower growth in agriculture;** agricultural growth has been disappointing most times due to poor soils, lack of incentives to boost the soils etc. Technology has been introduced but unfortunately it does not seem to be responding fast enough. More so, there is loss of agricultural labor force due to AIDS. As indicated before, Uganda primarily depends on agriculture for its economic growth and development. If this sector is slow, then poverty will definitely not reduce.

**Decline in prices for farmers' produce;** Uganda's terms of trade have been declining since the coffee boom in 1994. This has discouraged farmers and some have ended up abandoning farming since it ends up becoming too expensive for them to afford.

**Insecurity;** even when insecurity is limited to one area, it can generate increasing inequality because it has the effect of restricting investment, and hence growth. Some areas, such as Eastern Uganda, have experienced an increase in insecurity and related poverty. This is partly because there has been distress migration into the East from the troubled parts of the Northern Uganda, including relocation of some IDP camps.

**Fertility and Mortality;** the high rate of fertility has contributed to increased poverty. Poor households tend to have more children and therefore their assets are subject to greater sub-division across generations. Similar effects may come from AIDS related mortality and polygamy. The more wives one has, the greater the risks of contracting AIDS since most times you find those women having other partners as well. The death of a productive adult is likely to lead to loss of income. The constant illness and death lead to expenditures on health care and funerals which will further impoverish the households.

**The uses of public expenditure;** usually public expenditure does not go to the people below the poverty line but to public servants. For example, increases in public expenditure in the 2005/2006 National Budget went to salaries, public administration and defence. These do not have a direct impact on poverty, except in cases where the increased defence expenditure leads to more security. The expenditure on agriculture had minimal growth, and has not yet borne fruits due to time lags for investment, such as coffee trees to mature etc.

**Asset distribution;** Land ownership and distribution have become a great problem. Most of the land is owned by the well to do, so the poor have nowhere to cultivate or develop so as to earn an income. Sometimes, the only solution is to rent land for cultivation, but the rental fees are usually high and drain what little profit the farmer would have made.

**Social and cultural factors;** one of the social issues that has been pointed out is alcoholism. Heads of households have spent more on alcohol than family development. Cultural and traditional practices have also contributed to poverty. For example, in cultures where bride price is still valued, it ends up draining the groom's family and household.

## 7.2 Relationship between Poverty and Environment

Both environmental degradation and poverty alleviation are urgent global issues that have a lot in common, but are often treated separately. Of recent, there has been growing recognition that the linkages between poverty and the environment are complex, and they are strongly influenced by local demographic, institutional and cultural factors. In some circumstances, a positive relationship between poverty and environmental degradation has been identified. This has given credence to the hypothesis that poor producers will systematically degrade the resources on which they depend, if they have no alternatives. However, in other cases, it appears that over-exploitation of natural resources (such as forests and fisheries), is more likely the result of actions of relatively wealthy interests engaged in profit gain. A lot depends upon the strength of local institutions, engaged in environmental and resource management, to ensure that in trying to alleviate poverty, the environment is not degraded.

In Africa, persistent poverty has contributed to accelerated degradation of natural resources. The majorities of poor people live in rural areas and depend, directly or indirectly, on terrestrial and marine natural systems for income generation. It is estimated that two-thirds of the region's people live in rural areas and depend primarily on agriculture and other natural resources for income. These people mostly live on the most fragile and degraded rural and urban areas.

Africa is plagued by rampant poverty that affects both rural and urban populations, along with tremendous impacts on the environment. Alongside this situation, the standard of living has drastically deteriorated due to the lack of an efficient system of domestic and/or industrial waste management.

The biggest threats to the poor are fresh water shortages and the deterioration of agricultural land - through soil erosion, desertification and, in irrigated areas, water logging and salinization. In coming decades, these problems will become especially acute in China and Southern Asia, home to close to half the global population. Large parts of Africa will also be affected, as will parts of South and North America and Central Asia. Another danger is the

progressive destruction of natural ecosystems, notably tropical rain forests, mountain forests and wetlands. This will cause changes in local climates, and increase flooding and soil erosion. Also, livelihoods will be lost and natural food supplies, notably fish stocks, will dwindle. Lastly, the Greenhouse effect will lead to an increase in natural disasters, rising sea levels and local climate change. Again, the poor will be affected most severely.

