

# **Sri Lanka's Environmental Challenges**

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## **Introduction**

In comparison with other South Asian countries, Sri Lanka probably makes a greater effort to conserve its environment. Nevertheless, limited commitment and dedication from both public and state have created serious environmental threats in recent years. This article raises a series of questions concerning current challenges for environmental conservation, such as deforestation, freshwater pollution, air pollution, noise pollution, soil erosion, wildlife poaching, coastal degradation, and mangrove reduction in Sri Lanka.

Environmental conservation is a broad theme which is primarily focused on preservation and improvement of the environment. In addition, it includes activism and lobbying in order to protect natural environmental and ecosystems. Today globally a large number of international institutions are working to conserve the environment more than ever due to the threats which human have created on the natural environment.

Sri Lanka is an island which has been identified as one of the top biodiversity areas in the Asian region. Sri Lanka's natural forest resources are amongst the most floristically prosperous in Asia and it has the highest density of species diversity. However, recently anthropogenic threats to its forest and other natural resources (e.g., coastal, rivers, soil, fauna, flora, etc) have increased exponentially.



*Human-induced Mount of Garbage - A Colombo Landmark. Source: [www.lankanewspapers.com](http://www.lankanewspapers.com)*

The lack of effective environmental laws and weak policies together has compounded the situation. We need to take urgent action to protect the nation's environmental resources for the sake of current and future generations.

## Sri Lanka and Environmental Problems

Here we highlight some of the main environmental issues facing the country.

### 1. Deforestation

The present natural forest cover of Sri Lanka is a little less than 25% of land area or about half of what the country had at Independence. If we add planted forest to this figure the area is probably around 30%. Around 1800 Sri Lanka had nearly 80% of its land under natural forest. Due to various human induced practices, mainly the opening of plantations and growth of human settlement Sri Lanka has lost much of its natural forest in the last two hundred years. In fact this trend has accelerated after Independence when the population more than trebled in the space of about 60 years.

Deforestation has been identified as one of the most pressing environmental problems of Sri Lanka. Deforestation has increased soil erosion, landslides, floods, fauna and flora degradation, and damage to human lives and properties.

#### 1) Soil Erosion and Dam Siltation

Soil is one of the primary resources for survival of life on Earth. Under the Sri Lanka Soil Act (1996) there are several institutions responsible to protect soil resources. The institutions are: ministries such as environment, land, Mahaweli development, housing, highways, plantation industries, finance, provincial councils, mines and minerals, forestry and irrigation. The Soil Act clearly proposes measures, activities and research in order to protect soil resources from various damages.

Although soil conservation regulation is well outlined in legislation, the implementation of such regulation is very limited. Due to poor implementation of regulations and lack of public awareness, rich soil in the hill country has been eroded. One obvious repercussion of soil erosion is reservoir sedimentation. For example, the more than 40% of the full capacity of the Polgolla Dam is filled with silt.



*Vegetable cultivation and potential soil erosion on the hilly terrain in Nuwara Eliya. Photo, Ram Alagan, 2005*

#### 2) Garbage and Pollution

Increased garbage and environmental pollution are major issues in Sri Lankan urban environments. Moratuwa, Kandy, Colombo, Matale, Gampaha, Negombo are some of the municipalities which are suffering from increased garbage pollution owing to lack of proper dumping or recycling methods.

As of today, infrastructure for garbage collection are lacking in most municipal areas. This has increased uncontrolled scattering and dumping of garbage everywhere in the country including urban and suburban areas. It has increased problem of stray animals including wild elephants and monkeys in some areas feeding on garbage.

The increased garbage quantity also causes slower water-flow in many drainage channels and provides breeding places for disease vectors such as rats and mosquitoes. Kandy Meda-Ela is one of best examples for this problem. Open dumping sites (e.g., Gohagoda in Kandy) cause pollution of ground and surface-water sources. Open burning of waste without any government regulation is widespread in the country and cause bad smell and air pollution in neighborhoods. It contributes to atmospheric pollution and may cause serious health problems.



Pollution in Kandy Meda-Ela, Photo, Ram Alagan, 2004

### 3) Wildlife Poaching

Sri Lanka is an island and cannot bear to lose its wildlife resources because there are no adjoining land masses which could support wildlife migration like large continents (e.g., Africa, South America, North America or India). Thus it is our responsibility to protect wildlife.



According to Andrew Kittle and Anjali Watson (wilderness and wildlife, conservation trust Sri Lanka: <http://www.wwct.org/index.php>), poaching wildlife has increased during the last five years. Specifically, leopard and monkeys population in Sri Lanka have become increasingly threatened. Wild boar, elephants, wild buffalo, deer are a few other wild species that face severe threat due to increased human activities. Photo: <http://www.wwct.org/index.php>.

Since human settlements have expanded and forests have been cleared, invariably it is leading to conflicts not only with elephants but with other wild animals as well. Kumudini Hettiarachchi (2009) says that as soon as there is a human-elephant conflict in some area, the traditional answer has been to “translocate” the elephants, evacuate them from their habitat and place them in a new environment with the expectation that it would settle down there and not cause conflict. It is very unfortunate that experts and policy makers don’t consider or research the root of the problem before such action is taken. In particular a buy in through adequate consultation from the local communities that are affected is essential. For example, the Environment and Natural Resource Minister Champika Ranawaka is planning to relocate elephants from Udawalawe National Park to Ritigala Nature Reserve due to lack of space in Udawalawe. This proposal has created serious tensions between the local people of Ritigala and the ministry.

### 4) Coastal Degradation

Sri Lanka has 1,585 kilometers of beautiful coastal zone. During the last two decades increased human induced activities have caused severe threats to the coastal regions. Unsustainable coastal resource utilization such as coral mining, sand mining, cutting mangroves etc has increased around the island. Also lack of planning and management of resources have intensified pollution and erosion. The worst affected is the southwest coastal zone.

