



Gilgit-Baltistan Environmental Protection Agency (GB-EPA)

# Draft

# Gilgit-Baltistan Environment Policy (2024)

United Nations Development Program

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## PREAMBLE

Gilgit-Baltistan, with its towering peaks and lush valleys, is a region of unique ecological complexity. This area, characterized by diverse physical, biological, and cultural dimensions, is a dynamic environment where land, water, and air converge to support a rich biodiversity. The well-being of the communities in Gilgit-Baltistan is closely tied to preserving and enhancing the environment. Sustainable natural resource management is essential to meet present needs and secure the future.

This policy builds on the Gilgit-Baltistan Environmental Protection Act, the Gilgit-Baltistan Climate Change Strategy and Action Plan, the Gilgit-Baltistan Disaster Management Act, the National Environmental Policy, and other relevant legislation. It aligns with international best practices to ensure all development projects comply with environmental laws. Recognizing the reliance of local communities on natural resources, the policy introduces strategies to conserve these resources or provide sustainable alternatives, enhancing resilience.

The Gilgit-Baltistan Environment Policy addresses regional environmental challenges through targeted measures. These include combating Glacial Lake Outburst Floods (GLOFs), water pollution, unprecedented rainfall causing floods and landslides, loss of biodiversity, unsustainable construction, climate change, air pollution, solid waste, and the degradation of natural landscapes. The policy focuses on reducing pollution, improving waste management, countering deforestation, and addressing the impacts of natural and human-induced calamities, including climate change.

This policy aims to "provide for the protection, conservation, rehabilitation, and improvement of the environment, prevention and control of pollution, and promotion of sustainable development," as outlined in the GBPEPA Act 2014.

The Gilgit-Baltistan Environment Policy was developed with the technical and financial support of the United Nations Development Program (UNDP)

# 1. AN OVERVIEW OF ENVIRONMENTAL CHALLENGES:

Gilgit-Baltistan faces significant environmental challenges that threaten its ecological balance and the well-being of its people. The region, with its unique geography and rich biodiversity, is impacted by droughts affecting water and agriculture, floods from heavy rains damaging infrastructure, seismic activities causing landslides, and Glacial Lake Outburst Floods (GLOFs) that threaten communities and ecosystems. Unsustainable practices like deforestation and overgrazing lead to loss of forests and soil erosion, while pollution and urbanization stress natural resources. Climate change exacerbates these issues by increasing disasters like GLOFs and droughts, disrupting socio-economic stability. Rapid urbanization, unregulated mining, and poorly managed tourism degrade ecosystems, reduce agricultural land, and threaten food and water security. Weak environmental governance and fragmented policies further complicate resource management, leading to public health issues. Addressing these challenges demands integrated strategies that include community involvement, technological monitoring, and strong policies for sustainable resource use and conservation.

## 1.1. Actions taken for Environmental Protection

In response to increasing environmental awareness, various regulatory and promotional measures have been implemented at the national and provincial levels to advance environmental protection and sustainable development in Gilgit-Baltistan. Key national initiatives include the Pakistan Environmental Protection Act (PEPA-97), which provides a legal framework for enforcing environmental protection, and the National Environment Policy (2005), which guides alignment with sustainable environmental management goals. The updated National Climate Change Policy (revised 2021) adopts strategies for climate adaptation and mitigation, while the Clean Development Mechanism Operational Strategy (2005) promotes sustainable development through cleaner initiatives. At the provincial level, the Gilgit-Baltistan Environmental Protection Act (2014) establishes a regional legal framework, and the Gilgit-Baltistan Climate Change Policy and Action Plan (revised 2022) aligns with global and national objectives to enhance resilience and sustainability. Additionally, the Gilgit-Baltistan Climate Change Adaptation Action Plan focuses on localized strategies to address environmental risks effectively

## 2. GOAL, OBJECTIVES AND GUIDING PRINCIPLES

### a. Goal

- ✚ Conserve, protect, restore, and enhance Gilgit-Baltistan's environment to improve the quality of life for current and future generations through sustainable management of natural resources.

### b. Objectives

- ✚ Integrate environmental considerations into policy and planning.
- ✚ Enhance the efficiency of resource use.
- ✚ Foster collaboration and support research and innovation.
- ✚ Fulfill environmental commitments and strengthen legal frameworks.
- ✚ Ensure equitable access to environmental resources and promote sustainable resource utilization.

### c. Guiding Principles

- ✚ Ensure social equity, economic viability, and environmental soundness.
- ✚ Recognize environmental rights and adopt ecosystem-based approaches.
- ✚ Encourage public participation and decentralize management.
- ✚ Apply the precautionary principle and polluter pays principle.
- ✚ Ensure good governance and resource-efficient development.

### d. Implementation Timeline

- ✚ Policy active from 2024 to 2034, with reviews every five years to maintain relevance and effectiveness.

