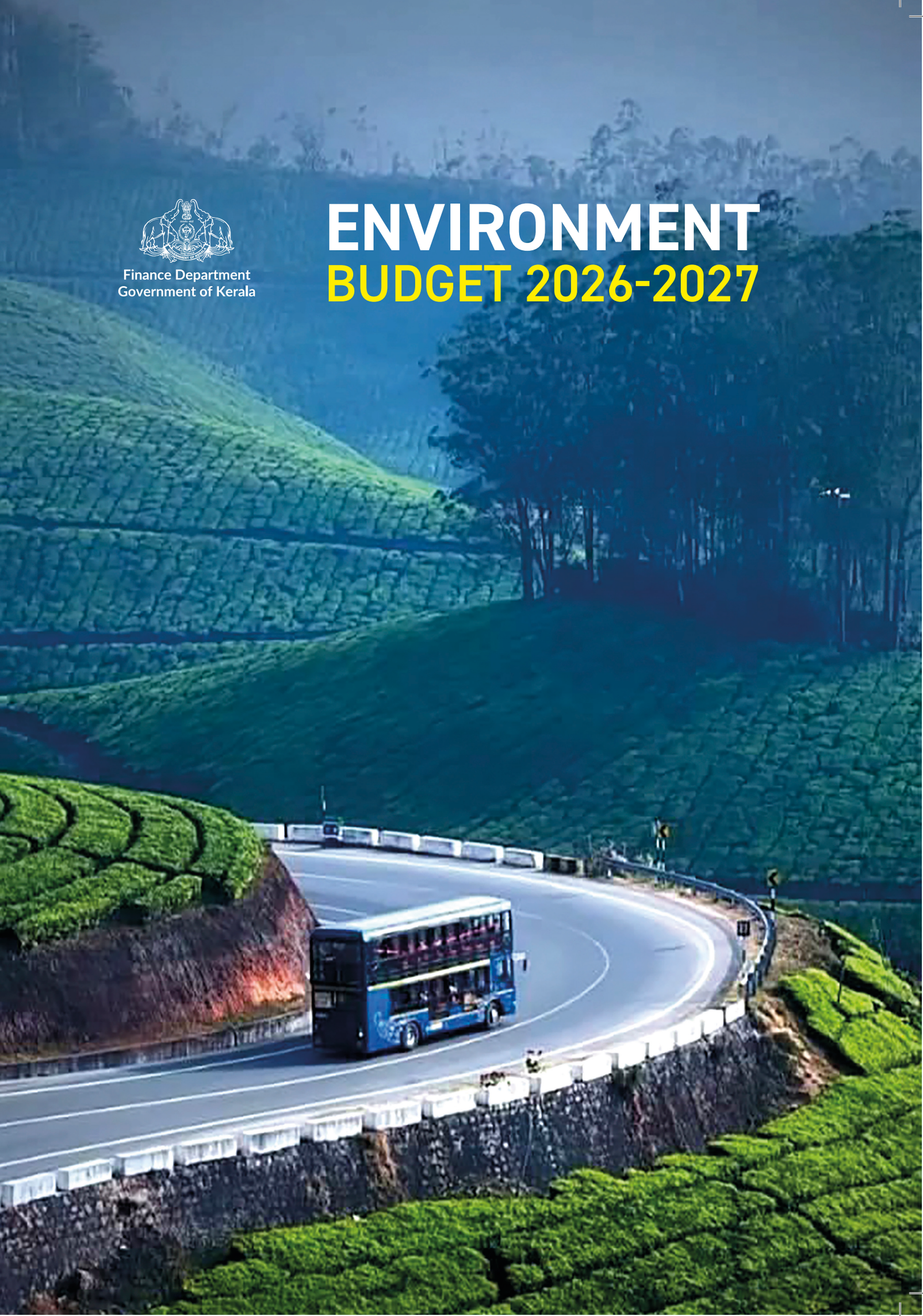
Finance Department
Government of Kerala

ENVIRONMENT
BUDGET 2026-2027



Government of Kerala

KERALA ENVIRONMENT BUDGET

GPM 4-18-2026

FOREWORD

Kerala stands at a critical juncture where the imperatives of economic development must be carefully balanced with the limits of its fragile ecology. The State's unique geography shaped by the Western Ghats, an extensive coastline, rich wetlands, and high population density makes it particularly vulnerable to climate change and environmental degradation. Recent experiences of floods, landslides, heat stress, coastal erosion, and emerging industrial and marine risks clearly demonstrate that environmental sustainability is no longer a sectoral concern, but a core determinant of Kerala's economic stability, social well-being, and fiscal resilience.