## 5) Mismanagement of Land use Changes due to Tsunami Resettlement

The 2004 tsunami resulted in resettlement of impacted communities. Forest lands, mangroves, sand dunes, and wetlands were altered or changed in order to support new resettlements by the government, INGOs, and NGOs. The new developments were not thoughtfully considered for sustainability. Now the new settlers are involved in encroaching adjoining natural lands, lagoon areas, and other natural resources to expend their livelihoods.

## 6) Freshwater Pollution

Although Sri Lanka has large endowment of water resources, drinking water sources are being diminished due to pollution.

The Central Environmental Authority (CEA) is the top environmental statutory body which is in-charge of environmental protection and management in Sri Lanka. CEA was set up in 1981 subsequent to the enactment of the National Environmental Act No.47 in 1980. At its commencement, the Authority functioned mainly as a coordinating and policy making body without regulatory powers to control industrial pollution and other environmental degradations. There are number of industries (e.g., textile, chemical, gem mining, rubber, tea, timber, coconut, fertilizer etc), which create large amount of environmental contaminants that pollute freshwater bodies. Unfortunately there is no effective check on such activities.



Freshwater Pollution in Passara, Budulla due to Gem Mining. Photo, Ram Alagan, 2005



Gem Mining in Bogawantalawa. Photo, Ram Alagan, 2006

## 7) Urban and Industrial Wastes

Increased urban and industrial waste is a serious environmental problem in Sri Lanka. Almost every city in the country faces industrial waste and lacks proper dumping or recycling solutions. Colombo is the most affected urban area which faces a serious threat with respect to the disposal of around 1500 tons of solid waste material per day (**Perera, 2003**). Perera (2003) states that roughly 80-85% of municipal domestic solid waste produced in Sri Lanka consists of organic waste, including food items and garden-related waste. The balance, 15%-20% consists of paper, glass, plastics, metals and other inorganic material. One of the recent adverse consequences of the lack of proper urban solid waste management is the increased risk of Dengue fever in the country.



Illegal garbage dumping at Akkaraipattu Lagoon  
Photo: Ram Alagan 2007



Illegal garbage dumping at Potuvil Lagoon  
Photo: Ram Alagan 2007

## 8) Destruction of Mangroves

Sri Lanka is gifted with natural resources. Many estuaries and lagoons are fringed with vastly diverse mangrove forests with high biodiversity. Although the total mangrove cover is very small – around 0.1 to 0.2 percent of the total land area (Karunathilake, 2003) - it plays a major role in preventing coastal erosion and supporting nesting and reproduction for fish and birds. According to Karunathilake (2003) about 25 different mangroves have been identified in Sri Lanka. Large mangroves can be found in lagoons such as Kalpitiya, Batticaloa, Madu Ganga, Trincomalee, Jaffna, Potuvil, Panama, and Periyakalappu. Mangroves also help people sustain their livelihoods in fishing, timber, and various other socio-economic activities.

In recent years mangrove resources have been drastically damaged or reduced due to various illegal activities. The increased human activities such as illegal timbering, clearing for settlements and business, dumping municipal and urban waste, land-filling for housing development, cutting for firewood, and clearing for security reasons in the northern and eastern districts have caused serious pressure to the mangroves environment. This has intensified flooding and erosion in the lagoon and coastal areas.



Mangrove in Madu Ganga Lagoon, Balapitiya  
Photo, Ram Alagan 2006



Mangrove in Madu Ganga Lagoon, Balapitiya  
Photo, Ram Alagan 2006

## **9) Air Pollution**

Although Sri Lanka has an impressive portfolio of environmental legislation and a set of standards for the quality of air, poor implementation of the law results in poor air quality in urban areas. During peak traffic hours (between 6 AM to 8.30 AM and 4PM to 6PM), urban areas such as Colombo, Kandy, Gampaha, Negombo, Kegalle, Kurunegala, Moratuwa, Galle, Kalutara, and Matale face severe air pollution.

Carbon monoxide (CO) - a colorless and toxic air pollutant-is produced in the incomplete combustion of carbon-containing fuels, such as gasoline, natural gas, oil, coal, and wood. The largest anthropogenic source of CO in Sri Lanka is vehicle emissions. Breathing the high concentrations of CO typical of a polluted environment leads health effects that include headaches and increased risk of chest pain for persons with heart disease. It is obvious that vulnerable groups such as children and pregnant mothers suffer a great deal from unclean air.

## **10) Lack of Regulation and Commitments**

Although Sri Lanka has a good record in environmental education in the Asian region still lacks the political will and commitment to protect its environment. The war was a distraction that also contributed to the neglect of the environment. Now the war is ended and it is time for the government and public to rethink and act progressively to protect the environment for future generation.

## Recommendations

The following are few recommendations for consideration:

1. Improve and develop new methods and techniques to recycle or salvage garbage. Initiate and support research activities on garbage recycling and management programs.
2. Enhance existing soil conservation methods with more robust techniques and with greater public awareness.
3. Enhance existing forest conservation legislation and develop management toward sustainable and participatory methods
4. Enhance Wildlife Department regulations and improve implementations of wildlife conservation initiatives with public support
5. Enhance freshwater resources legislation and strengthen and sustain public participation for water conservation
6. Permit and provide more autonomy to local government to make their own environmental conservation and management regulations based upon local issues with local involvement
7. Enhance the Coast Conservation Department Act to make the Department an exclusive authority on coastal conservation issues and increase public awareness on coastal resources.
8. Implement robust environmental legislation and provide more power to the CEA for environmental conservation
9. Strengthen environmental legislation and initiate a degree program on environmental law.

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