## 3. SECTORAL GUIDELINES

### 3.1. Forest Ecosystems in Gilgit-Baltistan

Conserving and sustainably managing forest ecosystems in Gilgit-Baltistan is critical for poverty alleviation and development. Forests support soil and water conservation, biodiversity, and climate moderation, providing essential resources and enriching community life. However, forests face pressure from agriculture, settlement, infrastructure development, and extraction activities.

The National Forest Policy 2015 and the Gilgit-Baltistan Forest Act 2019 provide a framework for forest conservation, but ongoing policy reviews and additional measures are necessary to strengthen forest conservation efforts.

#### **Policy Statements**

The Government of Gilgit-Baltistan is committed to the following actions:

1. Increase tree cover by afforesting degraded and wasteland areas using native species.
2. Restore degraded forest ecosystems and water catchment areas.
3. Support and enforce forest policies and laws for sustainable management.
4. Establish national standards for sustainable forest management.
5. Recognize and protect traditional rights of forest-dependent communities under customary laws and the GB Forest Act 2009.
6. Promote cultivation and economic use of minor forest products like medicinal plants outside forests.
7. Advocate for planting species that support specific ecosystems.
8. Develop methods to assess and restore environmental values of forests affected by land use changes

### **3.2. Wildlife**

Gilgit-Baltistan's wildlife, from insects to snow leopards, is crucial to its ecosystems and cultural heritage. Conservation efforts must focus on protecting entire ecosystems, creating Protected Areas, addressing human-wildlife conflicts, and enhancing habitat quality and connectivity. Integrating conservation with community development, utilizing scientific research, traditional knowledge, and community engagement, is essential. The Gilgit-Baltistan Environment Policy introduces cattle insurance to mitigate wildlife-related losses and promote sustainable coexistence through ecotourism and resource use, reflecting the region's ecological vitality and supporting human well-being.

#### **Policy Statements**

The Government of Gilgit-Baltistan is committed to the following actions:

1. Safeguard ecosystems, focusing on wildlife migration routes, breeding grounds, and habitats, especially for endangered species.
2. Launch programs for endangered species and their habitats, expanding the Protected Area network and establishing new Conservation and Community Reserves.
3. Implement schemes to reduce conflicts with wildlife outside Protected Areas.
4. Empower local communities in conservation efforts, promoting eco-tourism and sustainable practices.
5. Initiate eco-development programs to boost local economies near Protected Areas.
6. Invest in captive breeding and reintroduction of endangered species.
7. Promote wildlife research and monitoring to guide conservation strategies.
8. Educate communities on wildlife-related insurance claims in collaboration with agencies and NGOs.
9. Enforce regulations to prevent disruptions to wildlife ecosystems near Protected Areas

### 3.3. Biodiversity and Traditional Knowledge

Gilgit-Baltistan's rich natural heritage and biodiversity hotspots are crucial for ecotourism and genetic diversity. To benefit the local population, it is essential to conserve genetic resources and grant Intellectual Property Rights to local communities for their ethno-biological knowledge. A comprehensive protection plan should conserve national parks, prioritize habitat conservation, manage human activities, enforce conservation laws, promote sustainable tourism, and involve local communities. The plan must address the ecological needs of different elevations and include research and monitoring to manage protected areas effectively. The Gilgit-Baltistan Environment Policy aims to address biodiversity loss due to land degradation, climate change, pollution, unsustainable practices, and invasive species, integrating local insights to ensure sustainable development and enhance community livelihood.

#### Policy Statements:

The Government of Gilgit-Baltistan is committed to the following actions:

1. Enhance in-situ and ex-situ conservation through gene banks and protect rare, endangered, and threatened species.
2. Enforce the Patents Act, 1970, to ensure proper permissions for biological material use.
3. Develop mechanisms for equitable sharing of benefits from genetic resources with local communities.
4. Respect traditional knowledge and actively involve local communities and self-government institutions in biodiversity conservation.
5. Regulate sustainable use and bioprospecting of biological resources, considering biodiversity and heritage site impacts.
6. Develop and implement strategies to manage and mitigate the impact of alien and invasive species.

### 3.4. Mountain Ecosystems

The mountain ecosystems of Gilgit-Baltistan are essential for forest cover, river systems, genetic diversity, and sustainable tourism. They support unique flora and fauna and are vital for local climate regulation and community livelihoods. However, these ecosystems are threatened by deforestation, pollution, habitat degradation, illegal logging, unplanned urbanization, and climate change. Weak policies, inadequate enforcement, and insufficient community engagement hinder conservation efforts. Transboundary pollution further degrades air and water quality, soil health, and biodiversity.

To address these issues, it is crucial to implement strong environmental policies that prioritize sustainable development and conservation. Enhancing community involvement and international cooperation is vital to ensuring the long-term health of Gilgit-Baltistan's mountain ecosystems.