Africa is losing millions of hectares of forest every year. Its wildlife population of rich and unique species of animals and plants is under increasing pressure. Its biological resources are declining rapidly as a result of climate variability, habitat loss, over-harvesting of selected resources, and illegal activities. This is despite the fact that, biodiversity contributes to poverty reduction in at least five key areas (food security; health improvement; income generation, reduced vulnerability, ecosystem services). For instance the impacts of land degradation are felt mostly by the poor because they are forced to cultivate on river shores and marginal lands, such as desert margins, which get degraded more rapidly. The poor also often live in degraded urban environments, including sites close to waste disposal areas or vulnerable to flooding;

Real and lasting poverty reduction is only possible if the environment is able to provide the services people depend on, and if natural resources are used in a manner that does not undermine long-term development. The constantly increasing population in African countries demands for creative efforts to find new ways of producing more food from the country's finite resources.

African governments therefore, should link biodiversity conservation with policies on overcoming poverty, especially in local communities that live around protected areas and in zones richly endowed with biodiversity, through the sustainable use of the resources.

Uganda is a small landlocked country with about 24.7million people (UBOS, 2002). The country has experienced impressive economic growth in the past decades of over 5% per annum (MoFPED, 2002). Despite this, the country remains one of the world's poorest countries ranked 159<sup>th</sup> out of 175 in 1998 according to the human development index (UNDP, 1999). Nationally though, head count poverty has declined from 54% in 1992 to 35% by 2001 (MoFPED, 2002) which is a significant achievement.

It is generally acknowledged that the poor are both victims and agents of environmental degradation (SoER, 2002).

The poor are dependent on natural resources which may be owned by the poor themselves, the community, and the government or through common access (SoER, 2002). They depend on them for farm and grazing land, wild food, fish, fuel, pasture etc. These may be the primary source of livelihood or they may supplement the family's daily needs or income.

Poor people in the less developed countries, who cannot meet their subsistence needs through purchase, are forced to use common property or private resources such as forests for food and fuel, and ponds and rivers for water. Consequently, they directly experience the effects of environmental degradation, whether caused by their own actions or by consumption on the part of higher-income groups. For example, overuse of water resources by the poor, driven by population pressure, has resulted in some contamination and exhaustion of these resources. Urban populations are also increasingly using rivers to dispose of untreated sewage and industrial effluent. The result is that the health of those dependent on untreated sources of water is increasingly at risk (World Bank, 1990).

Forests are important sources of livelihood for large groups of the poor in many countries. The World Bank's new strategy, points out that about 60million indigenous people are almost wholly dependent on forests, some 350million people are living within or adjacent to dense forests and they depend on them for subsistence and income (World Bank, 2000a). In developing countries, about 1.2 billion people rely on agro-forestry to sustain agricultural productivity and generate income. Worldwide, the forestry industry provides employment for 60million people (Bojo & Ramachandra, 2003).

Given the above scenario, it can be seen that many people depend entirely on forests for their livelihood. They have to be used sustainably, therefore, to support livelihoods and help alleviate poverty, hence creating sustainable livelihoods.

Sustainable livelihoods have been defined by DFID 1999 as life that can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in future while not undermining the natural resource base.

More so, the proportion of traditional to modern fuel use is an important indicator of quality of life and poverty incidence in the country (Bojo & Ramachandra, 2003). In most low income countries, biomass is a major form of traditional energy. This does not only degrade

the forests and woodland, but it also has an impact on their health. The International Energy Agency (2002) estimates that 2.5million women and children die each year from carbon monoxide and other gaseous pollutants of stoves using biomass. This has an impact on the environment and poverty in that, when the productive group dies, then environmental protection cannot also be practiced. In addition, those left behind will have less income to depend on, leading to more poverty.

Deforestation also increases the burden on the poor, especially the women and children. They have to walk longer distances in search of firewood and water, leaving them with less time to participate in the production sector. This has an impact on poverty because without production, then there will be no income. According to the Uganda Integrated Household Survey, the average distance traveled by households to collect firewood has increased dramatically between 1992 and 2000, from 0.06km to 0.73km (SoER, 2002). Nepal and Bangladesh have also suffered from various environmental problems, such as the increasingly devastating floods, resulting from large-scale deforestation. Forests around the world face increased pressures from timber companies and agricultural businesses and this has contributed to increase in loss of forests.

Water supply is another resource that has a strong relationship with poverty, poor health and loss of productive time. Time spent on fetching water has implications on children's education and women employment. The quality of water has implications for water borne disease transmissions such as cholera, diarrhea, typhoid, dysentery and hepatitis A. There is also water washed transmission of skin and eye infections (trachoma) spread through insufficient water for hygiene. Epidemiological studies have shown that sanitation is as effective in preventing diseases as improved water supply. Provision of adequate sanitation and hygiene reduces diarrhea incidence by 65% and morbidity by 26% (WHO, 2000a).

In sub-Saharan Africa, environmental related causes of diseases contribute to 26.5% of all the other causes. Inadequate water supply and sanitation, vector borne diseases (e.g. malaria), and indoor air pollution are the major environmental causes contributing to poor health in Sub-Saharan Africa (SoER, 2002).