The Kerala Environment Budget 2026–27 reflects the Government's firm resolve to place environmental sustainability at the centre of public finance and development planning. By systematically consolidating and presenting environment-related interventions across sectors, this Budget brings clarity to the State's investments in climate change mitigation and adaptation, disaster risk reduction, biodiversity conservation, waste management, and sustainable use of natural resources. It reinforces the principle that public expenditure must proactively reduce future environmental, social, and fiscal risks, while safeguarding livelihoods and natural capital for future generations.

A defining strength of Kerala's environmental approach lies in its people-centered and decentralized implementation. Initiatives such as Haritha Karmasena, community-based waste management systems, local water conservation programmes, and nature-based solutions led by Local Self Governments demonstrate how environmental action can generate green livelihoods, improve public health, and strengthen social inclusion. The Environment Budget recognizes and supports these grassroots efforts as essential pillars of a resilient and circular economy.

This Budget is closely aligned with Kerala's long-term vision of achieving carbon neutrality by 2050 and transitioning to 100 percent renewable energy by 2040. It complements the State Action Plan on Climate Change (2023–2030), the Rebuild Kerala Initiative, Local Action Plans on Climate Change, and strengthened disaster early warning and response systems. Together, these efforts underscore Kerala's leadership in sub-national

climate action, transparency in environmental and climate-related public finance, and commitment to resilient, inclusive, and sustainable growth.

I am confident that the Kerala Environment Budget 2026–27 will serve not merely as a fiscal statement, but as a strategic roadmap guiding the State towards a greener, safer, and more sustainable future for all.

K N BALAGOPAL

Minister for Finance

CONTENTS

List of Acronyms & Abbreviations

ALCBT	Asia Low Carbon Building Transition Programme
ANERT	Agency for Non-Conventional Energy and Rural Technology
CITA	Co-operative Initiative in Technology-Driven Agriculture
CNG	Compressed Natural Gas
D-CAT	Disaster and Climate Action Tracker
DLIs	Disbursement Linked Indicators
DoECC	Department of Environment and Climate Change
DRR	Disaster Risk Reduction
ECSBC	Energy Conservation and Sustainable Building Code
EHS	Environmental Health & Safety
EMC	Energy Management Centre
ESG	Environmental Social and Governance
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
HTL	High Tide Line
HVRA	Hazard, Vulnerability and Risk Assessment
ICCI	Interventional Centre for Climate Innovation
ICCS	Institute of Climate Change Studies
IEC	Information, Education and Communication
IEFK	International Energy Festival of Kerala
IFS	Integrated Farming System
IPCC	Intergovernmental Panel on Climate Change
JNTBGRI	Jawaharlal Nehru Tropical Botanical Garden and Research Institute
KaWaCHaM	Kerala Warnings, Crisis and Hazard Management System
KFRI	Kerala Forest Research institute
KILA	Kerala Institute of Local Administration
KSAPCC	Kerala State Action Plan on Climate Change
KSCCAM	Kerala State Climate Change Adaptation Mission
KSCSTE	Kerala State Council for Science Technology and Environment

