Impact of Human Beings on Environment

Review Article

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Abstract:

Humans have actually reduced yield from ecosystem services, owing to human-induced changes to components of the Earth's biodiversity and ecosystems along with economic development. Growth in human populations increased conversion of natural ecosystems to agricultural, industrial, residential use and demand for ecosystem inputs, such as fresh water, fiber, and soil fertility, as well as increased pressure on the capacity of natural ecosystems. Deforestation, expanding agriculture, illegal fishing and hunting, unplanned tourism, and pollution by pesticides have also caused a progressive deterioration of natural habitats. The consequence is loss of biodiversity, removal of forest that eliminates food and shelter, for forest-dwelling wildlife. Environmental pollutants are introduced from uncontrolled use of pesticides and herbicides. Environment contaminate with mercury from unregulated gold mining, urban liquid and solid waste, including untreated sewage, introduction of invasive exotic species, unsustainable tourism, illegal hunting, traffic of wildlife, soil degradation. This biodiversity loss is due to lack of education and environmental consciousness, and fragility of environmental organizations. If we carry on losing biodiversity, future generations face hunger, thirst, disease and disaster. It directly and indirectly contributes many constituents of human, including security, basic material for a good life, health, good social relations, and freedom of choice and action.

Keywords: *agroecosystem, human, pollution, biodiversity, environment.*

Introduction:

Human activities have radically altered the earth's surface, oceans, and atmosphere, especially over the past 200 years (Turner 1990), which reminds the current generation of the warning by Malthus that unrestrained population growth would eventually be limited by fixed natural resources (Malthus 1798).Factors other than climate change are also expected to dynamically influence and negatively impact the efficacy of protected areas. Growing human population densities, intensified land-use, invasive species, often linked to changes in habitat heterogeneity, increasing habitat fragmentation and limited dispersal capacities are threatening ecosystems world-wide and protected areas are often the only refuge for endangered species. Indeed, the effects of these factors on protected areas can be further amplified by changing climatic conditions (Vos et al, 2008 and Beaumont et al, 2009).

Over the period of 1990–2005, the world total forest area decreased by 3.1%, while the global GDP increased by about 32%. Humans have actually reduced well-being that they yield from ecosystem services, owing to human-induced changes to components of the Earth's biodiversity and ecosystems along with economic development (Diaz, 2006).Following human occupation, there have been introductions of exotic plants and animals, in a deliberate or accidental manner, with consequent alterations of the natural ecological communities within the Pantanal (Alho, et al, 2011). Deforestation, expanding agriculture, illegal fishing and hunting, unplanned tourism, and pollution by pesticides have also caused a progressive deterioration of natural habitats. Because of the huge demand for soybean plantations on the upland plateaus surrounding the Pantanal, the application of toxic agricultural chemicals is very common (Alho, 2005; Harris et al., 2005, 2006).

Man-induced mortality of birds caused by electrocution with poorly-designed pylons and power lines has been reported to be an important mortality factor that could become a major cause of population decline of one of the world rarest raptors, the Spanish imperial eagle (*Aquila adalberti*). Consequently it has resulted in an increasing awareness of this problem amongst land managers and the public at large, as well as increased research into the distribution of electrocution events and likely mitigation measures (Lo´pezet. Al, 2011).

The biome has been impacted by the conversion of natural vegetation by human into agricultural fields and pasture for cattle raising, with alteration and loss of natural habitats and biodiversity. This article discussesimpact of human beings on environment,future needs and priorities for ecological research, in order to better understand the biome's natural system, to achieve conservation and sustainable use.

Material and Methods:

The present study is designed to illustrate the changes on biodiversity and environment by human beings, have been documented across different ecosystems. The authors are documented all possible impacts of human beings on environment.

Result and Discussion:

Both biodiversity and other ecosystem services—the benefits that humans derive from ecosystems—are increasingly threatened by human activities (Millennium Ecosystem Assessment 2005).Growth in human populations and prosperity translates into increased conversion of natural ecosystems to agricultural, industrial, or residential use, but also into increased demand for ecosystem inputs, such as fresh water, fiber, and soil fertility, as well as increased pressure on the capacity of natural ecosystems to assimilate our waste, including air and water pollution as well as solid waste (Tilman et al, 2001; McDaniel and Borton, 2002; Aide and Grau, 2004). Economic development has posed serious challenges to ecosystems and biodiversity conservation. None of biodiversity hotspots (areas rich in endemic species and threatened by human activities) have more than one-third of their pristine habitat remaining. Historically, they covered 12% of the land's surface, but today their intact habitat covers only 1.4% of the land (Brooks et al, 2002).

Humans have altered ecosystems more rapidly and extensively than ever, largely to meet rapidly growing demands for resources along with economic development. These demands have been considered important drivers of ecosystem degradation and biodiversity loss. As a consequence, the policies and implementations of both economic development and ecosystems/biodiversity conservation should be formulated and carried out in the context of the increased dependence of humans on ecosystem services along with economic development (Guo et al, 2010).