The poor often have no alternative when the environmental resources they depend on are degraded. Consequently, undependable food supplies, unsafe drinking water, polluted air, and unsanitary conditions contribute significantly to reduced life expectancy and high child

mortality. These conditions, in turn contribute to population growth as the poor make fertility decisions to compensate. Because many of their children die, it is necessary to have many. Children are valuable to the rural poor - they gather fuel, collect drinking water, and care for aging relatives. The result is a vicious cycle: a larger population leads to more poverty and more pressure on the environment.

Land scarcity is another problem that has increased poverty and environmental degradation. With the high population growth rate, land has been fragmented and this has not only reduced agricultural productivity, but had negative impact on the environment. These small pieces of land have been cultivated continuously so the soil gets loose and is easily washed away by agents of erosion when there is a down pour. In addition to this, continuous cultivation decreases soil fertility resulting in poor yields and low incomes. This problem has been exacerbated by the land tenure system in Uganda. Land ownership is a big problem because people who own big chunks of land are not putting it to good use, and neither are they allowing those in need to use it.

The fact that land is scarce, and expensive, has made the poor people encroach on fragile ecosystems. Ecosystems, such as wetlands and forests, are usually free resources, with free access and they are available. Because of this, communities encroach on them for settlement or agriculture without any management practices, hence contributing to their degradation. In Kampala city, for example, the Veterans decided to occupy the wetland in Wandegaya because it was the open and unused land they could find. They disregarded the fact that this wetland was acting as a buffer to floods in that area.

Southgate (1988) maintains that small-scale farmers have been the main agents responsible for land degradation activities. He states that market and institutional failure were the primary causes for farmers adopting non-sustainable practices. Pagiola (1995) shows how government price controls on agricultural goods in Kenya have not provided incentives for the small-scale and poor farmers to conserve their land. In some cases this has led to the mining of resources for maximum output.

Wildlife is often found on private or communally owned land outside protected area systems. However, the state still “owns” the wildlife on such land. As a result, land owners do not take responsibility for its management and protection, leading to changes in land use and increased human-wildlife conflicts. This growing problem of human-wildlife conflict, has



contributed to poverty among the local communities, who are already impoverished. People always lose property, as well as lives, due to wildlife invasions. There is also the transmission of diseases both to human beings and the livestock they keep. This causes financial strain on the poor communities who have to treat the diseases.

Natural disasters such as earthquakes, droughts and floods caused by environmental changes, and sometimes induced by human activities, have also had a part in increasing poverty levels. The poor have less ability to cope than the rich for a variety of reasons. They are often dependent on more marginal areas, have fewer assets to sell which would enable them to make their consumption easy, have fewer income earning alternatives and they often have less information about impending disasters or the capacity to respond to whatever information they do have (Bojo, et al, 2001).

For poor people, many constituents and determinants of well-being are closely linked with ecosystem services - the benefits people obtain from ecosystems. Ecosystems provide flow of goods such as food, fresh water, and fuels; they also provide services which regulate ecosystem processes in support of human well-being through, for example, the purification of air and water and the renewal of soil and soil fertility; and they enrich by contributing to a community's spiritual and cultural identity. It is well documented that poor people suffer disproportionately when environmental degradation limits the capacity of ecosystems to provide such services. Failure to reflect this dependence within the development strategies of countries could lead to further degradation of the ecosystems and actually increase poverty.

The World Bank's ultimate objective is the reduction of poverty in the less developed part of the world. In the past, however, development projects encouraged by the World Bank and other international financial organizations have been detrimental to the environment and to the poor. Some development projects have deprived the poor of access to the natural resources on which their livelihoods depend. For example, farmers have been evicted from their lands by dam construction, logging concessions, and large scale agricultural and industrial projects. The financial cost of this destructive approach to development is immense. Financial institutions, while aiming to reduce poverty through development, may in fact be creating more poverty.



The poor are also affected by the debt acquired by developing countries through loans for development. In order for the countries to service their debts, they must earn foreign exchange. Consequently, they are encouraged by the international financial institutions to reduce domestic expenditure and to export more. In many countries, the impact of these policies on the poor has been devastating, since they have implied a drop in wages and a slashing of expenditure on education and health services as well as provision of incentives.

Therefore, the poor do not willfully degrade the environment, but poor families often lack the resources to avoid degrading their environment. The very poor, struggling at the edge of subsistence, are preoccupied with day to day survival. It is not that the poor have inherently short horizons; poor communities often have a strong ethic of stewardship in managing their traditional lands. But their fragile and limited resources, their often poorly defined property rights, and their limited access to credit and insurance markets prevent them from investing as much as they should in environmental protection. When they do make investments they need quick results (World Bank, 1992).