KSDMA	Kerala State Disaster Management Authority
KSIDC	Kerala State Industrial Development corporation
KSWMP	Kerala Solid Waste management Project
LAPCC	Local Action Plan for Climate Change
LRIS	Land Resources Information System (LRIS)
LRK	Land Resource of Kerala
LSGs	Local Self Governments
LUB	Land Use Board
MBGIPS	Malabar Botanical Garden and Institute of Plant Science
MMNK	Malinya Muktham Nava Keralam
MoEFCC	Ministry of Environment Forest and Climate Change
NAPCC	National Action Plan on Climate Change
NDCs	Nationally Determined Contribution
NDMA	National Disaster Management Authority
NGOs	Non-Governmental Organizations
NRN	Natural Resource Management
PSP	Pumped Storage Project
RIMP	Risk Informed Master Planning
RKI	Rebuild Kerala Initiative
RWBCIS	Weather Based Crop Insurance Scheme
SAPCCHH	State Action Plan on Climate Change and Human Health
SASB	Sustainability Accounting Standards Board
SDGs	Sustainable Development Goals
SHP	Small Hydro Power
ULB	Urban Local Body
UNICEF	United Nations Children's Fund
WLIS	Wetland Information System

Executive Summary

The Kerala Environment Budget 2026–27 is a pioneering fiscal instrument that integrates environmental sustainability into the State's budgeting and development framework. Prepared alongside the annual State Budget, it systematically identifies and consolidates schemes that contribute positively to environmental conservation, climate change mitigation and adaptation, disaster risk reduction, and sustainable natural resource management.

Kerala's development pathway is increasingly shaped by climate-induced risks such as floods, landslides, droughts, heat waves, coastal erosion and ecosystem degradation. These risks have significant economic and social implications, as demonstrated by recent disasters that have resulted in large-scale loss of life, livelihoods and public assets. In this context, the Environment Budget serves as a strategic response, aligning fiscal priorities with the State's environmental vulnerabilities and long-term sustainability goals.

The Environment Budget 2026–27 identifies 96 schemes across 10 key sectors, with a total outlay of ₹947.89 crore. Priority sectors include agriculture, soil and water conservation, fisheries, forestry and wildlife, irrigation and flood management, energy, industry and infrastructure, and environmental governance. Only those schemes that demonstrate clear and measurable environmental benefits have been included, ensuring focused and outcome-oriented public expenditure.

This Budget is closely aligned with Kerala's State Action Plan on Climate Change (2023–2030), India's Nationally Determined Contributions under the Paris Agreement, and the United Nations Sustainable Development Goals. Flagship initiatives such as the Rebuild Kerala Initiative, Local Action Plans on Climate Change, KaWaCHaM Early Warning System, Malinya Muktham Nava Keralam Waste Management Campaign, Green Hydrogen Valley roadmap, and the Kerala ESG Policy 2025 illustrate the State's integrated approach to climate resilience, low-carbon development and environmental governance.

By making environmental expenditures transparent and measurable, the Kerala Environment Budget 2026–27 strengthens accountability, enables better tracking of climate

and environmental investments, and reinforces Kerala's position as a national and international leader in sub-national climate action and sustainable development.

CHAPTER 1

KERALA ENVIRONMENT BUDGET

1.1 Introduction

Kerala's unique ecological heritage, encompassing the biodiverse Western Ghats, a long and dynamic coastline, extensive backwaters, and rich agricultural landscapes, forms the foundation of its environmental and socio-economic well-being and stands at the forefront of India's environmental stewardship efforts. However, the State is increasingly exposed to climate-induced risks, including extreme weather events, coastal erosion, water scarcity, and biodiversity loss, intensifying the imperative for proactive environmental governance. Recent events, such as the 2024 Wayanad landslides, which caused over ₹2,000 crore in damages, highlight the urgency of resilient planning. Therefore, this Kerala State Environment Budget is designed to strategically align fiscal planning with the State's environmental priorities, mapping resources that support climate change mitigation, adaptation, and sustainable natural resource management in accordance with the Kerala State Action Plan

Kerala's Environment Budget strategically aligns fiscal planning with climate resilience, sustainable natural resource management, and the State's long-term environmental priorities

on Climate Change and broader sustainable development goals. Through this budget, the Government of Kerala aims to not only mitigate these challenges but also position Kerala as a model for sub- national climate action, inspiring other states in India and beyond.