### **Policy Statements**

The Government of Gilgit-Baltistan will:

1. Implement effective land use planning and watershed management tailored to mountain ecosystems.
2. Enhance understanding of mountain ecology to support informed decisions and policy development.
3. Promote alternative livelihoods that encourage community participation in conservation efforts.
4. Apply best practices in construction to minimize environmental impact in mountain areas.
5. Support organic farming of traditional crops to enable farmers to achieve premium prices
6. Foster sustainable tourism through best practices and partnerships to enhance local livelihoods and regulate tourist inflows within ecological limits
7. Develop strategies to protect unique mountain landscapes with "incomparable values."
8. Enact strict regulations on pollutants to address soil contamination and protect biodiversity.
9. Coordinate with the federal government to control air and water pollution from transboundary sources.

### **3.5. Soil and Land Degradation in Gilgit-Baltistan**

The land in Gilgit-Baltistan is facing severe degradation due to soil erosion, waterlogging, pollution, and a decrease in organic matter, driven by the loss of forest cover, unsustainable grazing, excessive irrigation, inappropriate use of agricultural chemicals, diversion of animal waste, and improper disposal of industrial and domestic waste. Policy-related issues, such as subsidies for water, power, fertilizers, and pesticides, further exacerbate the problem. From 2015 to 2024, 43% of Gilgit-Baltistan's land was threatened by desertification or degradation, a 2% increase since 2010-2011. Addressing these challenges requires revising agricultural practices, improving land management policies, and promoting sustainable land use strategies to prevent further degradation and restore the region's land health for future generations

### **Policy Statements**

The Government of Gilgit-Baltistan will commit to;

1. Promote sustainable land use by supporting research, training, and access to finance, including initiatives like the Gilgit-Baltistan Economic Transformation Initiative for organic agriculture and food security.
2. Reclaim degraded forestland through collaboration with landowners, communities, and funding agencies.
3. Implement watershed management to increase green cover and combat desertification in areas such as Baltistan, Diامر, Yaseen Valley, and Upper Hunza.
4. Develop alternatives to shifting cultivation to protect ecologically vulnerable areas while preserving local cultural and social structures.
5. Support agro-forestry, eco-farming, and organic farming to maintain soil fertility through sustainable cropping patterns.
6. Protect wetlands, riverbanks, and slopes from unsustainable practices to prevent soil erosion and environmental degradation.

### 3.6. Desert Ecosystem of Baltistan Region

The Baltistan region in Gilgit-Baltistan, comprising over 60% barren land and significant cold desert areas, is rich in faunal biodiversity and serves as a habitat for wildlife and migratory birds. These ecosystems face increased stress and degradation, necessitating innovative, integrated conservation measures to protect and sustainably manage the delicate desert ecosystems of Baltistan.

#### Policy Statements

The Government of Gilgit-Baltistan extend support to;

1. Combine traditional knowledge with scientific methods to implement effective water and moisture conservation practices.
2. Promote green cover expansion using local species suited to Baltistan's desert ecosystem.
3. Review current agronomic practices and promote crops and methods adapted to arid conditions.
4. Empower local communities with access to finance and technology to support ecotourism services.
5. Forge partnerships for afforestation and enhancing wildlife habitats to boost conservation and ecotourism opportunities.

### 3.7. Water Resources, Quality and Distribution in Gilgit-Baltistan

Gilgit-Baltistan, with over 7,000 glaciers, is vital for the Indus Basin irrigation system, providing water for agriculture, drinking, and hydroelectric power. Key water sources include glacial melt, springs, rivers, and groundwater, but 78% of these are unsafe due to microbial contamination, turbidity, and high iron levels. Issues like mining, large-scale infrastructure projects, and agricultural practices exacerbate water pollution. Sustainable management, community involvement, and international cooperation are essential for preserving water resources and supporting livelihoods. Protecting rivers, groundwater, and wetlands is crucial for ecological and economic health, necessitating integrated water resource management plans and pollution control policies.

#### Policy Statements

The Government of Gilgit-Baltistan will commit to:

1. Implement comprehensive river basin management plans for sustainable freshwater use and conservation.
2. Protect freshwater resources from pollution and unauthorized diversions.
3. Develop integrated management strategies for freshwater and wetlands.
4. Conduct water assessments and allocate budgets according to sector demands.
5. Monitor and regulate freshwater demand and supply.
6. Enact mandatory water harvesting through small dams and traditional methods.
7. Regulate maximum freshwater usage by industries and individuals.
8. Promote efficient water use and groundwater recharge practices.

### 3.8. Agriculture

Agriculture in Gilgit-Baltistan, where only 2% of its 72,971 km<sup>2</sup> area is cultivable, heavily depends on both seasonal and long-term climate variations. Over 80% of the population engages in subsistence farming, producing cereals, fruits, vegetables, and livestock fodder. Key staples like wheat, maize, and barley dominate, with 70% of land dedicated to wheat and barley in winter, followed by maize. Fruit cultivation, including cherries, apples, apricots, and walnuts, is primarily for domestic use, though surpluses are often wasted. Vegetables like tomatoes, beans, and potatoes are also grown, and cash crops like potatoes and peas are increasingly commercialized for export. Government and NGO support has boosted fresh and dried fruit exports. Due to the region's harsh terrain and fragile ecosystem, intensive farming with high inputs is unsuitable. Instead, eco-friendly, modern farming practices are crucial to mitigating climate change impacts.