The poor people suffer the most when water, land, and air are polluted, and environmental risk factors are a major source of health problems in developing countries (Asif Zaidi and Usman Iftikhar, 2003).

The poor, generally, only have access to areas that have higher risk for health and low income generation. They basically lack the resources to reduce the exposure to the risk or to invest in alleviating the causes of such risk. Environmental degradation therefore, can affect the health and nutrition status of the poor, and lower their productivity. This can happen both directly (for example, through lower yields per unit of labor or land due to reduced soil quality), and indirectly because of the reduced physical capacity of labor to produce as a result of malnutrition and poor health.

Even in cases where the poor are healthy, labor productivity can be low due to increased time being allocated to less-productive activities such as fuel wood collection. This keeps them away from agriculture and other income generating activities (Kumar and Hotchkiss, 1988).

In terms of the productivity of the resources that the poor manage, the decline is intricately related to the poverty-population-environment interaction (Mink, 1993). Where the poor depend on biomass fuel, and confront increasing fuel wood scarcity, they often shift to using animal dung, fodder and crop residues for fuel. The quantities of these materials that are returned to the soil are thus reduced and its fertility declines. Non-replenishment of soil nutrients leads to soil exhaustion as fuel wood supplies diminish and animal manure is increasingly used as a fuel substitute.

Poverty forces a trade-off between the immediate demands for fuel for cooking and heating and manure for the land. The time-preference argument suggests that the immediate and urgent needs be satisfied. Mortimore (1989) shows how soil exhaustion occurs when certain nutrients are taken from the soil but are not replenished naturally or artificially with fertilizers. A homogenous crop, usually a cash crop, grown repeatedly on the same piece of land can lead to soil exhaustion. Increasing population pressures on land can also lead to shortened fallow periods and this coupled with the farmer's inability to apply variable inputs more intensively because of poverty, can lead to decreased soil productivity.

The most debilitating risk is that of drought in semi arid tropical areas. The combination of poverty and drought can have serious environmental consequences that threaten future agricultural productivity and the conservation of natural resources. Poor people are induced to scavenge more intensively during droughts, seeking out wood and other organic fuels, wild life and edible plants, both to eat and to sell. This scavenging aggravates deforestation and damage to watersheds and soil, already under stress from the drought. The problem is aggravated in common property pastoral farming where farmers carrying extra cattle as insurance against drought may exploit and over burden the carrying capacity of the land increasing the likelihood of permanent damage. Small ruminants can be exceptionally damaging to resources. Poorer households are generally responsible for raising small ruminants, which are allowed to graze low quality resources especially on open access and common property land which may often lead to decline of these resources due to over-use.

Lipton (1997a) also says that the poor face greater constraints to managing their risks. Their assets and stored production are generally minimal. Their access to credit and insurance is

generally limited and or non-existent. Rural credit and insurance markets in developing countries are notoriously fragmented. In most cases there is also a gender bias such that poor women have far less access to mechanisms for managing risk than their male counterparts. If risk is allowed for, the interest rate incentive to deplete is probably sharpened. Higher interest rates reduce the present value burden of long term future risks relative to that of near term risks (and costs). The land use patterns are, therefore, shifted towards activities with long-term risks such as, possible long-term resource degradation. There is, thus, a powerful resource depleting incentive created by rising interest rates. Costly credit undoubtedly shifts the composition - of inputs, outputs, techniques, investment, consumption and savings - sharply in a resource depleting direction

However, the long-standing assumption that the poor are the main perpetrators of environmental degradation has been refuted by recent research. New evidence points to a much more complex nexus of social and economic exclusion, as well as institutional failure as the main drivers of both environmental degradation and poverty. It is therefore imperative, that an approach that fully integrates the human as well as the ecological dimension be adopted to address the problem of poverty worldwide. UNEP has responded to this need by developing an approach that fully integrates the environment into the challenge of poverty alleviation.

The UNDP paper on the links between poverty and the environment in urban areas of Africa, Asia and Latin America suggests that there is little evidence of urban poverty being a significant contributor to environmental degradation but strong evidence that urban environmental hazards are a major cause or contributor to urban poverty. Indeed, for much of the poor urban population, environmental hazards are among the main causes of ill-health, injury and premature death. This population also faces much larger environmental health burdens than middle or upper income groups. This health burden can be greatly reduced by better environmental management.

### **Self-Review Questions (SRQ) For Study Session 7**

1. Differentiate between individual and community poverty
2. Why is there persistent poverty in developing countries?
3. Using two natural resources, demonstrate the relationship between poverty and environment