Kerala's Environment Budget is a pioneering initiative to formally integrate environmental sustainability into fiscal planning. Presented alongside the State Budget, it evaluates the environmental impacts of budgetary and fiscal policies and embeds "environment-friendly" priorities in governance. This document makes environmental considerations visible in public spending and signals the Government's commitment to sustainable development, i.e., a balanced economic growth with ecological conservation. At its core, the budget aligns with Kerala's ambitious vision of achieving carbon neutrality by 2050 and transitioning to 100% renewable energy by 2040.

1.2 Purpose and Objective of the Environment Budget

The Kerala Environment Budget serves as a strategic instrument to embed environmental sustainability within the State's fiscal framework by mainstreaming ecological considerations across all sectors and ensuring that economic growth does not compromise environmental integrity. By presenting environment-related allocations as a standalone document, the Government of Kerala promotes transparency and accountability, enabling citizens, NGOs, and international bodies to effectively monitor progress. The principal objective is to foster sustainable development by integrating green initiatives and policy interventions throughout government sectors, while systematically tracking and enhancing investments in ecological restoration, climate resilience, and resource management.

By mainstreaming ecological considerations across sectors, the Kerala Environment Budget strengthens transparency, accountability, and sustainable development.

The Environment Budget is guided by the following key objectives:-

- **Assess and Tag Schemes** – Identify and prioritise government schemes that have a positive environmental impact, thereby encouraging departments to factor in environmental concerns.

- **Tracking Expenditures**- Systematically categorising and quantifying direct and indirect environment-related spending to identify gaps and optimise resource allocation.

- **Align with Goals and Global Standards** – Ensure State spending supports national and international goals (NDCs, SDGs) and integrates frameworks such as Environmental, Social, and Governance (ESG) criteria to attract sustainable investments.

- **Promoting Green Practices**- Encouraging green public procurement, climate-resilient infrastructure, and low-carbon technologies through targeted incentives.

- **Raise Awareness** – Publicize the State's environmental programs and expenditures, so citizens and investors recognize Kerala's green priorities.

- **Fostering Participation**- Engaging Local Self-Governments (LSGIs), communities, and private sectors in environmental governance, as seen in initiatives like the Haritha Keralam Mission.

In essence, the Environment Budget is more than a financial statement; it is a blueprint for a sustainable Kerala, where fiscal decisions are guided by ecological wisdom.

1.3 Approach and Methodology

The approach adopted for formulating the Kerala Environment Budget 2026–27 is grounded in a holistic and outcome-oriented framework that classifies schemes based on their environmental relevance and impact. The Environment Budget is prepared through a systematic tagging and analytical process, undertaken in close coordination with sectoral departments. Broadly, the Finance Department (Budget Wing) works with line departments to identify and tag existing schemes as environment-sensitive based on predefined criteria.

1.4 Environmental Sustainability in Kerala's Development Process

Environmental sustainability is integral to Kerala's overall development model. The State, known for advanced human development, has prioritized preserving its natural assets even as it grows economically. The success of this approach is reflected in national indices: Kerala consistently ranks at the top of India's SDG Index.

At the same time, Kerala's high population density and its peculiar geography pose significant environmental challenges. High urbanisation rate, rural-urban continuum and land-use changes have reduced traditional farmland, while the changing climate has brought severe monsoon floods and landslides in recent years. In response, Kerala's planning emphasises resilience. Environmental sustainability is enshrined as a cornerstone of Kerala's Nava Kerala Vision, which envisions a harmonious blend of economic prosperity, social equity, and ecological balance. Committed to achieving high-level economic expansion, the State mandates the integration of environmental sustainability to manage development within ecological limits. This strategy assumes critical importance in the context of Kerala's rapid urbanisation and the growing risks posed by climate change-induced disasters.

Environmental sustainability is a cornerstone of Kerala's Nava Kerala Vision, guiding development within ecological limits amid rapid urbanisation and climate risk

1.5 Environmental Sustainability and the Nava Kerala Vision

Kerala faces acute environmental challenges exacerbated by climate change, including frequent landslides, floods, coastal erosion and diseases. In response, the State has launched a suite of policies and programs to build resilience and sustainability across sectors. The government's long-term goal of 'net-zero carbon emissions by 2050' guides planning, and the approach aligns with Kerala's updated State Action Plan on Climate Change (2023–2030), embedding environmental priorities in development planning.

