

WESTERN GHATS AND ENVIRONMENTAL SUSTAINABILITY: A STUDY

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Abstract

Western ghats known as “sahyadri” is a mountain range in India that runs in the west coast of the country. They are UNESCO World Heritage Site. They are known for biodiversity, geological features and cultural heritage. They run through the states of Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu. The western ghats contain biodiversity hotspots, tropical rain forests, grass lands etc.,. The western ghats are home for rivers like Gothavari, Krishna and Kaveri. These ghats are important for regulating Indian monsoon as well as sequestering carbon dioxide from atmosphere. Again, they are home for many endemic species (Both flora and fauna). Today western ghats face lots of threats. They are threatened by poaching, infrastructure development and loss of living space for wildlife. Protection of western ghats leads to sustainable growth. We have to take care of these ghats to avoid climate change, hazards and loss of hotspots of biodiversity. These ghats are protected by a number of laws, committees and programs. The goal is to protect region’s environment leading to sustainable growth. Natural disintegration of western ghats forms strategic minerals like ilmenite, monazite, zircon. They should be mined for the benefit of the nation without causing damage to environment.

Keywords: Western ghats, Biodiversity, Hotspots, Sustainable growth, Strategic minerals.

Introduction

Western Ghats form a continuous chain of mountains. The Western Ghats extend from the Satpura Range, south of the Tapi River in the north and runs approximately 1600 km to the southern tip of the peninsula, where it ends at the Marunthuvazh Malai at Swamithope in Kanyakumari district. These mountains cover an area of around 140,000 km²

Older than the great Himalayan Mountain chain, the Western Ghats of India are a geomorphic feature of immense global importance. The Western Ghats in Tamil Nadu include the Nilgiris, Anaimalai Hills, Palani Hills and Cardamom Hills. The Western Ghats are very important because of its Biodiversity. Western Ghats are playing a great role in controlling climate change and regulating monsoons. These mountain range contains valuable natural resources. Great biodiversity (both flora and fauna) is one of the specialties of Western Ghats. Today Western Ghats face lots of threats. They are threatened by poaching, infrastructure

development and loss of living space for wildlife. Protection of Western Ghats leads to protection of Environment and Earth leading to sustainable growth. This paper tries to bring to the notice the importance of the relation between Western Ghats and Environmental Sustainability.

Importance and Benefits of Western Ghats:

The Western Ghats also known as “Sahyadri” meaning benevolent mountains. They run through the states of Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu. The Western Ghats are home for rivers like Godavari, Krishna and Kaveri. They are UNESCO World Heritage Site.

The mountain chain of the Western Ghats represents geomorphic features of immense importance with unique biophysical and ecological process. The site’s forest ecosystems influence the Indian monsoon weather pattern. Moderating the tropical climate of the region, the site presents one of the best examples of the monsoon system on the planet. It also has an exceptionally high level of biological diversity, and is recognized as world’s “hottest hotspots” of biodiversity. The ever-green forests of Western Ghats are home for at least 325 globally threatened flora and fauna.

The Western Ghats are internationally recognized as a region of immense global importance for the conservation of biological diversity, besides containing areas of high geological, cultural and aesthetic values.

The outstanding Universal Value of Western Ghats is manifested in the region’s unique and fascinating influence on large-scale biophysical and ecological processes over the entire Indian peninsula. The mountains of the Western Ghats and their characteristic montane forest ecosystems influence the Indian monsoon weather patterns that mediate the warm tropical climate of the region, presenting one of the best examples of the tropical monsoon system on the planet.

Endangered species such as the lion-tailed Macaque, Nilgiri Tahr and Nilgiri Langur are unique to this area. A number of rare flowering and medicinal plants are in Western Ghats. Karvi flower turns the hillsides purple every seven years. Neelakurinji plant famous for its blue colour blooms every 12 years. Natural beauty of Western Ghats includes misty peaks, waterfalls, rivers and forests. The Western Ghats include National parks, Wildlife sanctuaries and reserve forests.

Western Ghats are rich in iron, manganese and bauxite ores. These ghats are an important source of timber. The Western Ghats host several plantation crops.



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Western Ghats - Map



Picture of Western Ghats

Threats and Protection:

These Ghats are protected by number of laws, committees and programs. There are number of Acts like Forest Conservation Act, Wildlife Protection Act etc. Govt. is trying it's best to protect this valuable UNESCO Heritage site.

Still, Western Ghats are facing number threats. We have to protect this World Heritage Site from threats and dangers. In spite of the fact that strict rules are therefor the protection of these ghats, there are a number of threats which these ghats face.

Natural calamities like, heavy storms, rains, forest fire, cause a lot of havoc to these mountain ranges. Again man-made activities like, encroaching the forest areas, poaching, unauthorized timber extraction also lead to the destruction of these ghats. In the name of development, these regions are attacked by human beings for their benefits

Discussion and Findings:

Western Ghats is an important hot-spot of biodiversity. Western Ghats are rich in biodiversity, both flora and fauna. Western Ghats in India is home for many medicinal plants used in

Ayurveda. Recently forest fire was observed in the northern Western Ghats during the last week of March 2025 causing havoc to both plants and animals. Apart from biodiversity Western Ghats are sources of valuable minerals used in connection with the production of GreenEnergy. Western Ghats play an important role in providing proper monsoons. Deforestation and destruction of Western Ghats can increase global warming leading to climate change. Natural disintegration of Western Ghats results in the production of highly valuable minerals like ilmenite, rutile, zircon, monazite, garnet and sillimanite. These minerals are brought to sea by streams and rivers. Owing to the peculiar disposition of the sand belts under sea water currents, these minerals are getting deposited on the shores as beach washings. It is clear that these beach washings are valuable since they contain minerals and metals which can be used in the field of Green Energy production. Hence, we have to protect Western Ghats from all dangers and threats to have sustainable environment throughout the region. Sustainable Development is possible only if we give much attention to the protection of God's Given Gift called Western Ghats.

Conclusion:

Environmental Sustainability depends on the protection of Western Ghats. The Western Ghats are important for regulating Indian monsoon as well as sequestering carbon dioxide from atmosphere. Deforestation releases more carbon dioxide into the atmosphere leading to Global Warming and finally resulting in Climate Change. Unwanted infrastructure in Western Ghats results in the loss of biodiversity and valuable natural resources. Protection of Western Ghats is a must for Sustainable Development. Natural disintegration of Western Ghats forms strategic minerals like ilmenite, rutile, monazite, zircon, sillimanite, garnet etc. Some of these minerals can be used in the field of Green Energy production. These valuable minerals may be mined in a sustainable manner for the benefit of the nation without causing damage to the environment. Protection of the Western Ghats ensures the sustainability of environment of that region.

Reference: Science Direct, Picture and Map from Google