#### Policy Statements

The Government of Gilgit-Baltistan will commit to:

1. Promote climate-resilient agricultural practices for sustainable food production.
2. Optimize the use of the 2% cultivable land with conservation agriculture and sustainable land management.
3. Provide technical and financial support to subsistence farmers to enhance productivity and food security.
4. Encourage crop diversification to improve economic resilience and reduce reliance on staple crops.
5. Enhance infrastructure for commercialization and export of high-value crops to boost the local economy.
6. Promote eco-friendly farming methods to protect the fragile mountainous ecosystem.
7. Implement strategies to reduce post-harvest losses and establish drying and storage facilities.
8. Conduct regular farmer training on sustainable farming and climate adaptation techniques.
9. Invest in agricultural research and development for innovative practices suited to local conditions.
10. Foster partnerships with NGOs and the private sector to support sustainable agricultural development

### 3.9. Livestock

Livestock is a crucial component of the farming system in Gilgit-Baltistan, significantly contributing to food security and accounting for nearly 40% of household farm income. Livestock provides fertilizer for traditional farming, and animals like bulls and yaks are essential for traction in rural areas. The region's 1.6 million livestock, including cows, goats, sheep, donkeys, buffaloes, horses, mules, and yaks, along with half a million poultry, are vital to the rural economy. Transhumant practices at higher altitudes involve seasonal livestock movement between lower altitude primary homes in winter and mountain grazing lands in summer.

This cycle leads to nutritional fluctuations, causing low milk, meat, and wool production, and increased susceptibility to diseases due to inadequate veterinary services. Climate change

impacts, such as rising temperatures, shifting snowlines, diminishing vegetation, and frequent natural disasters, are more pronounced at higher altitudes, affecting alpine pastures and the rural livelihood.

#### **Policy Statements**

The Government of Gilgit-Baltistan will commit to:

1. Enhance veterinary services to improve livestock health and productivity.
2. Support sustainable transhumant practices to maintain grazing lands and livestock nutrition.
3. Mitigate climate change impacts on livestock by protecting alpine pastures and improving resilience.
4. Promote livestock diversification and improve breeds to boost milk, meat, and wool production.
5. Develop infrastructure and resources for better livestock management and disease prevention.

### **3.10. Tourism**

Tourism is a vital economic driver in Gilgit-Baltistan, known for its stunning landscapes like the Himalayas, Karakoram, Hunza Valley, and Deosai National Park. However, unplanned tourism has led to environmental degradation, waste management issues, and resource strain. To preserve the region's natural beauty and support local livelihoods, sustainable tourism development is essential. Climate change adds further threats, requiring adaptation and mitigation strategies. Innovations in tourism can enhance resilience and profitability, but unregulated tourism harms the local ecology and culture. Effective policies and enforcement, implemented by local government bodies, are crucial. Recommendations include control systems, improved climate change education, flexible and participatory approaches, and integrating sustainable tourism into broader policies to ensure the sector's sustainability.

#### **Policy Statements**

Government of Gilgit-Baltistan will commit to;

1. Provide incentives for eco-tourism initiatives focused on environmental conservation.
2. Enforce environmental regulations to ensure sustainable tourism practices.
3. Raise environmental awareness among tourism stakeholders.
4. Promote and market "green" tourism products with minimal environmental impact.
5. Facilitate investment in ecotourism and cultural tourism ventures.

### **3.11. Infrastructure Resilience**

Infrastructure development in Gilgit-Baltistan encompasses buildings, roads, railways, ICT networks, pipelines, irrigation systems, airports, and electricity transmission lines, each with significant environmental implications. These projects can harm local ecosystems and disrupt

communities if not properly managed. Integrating environmental considerations into planning and execution is crucial for sustainable development. Environmental impact assessments and mitigation strategies are essential to preserve the region's ecological integrity and cultural heritage.

The region's infrastructure is vulnerable to climate change-related disasters, making resilience enhancement vital. With a population of 1.5 million in small villages and slow urbanization, infrastructure is particularly susceptible to extreme weather. Climate-resilient construction, updated building codes, hazard mapping, and zoning are necessary to protect infrastructure and minimize natural disaster damage

#### **Policy Statements**

Government of Gilgit-Baltistan will commit to;

1. Integrate environmental considerations into all infrastructure planning and execution.
2. Mandate environmental impact assessments for all infrastructure projects.
3. Enhance infrastructure resilience to climate-related disasters.
4. Amend building codes to incorporate and enforce climate resilience.
5. Conduct hazard mapping and zoning for safe infrastructure development.
6. Promote climate-resilient construction practices among stakeholders.
7. Support communities in building and maintaining resilient infrastructure.

