

The Environmental Impacts of Mining and Deforestation Activities

While the world often praises Guyana for its pristine rainforests and low deforestation rates, a less visible reality is unfolding: mining is now the leading driver of forest loss. This silent threat risks undermining the very reputation that gives Guyana its global environmental standing.

As mining expands deeper into the interior, particularly in Regions One (Barima-Waini), Seven (Cuyuni-Mazaruni), Eight (Potaro-Siparuni), and Nine (Upper Takutu-Upper Essequibo), where gold and diamond mining are prevalent, it has become the leading driver of deforestation and environmental degradation in the country, despite national deforestation rates remaining relatively low.

Mining: Economic Backbone with Environmental Costs

Mining remains one of Guyana's most lucrative industries, significantly contributing to the National GDP and providing employment across remote hinterland communities. However, this economic lifeline comes at an environmental cost.

The Environment Protection Agency (EPA), in collaboration with the Guyana Geology and Mines Commission (GGMC), has highlighted that activities such as river dredging, land clearing, and the use of hazardous chemicals, including mercury, are having increasingly visible impacts on biodiversity, water quality, and public health.

Though regulations under the Environmental Protection Act Cap 20:05 and the Mining Act of 1989 and the Mining Regulations of 2005 exist, enforcement remains a challenge, especially in more remote areas.

Environmental Fallout: EPA Monitoring Key Impacts

Officers have been monitoring environmental compliance at mining sites along the Essequibo River. Their recent assessments have identified several major areas of concern:

Soil Degradation

Excessive excavation leads to erosion and loss of fertile topsoil.

Sediment runoff clogs rivers and impairs agricultural viability.

Water Pollution

Discharge of heavy metals and suspended solids threatens aquatic ecosystems.

Mercury and cyanide use in processing has led to contamination of drinking water and fish stocks.

Improper waste disposal contributes to rising health concerns in mining communities.

Biodiversity Loss

Mining disrupts critical habitats and forces wildlife migration.

Mercury bioaccumulation threatens both wildlife and human health through the food chain.

Air Pollution

Dust and open burning of mercury amalgam have been linked to respiratory illnesses.

Prolonged exposure to airborne pollutants poses long-term health risks.

Visual and Aesthetic Damage

Deforestation and unregulated mining operations scar the natural landscape.

Abandoned mining pits and man-made structures affect the eco-tourism potential.

Deforestation: A Growing Threat Beyond Mining

The EPA warns that deforestation, driven largely by mining and logging, carries broader consequences for Guyana's climate and biodiversity. Forest loss is contributing to:

- Soil erosion and increased sedimentation in rivers.
- Loss of carbon sinks, increasing carbon dioxide emissions.
- Disruption of rainfall patterns and risk of desertification in heavily mined areas.
- Threats to Indigenous lifestyles and forest-related livelihoods.

These changes pose significant threats to Indigenous communities and others whose livelihoods depend on healthy, intact forests.

Communities Bear the Social and Cultural Burden

Beyond environmental degradation, mining activities are taking a significant social and cultural toll, particularly on Indigenous and forest-dependent communities. Occupational hazards at mining sites remain high, while Amerindian villages face displacement, cultural disruption, and rising health risks.

Diseases such as malaria and dengue have also increased in mining regions, and land conflicts involving agriculture, forestry, and eco-tourism are becoming more frequent. While mining has brought economic benefits and improved infrastructure to some areas, the EPA emphasizes that sustainable practices are essential to prevent long-term harm to both communities and ecosystems.

Policy and Restoration Efforts Underway

To combat these environmental threats, the government, through the EPA and GGMC, has launched several initiatives:

- Land Reclamation Projects: A 23-hectare site at Dakoura is undergoing restoration, with native species such as Tauroniro and Bloodwood being replanted to revive the ecosystem.
- Reforestation Target: GGMC is leading an ambitious project to reforest 200,000 hectares impacted by mining, agriculture, and infrastructure development.
- Mineral Mapping Investment: A GY\$400 million initiative, funded in the 2024 national budget, will provide more accurate geological data to reduce unnecessary land clearing.

The EPA continues to advocate for responsible mining practices, urging miners to adopt environmentally sound techniques and comply with existing regulations. While economic development remains a national priority, the environment is not an infinite resource. What we do today will determine the sustainability of our future.

As Guyana moves forward with balancing development and environmental stewardship, the EPA remains a key player in shaping a greener, more resilient future.