

Ecosystem Disservices and Poverty

If you want to alleviate poverty through ecosystem services, you might want to take into account the disservices too

Human beings depend heavily on ecosystem services for their survival and well-being. Basic needs like drinking water, fresh air, food and construction materials are to a large extent provided to us by nature, as are more luxury services like spectacular views for expensive homes and eco-tourism activities.

However, many of the problems that ail humanity also come from nature and might be thought of as ecosystem disservices: Approximately 2 billion people are infected with the hepatitis B virus, making it the most common infectious disease in the world today. Close to a billion persons are infected with tuberculosis, which causes nearly 2 million deaths every year. Several hundred million people suffer from malaria and almost a million children die from it every year. About 50 million cases of dengue fever appear each year, and countless millions suffer horribly from other infectious and parasitic diseases, such as African trypanosomiasis ("sleeping sickness"), cryptosporidiosis, leishmaniasis, onchocerciasis ("river blindness") and schistosomiasis.

In addition, the crops and livestock on which we depend for food are frequently assaulted by insects, fungi, viruses, weeds, bacteria and predators. Rainfall, which is great in the right amounts at the right time, can also cause huge disasters, if it arrives in the wrong amounts or at the wrong time.

Africa is the continent that suffers most from ecosystem disservices. More than 80% of all cases of malaria and AIDS occur in Africa, although the African population only constitutes about 15% of the World population. In the African region, 46% of all deaths are children aged under 15 years, whereas in the high-income countries, only 1% of deaths are children (1). The majority of child deaths can be attributed to ecosystem disservices, as they are caused

principally by infectious and parasitic diseases, such as pneumonia, diarrhea, malaria, AIDS and measles.

Table 1 shows a very strong relation between ecosystem disservices and poverty. In high income countries only 35 children out of every million die of infectious and parasitic diseases every year. For middle income countries this is 20 times more frequent, and for low income countries these heartbreaking tragedies are 130 times more frequent.



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Table 1: Burden of ecosystem disservices on children (aged 0-15), by country income group

	High income countries	Middle income countries	Low income countries
Number of child deaths due to infectious and parasitic diseases (per million children)	35	679	4536

Source: World Health Organization (2008) Global Burden of Disease: 2004 update.

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Ecosystem disservice: Dengue transferred by mosquito and below Ecosystem service: Pollination by bumblebee. Source: Wikimedia commons