### **3.12. Human Settlement**

The pattern of human settlements in Gilgit-Baltistan is shaped by the availability of natural resources, with the region being predominantly rural and experiencing high population growth. This growth exerts pressure on resources, exacerbated by socioeconomic factors, topography, and climate variability. Sustainable settlements must ensure healthy, productive lives in both rural and urban areas, with access to essential amenities.

Rapid urbanization, driven by population growth and migration, challenges urban centers to provide adequate housing, infrastructure, services, and jobs. Addressing these issues requires comprehensive planning and policy interventions to promote sustainable development and improve the quality of life.

### **Policy Statements**

The Government of Gilgit-Baltistan will commit to;

1. Develop policies and programs to ensure sustainable living conditions in both rural and urban areas.
2. Implement strategies for responsible management of natural resources to support population growth and development.
3. Address urbanization challenges with comprehensive planning to provide adequate housing, infrastructure, and services.
4. Foster rural development initiatives to improve living standards and reduce migration pressures on urban centers.
5. Incorporate climate resilience into settlement planning to mitigate the impacts of climate variability and topographical challenge

### **3.13. Energy Use Efficiency and Conservation**

Energy is critical for socio-economic development in Gilgit-Baltistan (GB), necessitating coordinated efforts to enhance power supply in remote areas to drive development and improve livelihoods. Despite GB's significant hydropower potential of 60,000 Megawatts, the current capacity is only 170 Megawatts in summer and 110 Megawatts in winter, against a demand of 280 Megawatts, a gap likely to widen with growing tourism. The federal energy policy, now inclusive of GB, aims to establish a robust, secure, and efficient energy system, diversifying sources and ensuring a cost-effective, reliable power supply. An autonomous institution is needed to mobilize resources and attract investments for sustainable run-of-the-river projects, integrating GB into the national grid with a regional grid to maximize hydropower utilization. The current institutional framework lacks the capacity for comprehensive policy analysis, strategic energy

### **Policy Statements**

The Government of Gilgit will commit to:

1. Improve power supply in remote areas to drive socio-economic development.
2. Develop infrastructure and policies to utilize GB's 60,000 Megawatt hydropower capacity effectively.
3. Encourage the diversification of energy sources to ensure a cost-effective and reliable power supply.
4. Create an institution to mobilize resources, attract investments, and oversee sustainable energy projects.
5. Develop a regional grid to integrate GB into the national grid, optimizing hydropower utilization.
6. Enhance the institutional framework to support comprehensive policy analysis, strategic planning, resource mobilization, and sustainable energy infrastructure development.
7. Promote green growth through energy independence and sustainable energy practices.

investment planning, resource mobilization, and sustainable infrastructure development, which are essential for energy independence and green growth in GB.

### 3.14. Climate Change

Climate change poses significant challenges for Gilgit-Baltistan, increasing vulnerability through altered air temperature, precipitation patterns, and more frequent extreme weather events, with substantial social, economic, and ecological impacts. The region's dependence on natural resources and limited adaptive capacity exacerbates these vulnerabilities, affecting agriculture, forests, water supplies, health systems, and overall development. Mitigation and adaptation strategies are essential to address these impacts and ensure sustainable development focused on community well-being. Integrated policies are needed to enhance resilience and adaptive capacities while maintaining long-term sustainability.

#### Policy Statements

Government of Gilgit-Baltistan commits to:

1. Implement and update the Climate Change Action Plan for Gilgit-Baltistan.
2. Strengthen provincial institutions for climate resilience and low-carbon development.
3. Develop programs to raise awareness and build capacity for climate adaptation and mitigation.
4. Enhance early warning and response systems for climate risks and disasters.
5. Strengthen research capacities on climate change for informed decision-making.
6. Establish mechanisms to access climate funds and allocate development funds for climate actions.
7. Set up a Provincial Climate Change Centre for coordination, information management, and collaboration to enhance resilience and preserve ecosystems.

### 3.15. Disaster Management in Gilgit-Baltistan

Climate change in Gilgit-Baltistan increases disaster risks, as evidenced by recent Glacial Lake Outburst Flood (GLOF) events, which erode environmental and social resilience and escalate vulnerability.

Climate variability is expected to lead to more frequent and intense disasters, affecting infrastructure, food security, and livelihoods. Projected increases in extreme weather events include more droughts, heavy precipitation and floods, earthquakes, landslides, soil creeps, and avalanches, along with heightened risks to downstream communities from GLOFs. Integrating disaster risk management and climate change adaptation into development planning is essential

to bolster social and economic sustainability in Gilgit-Baltistan. The strategic plan should enhance disaster risk understanding and foster robust risk reduction frameworks,

#### **Policy Statements**

The Government of Gilgit-Baltistan commits to;

1. Incorporate disaster risk management and climate adaptation into development planning.
2. Improve understanding of disaster risks through research and data collection.
3. Continuously enhance disaster preparedness, response, and recovery practices.
4. Reduce ecosystem service depletion to mitigate disaster impacts.
5. Implement better urban land use and territorial organization.
6. Strengthen rural livelihoods and governance.
7. Enhance community awareness and capacity for disaster resilience.