These environmental threats result in many endangered species. The environmental threats to the Pantanal biodiversity can be grouped under seven interacting categories: 1) conversion of natural vegetation into pasture and agricultural crops, 2) destruction or degradation of habitat mainly due to wild fire, 3) overexploitation of species mainly by unsustainable fishing, 4) water pollution, 5) river flow modification with implantation of small hydroelectric plants, 6) unsustainable tourism, and 7) introduction of invasive exotic species. More recently, two other factors have proven devastating to populations and ecosystems, adding to the list: pathogen pollution, and global environmental change linked to climate. Major economic activities are cattle ranching, fishing, agriculture, mining and tourism. Deforestation to convert natural habitats with pastures for cattle is increasing. The consequence is loss of biodiversity, for example, removal of forest that eliminates food and shelter, for forest-dwelling wildlife. Environmental pollutants are introduced from uncontrolled use of pesticides and herbicides, contamination with mercury from unregulated gold mining, urban liquid and solid waste, including untreated sewage, introduction of invasive exotic species, unsustainable tourism, illegal hunting, traffic of wildlife, soil degradation, lack of education and environmental consciousness, and fragility of environmental organizations to enhance legislation (Alho, 2011).

Agriculture (mainly soybean) and cattle ranching is prevalent in highlands but in the northern region of the river basin, mining has been active since the beginning of the XVIII century (Casarin, 2007). Mining is responsible for environmental degradation in the region of the Paraguay/Diamantino watershed, resulting in erosionwith revolved soil due to mining processing. In addition, deforestation

for agriculture and cattle pasture cause erosion mainly in slope terrains and mountain hillsides of the highlands. Cattle-ranching is an important economic activity within the Pantanal. There are direct effects on plant productivity and survival; besides constant loss of biomass to herbivores, grazing usually results in the introduction of exotic species. Large domestic herbivores affect vegetation, both directly by consuming a large portion of its biomass and also indirectly by being selective in preferred items, compacting the soil, foraging on woody vegetation (browsing) and dispersing seed-propagating species (Alho, 2011).

In many cases the provision of services to the most privileged sectors of society is subsidized but leaves the most vulnerable to pay most of the cost of biodiversity losses. These include, for example, subsistence farmers in the face of industrial agriculture (Lambin et al, 2003) and subsistence fishermen in the face of intensive commercial fishing and aquaculture (Naylor et al, 2000). Second, because of their low economic and political power, the less privileged sectors cannot substitute purchased goods and services for the lost ecosystem benefits and they typically have little influence on national policy. When the quality of water deteriorates as a result of fertilizer and pesticide loading by industrial agriculture, the poor are unable to purchase safe water.

When protein and vitamins from local sources, such as hunting and fruit, decrease as a result of habitat loss, the rich can still purchase them, whereas the poor cannot. When the capacity of natural ecosystems to buffer the effects of storms and floods is lost because of coastal development (Danielsen et al, 2005), it is usually the people who cannot flee—for example, subsistence fishermen—who suffer the most.

The loss of biodiversity-dependent ecosystem services is likely to accentuateinequality and marginalization of the most vulnerable sectors of society, by decreasing their access to basic materials for a healthy life and by reducing their freedom of choice and action. Economic development that does not consider effects on these ecosystem services may decrease the quality of life of these vulnerable populations, even if other segments of society benefit. Biodiversity change is therefore inextricably linked to poverty, the largest threat to the future of humanity identified by the United Nations. This is a sobering conclusion for those who argue that biodiversity is simply an intellectual preoccupation of those whose basic needs and aspirations are fulfilled (Diaz, 2006).

The most dramatic changes in ecosystem services are likely to come from altered functional compositions of communities and from the loss, within the same trophic level, of locally abundant species rather than from the loss of already rare species. Direct effects of drivers of biodiversity loss (eutrophication, burning, soil erosion and flooding, etc.) on ecosystem processes and services are often more dramatic than those mediated by biodiversity change.

Biodiversity contributes to make human life both possible and worth living. Human beings are the major source for degradation of biodiversity. Biodiversity is under significant threat from the effects of human-induced climate. Its loss is threatening the fulfillment of basic needs and aspiration of humanity as a whole. If we carry on losing biodiversity, future generations face hunger, thirst, disease and disaster. It directly and indirectly contributes many constituents of human, including security, basic material for a good life, health, good social relations, and freedom of choice and action (Shende and Patil, 2013).

Conclusion:

Scientific research is needed to improve conservation on the basis of scientific methods, in order to discuss the progress, problems and priorities to achieve sustainable use in the region. Scientific research improves our understanding of the magnitude of biodiversity, land use, and contributes to mitigating land use impacts. Incorporating research results into an action plan for biodiversity conservation is an important part of the adaptive management process.

Most of the concrete actions to slow down biodiversity loss fall under the domain of policy making by governments and the civil society. However, the scientific community still needs to fill crucial knowledge gaps.

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