### **3.16. Air Quality**

Air pollution in Gilgit-Baltistan is a primary cause of respiratory diseases such as chronic obstructive pulmonary disease (COPD), lung cancer, and bronchitis. The dual burden of outdoor and indoor air pollution, with many households using biomass fuels like charcoal and firewood, affects both urban and rural populations significantly.

#### **Policy Statements**

The Government of Gilgit-Baltistan will commit to:

1. Strengthen compliance with air quality standards and develop the capacity for enforcement of these standards across Gilgit-Baltistan. This includes monitoring and reducing pollutants to safeguard public health and the environment.
2. Develop and promote infrastructure for efficient non-polluting mass transport systems. Reduce reliance on private vehicle use and cut down on greenhouse gas emissions, contributing to cleaner air and less traffic congestion.
3. Promote the adoption of alternative cooking technologies and stoves that minimize pollution, alongside the construction of well-ventilated houses. This effort is intended to reduce indoor air pollution, a major health hazard, particularly in rural and underserved areas.
4. Develop hydropower resources to reduce the dependency on fuelwood and other non-renewable energy sources, thereby decreasing deforestation rates and air pollution

### **3.17. Water and Sanitation**

Water pollution has become critically severe with the expansion of hospitality infrastructure along the pristine lakes and rivers of Gilgit-Baltistan. Iconic locations such as Attabad Lake in Hunza are under threat as untreated wastewater from nearby hotels leads to significant ecological damage. The Hunza and Skardu rivers, part of the larger Indus river system, are similarly affected by direct sewage discharges, turning these rivers into toxic waterways. Despite considerable reforms and some improvements in water supply systems, many areas still face seasonal water scarcity and rely on contaminated traditional water sources. Enhanced operational efficiency of



sewage treatment facilities and better waste management practices are urgently needed to mitigate these impacts.

#### **. Policy Statements**

The Government of Gilgit-Baltistan commits to;

1. Establish and upgrade sewage treatment facilities to prevent untreated wastewater from entering lakes and rivers.
2. Implement strict regulations for hotels and other hospitality infrastructure to ensure proper wastewater treatment and disposal.
3. Enforce measures to protect key locations of tourism flow from ecological damage caused by pollution.
4. Enhance operational efficiency of water supply systems to reduce reliance on contaminated traditional sources.
5. Engage local communities in water conservation and pollution prevention efforts through education and participation.
6. Develop strategies to address seasonal water scarcity and ensure clean water availability year-round.

### **3.18. Waste Management**

The region faces challenges with waste management due to inefficient production processes, non-durable goods, and unsustainable consumption patterns, leading to high levels of solid waste. Wastewater discharge is a major threat to local water resources, contributing to algal blooms and the depletion of oxygen levels, which destroy aquatic habitats. Special attention is also required for the disposal of electronic, military, and clinical wastes, as well as managing the environmental hazards of oil spills.

#### **Policy Statements**

The Government of Gilgit-Baltistan commits to;

1. Develop an integrated area waste management strategy
2. Promote the use of economic instruments to manage waste.
3. Promote establishment of facilities and incentives for cleaner production, waste recovery, recycling and re-use

### 3.19. Noise

Excessive noise pollution in Gilgit-Baltistan, exacerbated by the influx of tourism and the use of diesel generators amid electricity shortages, significantly impacts human health. High noise levels can cause hearing loss, stress, and other physiological problems, disrupting daily life and diminishing the quality of the environment.

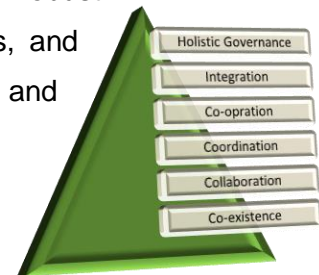
#### Policy Statements

*The Government of Gilgit-Baltistan will commit to:*

1. Regulate noise levels from tourism activities and enforce strict noise control measures.
2. Implement noise reduction standards for diesel generators and promote alternative energy sources.
3. Raise public awareness about the health impacts of noise pollution and encourage community action.
4. Monitor and assess noise pollution levels to develop targeted mitigation strategies.
5. Promote urban planning practices that minimize noise pollution and enhance the quality of life.

## 4. ENVIRONMENTAL GOVERNANCE IN GILGIT-BALTISTAN

Effective environmental governance in Gilgit-Baltistan requires robust governance structures, comprehensive legal and policy instruments, and strong institutional capacities to ensure judicious implementation and enforcement.



### 4.1. Framework for Legal Action

In Gilgit-Baltistan, reliance on criminal sanctions to deter environmentally harmful behavior has proven limited and often ineffective. To address this, a more balanced approach using both civil and criminal legal processes is recommended. Civil law, with its flexibility, allows for tailored sanctions that effectively address unique environmental issues. Enhancing enforcement requires reviewing and amending existing environmental laws to close loopholes and ensure strict

#### Policy Statements

*The Government of Gilgit-Baltistan commits to:*

1. Update the Environment Protection Act to align it with the constitutional provisions and the unique environmental challenges of Gilgit-Baltistan. This revision will facilitate the effective implementation of the region's environmental policy, ensuring that it addresses current issues and incorporates sustainable practices.
2. Introduce a tailored Environment Management and Coordination Act that reflects the specific needs and conditions of Gilgit-Baltistan. This new legislation will be dynamic and adaptable, designed to effectively manage the region's diverse environmental aspects over time.
3. Ensure that all sectoral laws related to environmental management are harmonized with the Environment Management and Coordination Act. This includes a thorough review and adjustment of existing laws to ensure they complement each other and collectively contribute to a coherent and comprehensive environmental management framework.

compliance. Designating clear authority to initiate legal actions is crucial for maintaining effective environmental governance. By refining legal frameworks and procedures, Gilgit-Baltistan can better deter violations and promote compliance, protecting its natural heritage.

## **5. IMPLEMENTATION STRATEGIES AND ACTIONS**

The main responsibility for following up the GB Environment Policy Goal and Objectives and ensuring their realization rests with the Government of GB. The proposed implementation strategies and actions presuppose active participation of stakeholders at all levels. In this regard, a number of strategic actions, given below, will guide the implementation of this Policy

### **5.1. Integration of Environmental Concerns in Policy, Planning and Development Processes**

Integration of environmental considerations in all provincial and relevant sectoral policies, planning and development processes is critical if this Policy is to achieve its goal and objectives. In order to operationalize these, the GB EPA responsible for the environment has to take the leadership role in ensuring that all national, provincial and all sectoral policy planning and development processes mainstream environmental considerations.

#### **Policy Statements**

The Government of Gilgit-Baltistan commits to:

1. Institutionalize cooperative governance and integrated approach to the management of the environment and natural resources by explicitly identifying and integrating environmental considerations in relevant sectoral and cross-sectoral policies, laws, planning and development process
2. Ensure synergies between National and Provincial Development planning process.
3. Institutionalize strategic environmental assessments approaches to all policies, programs and plans
4. Ensure that all significant development projects are subjected to environmental impact assessment and regular environmental audits.

### **5.2. Clarifying Roles and Responsibilities**

Implementation of this Policy involves diverse stakeholders, including Government agencies at local, national and regional levels, private sector, civil society organizations, local communities and the public at large.

A key element is defining the roles and responsibilities of the various groups. Effective environmental conservation in Gilgit-Baltistan requires active involvement from public and private sectors, financial institutions, industry associations, academia, media, youth clubs, community organizations, and development partners. Policy and legislative changes are essential to enable these stakeholders to contribute effectively. Sustainable financing is crucial, with the need to supplement government funds with additional sources from multilateral mechanisms, development partners, and private sector contributions. Clearly defined roles and responsibilities for government agencies, private sector, civil society organizations, local communities, and the public are vital for successful policy implementation.

#### **Policy Statements**

The Government of Gilgit-Baltistan will commit to;

1. Enable diverse stakeholders to contribute to environmental conservation through policy and legislative reforms.
2. Secure additional funding from multilateral mechanisms and private sector to complement government budgets for environmental protection.
3. : Clearly outline the roles of various groups in implementing environmental policies to ensure

### **5.3. Environmental Compliance**

Compliance is critical to achieving sustainable development. Voluntary compliance with environmental requirements reduces costs of enforcement and monitoring. Compliance strategies involve both actions to promote and enforce legal requirements. Enforcement is important in order to create a climate in which the stakeholders will have clear incentives to make use of the opportunities and resources provided. It is however very important that the enforcement and the compliance so required must be timely.

#### **Policy Statements**

The Government of Gilgit-Baltistan commits to:

1. Design and implement a GB Environmental Compliance and Enforcement Program.
2. Enhance public private partnerships in environmental management.
3. Provide economic incentives for businesses that adopt environmental-friendly technologies.
4. Establish Indigenous conflict resolution mechanisms and Public Complaints Committee
5. Strengthen the Public Complaints Committee and devolve its functions to the districts and UCs
6. Establish and strengthen the environmental courts/tribunals

## **6. Policy Implementation Strategies and Action/Instruments**

The Gilgit-Baltistan Environmental Policy will be implemented from 2024 to 2034, with periodic reviews every 5 years. Key strategies include ensuring equitable resource access, promoting economically viable and resource-efficient development, and preserving ecosystem health and

diversity. Implementation will adopt integrated ecosystem management, recognize the economic value of ecosystems, and ensure sustainable resource use. Public participation, decentralization of management, and adherence to the precautionary and polluter pays principles will be prioritized. The state will manage natural resources for public use under good governance principles, integrating environmental considerations into all policies. Standards will be set based on health risks and feasibility, with preventive action and environmental offsetting to address ecosystem damage. Capacity building, research, and alignment with national programs are essential for success.

### 6.1. Capacity Building and Institutional Strengthening

The multifaceted nature of environmental issues in Gilgit-Baltistan requires robust institutional arrangements and capacity building to ensure effective policy implementation. Cooperation and consultation among government agencies and stakeholders are crucial for integrating environmental considerations into all development planning and activities. Existing institutional mechanisms must be recognized and enhanced to foster better coordination and cooperation.

Weak enforcement of environmental compliance is due to inadequate technical capacities, monitoring infrastructure, and trained staff in enforcement institutions. Building a cadre of professionals in environment and natural resource

#### Policy Statements

The Government of Gilgit-Baltistan commits to;

1. Strengthen the capacity of the GB EPA under the Provincial Department responsible for environment to play the oversight role of monitoring the implementation of the GB Environment Policy
2. Develop and implement delegation instruments to provide a framework for cooperative and collaborative management between the lead agencies. Strengthen the capacity of environmental institutions at the provincial and district levels so as to make them more effective in ensuring compliance and enforcement.
3. Strengthen provincial government capacity to assess, negotiate and monitor investments, contracts, leases and concessions used for sustainable resources management
4. Strengthening capacity in the area of environmental economics that includes natural resources accounting, development of incentives and disincentives, indicators for sustainable development and valuation of environmental goods and services

management is essential and should be approached through both short-term training and long-term specialization.

### 6.2. Coordination for the Policy Implementation

To ensure effective implementation and coordination, a committee “Gilgit-Baltistan Environmental Policy Implementation committee” would be established at the GB level. The Gilgit-Baltistan Environmental Protection Council will oversee the implementation of this policy, with support from the Gilgit-Baltistan Environmental Protection Agency and other relevant stakeholders. One of the

tasks of this committee shall be regular monitoring, evaluation and updating of the Gilgit-Baltistan Environmental Policy after every 5 years. The committee would meet biannually and report the implementation status to the Gilgit-Baltistan Environmental Protection Council. The composition of the committee has already been notified under section 3 of Gilgit- Baltistan Environmental Protection Act, 2014 and is as follows:

The Chief Minister or such other person as the Chief Minister may nominate on this behalf.....	Chairperson
The Minister in charge of the Environment Department	Vice Chairperson
Chief Secretary	Ex-officio member
The Secretaries of Planning and Development Department Forest, Wildlife and Environment Department Agriculture, Fisheries and Livestock Department Water and Power Department Works Department Local Government and Rural Development Department Industries and Mineral Development Department	Ex-officio members
President Gilgit-Baltistan Chamber of Commerce and Industry One representative of NGOs	Non-official members
Director Environment Protection Agency	Ex-officio member/ Secretary

### 6.3. Proposed Actionable Implementation Strategies

Action Step	Activities	Timeline	Responsible Party
Establish a Central Coordination Committee (CCC)	Formulate committee composition and terms of reference Officially appoint members	1-3 Months	GB EPA Leadership
Develop Sector-Specific Guidelines	Conduct sector analysis to identify integration points for environmental considerations Draft and review guidelines with stakeholder input	3-6 Months	Sector Departments with CCC oversight
Training and Capacity Building	Identify training needs and develop modules Conduct workshops and training sessions bi-annually	Ongoing, starting within 6 months	CCC in collaboration with environmental consultants

Monitoring and Reporting Mechanism	Design a monitoring framework and reporting template Implement annual reporting and public disclosure process	6-12 Months	CCC supported by an independent monitoring team
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### Clarifying Roles and Responsibilities

Action Step	Activities	Timeline	Responsible Party
Clear Definition of Roles	Document specific roles and distribute manual Hold informational sessions for all stakeholders	1-2 Months	GB EPA and local government bodies
Stakeholder Engagement Plan	Develop an engagement strategy including communication channels and schedules Implement regular stakeholder meetings	2-4 Months	GB EPA with local community leaders
Accountability Framework	Establish performance indicators and evaluation protocols Regular performance reviews and feedback sessions	3-6 Months	Department heads with CCC oversight
Conflict Resolution Mechanism	Set up a conflict resolution team Define process and response times for conflict management	3 Months	GB EPA with legal advisors

### Environmental Compliance

Action Step	Activities	Timeline	Responsible Party
Compliance Promotion Programs	Design incentives for exceeding standards Launch recognition programs for compliant organizations	4-6 Months	GB EPA and Department of Commerce
Regular Inspections and Audits	Develop an inspection schedule Train and deploy inspection teams	6 Months	GB EPA Compliance Division
Penalty and Reward System	Define clear penalties and reward criteria Publicize the system to ensure wide understanding	1-2 Months	Legal Department of GB EPA
Public Awareness Campaigns	Create and distribute educational materials Conduct workshops and public meetings quarterly	Ongoing, starting immediately	Public Relations Department of GB EPA

### Long-Term Strategies

Action Step	Activities	Timeline	Responsible Party
Policy Review and Update	Establish a review committee Regular policy update meetings every two years	Every 2 years	CCC with external advisors
Technology Integration	Identify needed technologies for compliance monitoring Implement technology solutions and training	1-3 Years	IT Department of GB EPA