Kerala has launched numerous initiatives to tackle its specific environmental challenges, as detailed below:

I. Rebuild Kerala Initiative (RKI)

In the wake of the devastating 2018 floods, the Rebuild Kerala Initiative (RKI) was launched to "build back better" with climate resilience at the core. RKI (under the broader Rebuild Kerala Development Programme) channels multilateral funds into infrastructure reconstruction and risk- informed planning. Its flagship mechanism is a World Bank Program-for- Results (PforR) that incentivizes local governments in the hardest-hit Pamba-basin districts (Alappuzha, Pathanamthitta, Kottayam, Idukki) to integrate climate risk into their plans. In practice, each Local Self- Government Institution (LSGI) must prepare risk-informed Master Plans and Disaster Management Plans, with progress tracked via Disbursement-Linked Indicators (DLIs). A key DLI (DLI5) requires every Panchayat or Municipality to explicitly incorporate climate risk and disaster mitigation projects into its annual action plan. To support implementation, RKI established training and support through agencies like the Kerala Institute of Local Administration (KILA).

II. Kerala State Action Plan on Climate Change (2023-2030)

The Kerala State Action Plan on Climate Change 2.0 (KSAPCC 2023- 2030) serves as the State's fundamental policy response to the intensifying climate crisis, superseding the 2014 version. Driven by the frequency of extreme weather events, including the devastating floods of recent years, the plan was officially released in December 2022 and follows the common framework established by the MoEFCC, ensuring alignment with India's NDCs and the UN Sustainable Development Goals. The KSAPCC 2023-2030 is primarily focused on adaptation and crystallises a framework for sectoral actions up to 2030 in crucial areas like agriculture, livestock, coastal fisheries, health, water resources, forests, and biodiversity, aiming to reduce vulnerability and strengthen resilience through inclusive, participatory development.

KSAPCC prioritises energy efficiency, renewable energy, and electric mobility to drive large-scale emission reductions in Kerala's energy sector

In terms of mitigation, KSAPCC sets ambitious goals, proposing an investment of approximately ₹52,238 Crore to avoid around 57,000 $ktCO_2$ emissions by 2030. These strategies primarily target the energy sector - the largest source of emissions - by prioritising energy efficiency improvements, enhanced renewable energy generation, and accelerated adoption of electric vehicles (EVs). Furthermore, this action plan establishes a strong institutional mechanism, led by the Chief Minister's Governing Council and supported by the State Climate Change Cell, to mainstream climate change actions across all departmental schemes. The comprehensive nature of SAPCC 2.0 is designed not only to guide state-level intervention but also to act as a pivotal document for leveraging necessary climate finance from national and international sources.

III. Kerala State Greenhouse Gas Inventory

In line with its commitment to evidence-based climate action, the Government of Kerala developed and released the State's first official Greenhouse Gas (GHG) Inventory in June 2024. Covering the period from 2005 to 2021, the inventory provides a comprehensive assessment of emissions across key sectors—energy, agriculture, waste, and others and disaggregates them by gas, including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). The inventory, prepared using internationally accepted Intergovernmental Panel on Climate Change (IPCC) guidelines, was launched by the Hon'ble Chief Minister on World Environment Day 2024, along with dedicated public-facing web portal (https://climatechange.envt.kerala.gov.in/).

According to the findings, Kerala's total GHG emissions for 2021 stood at 21.86 million tonnes of CO_2 equivalent ($MtCO_2e$), reflecting a 6.8% reduction compared to 2005 levels. This relatively stable emission trajectory underscores the State's progress along a low-carbon development path. The online platform enhances transparency and enables policymakers to monitor emissions trends, identify sectoral hotspots, and prioritise mitigation strategies. The Government has committed to regularly updating the inventory, which serves as a foundational input for tracking the State's progress toward its long-term goal of carbon neutrality by 2050, as articulated in the State Action Plan on Climate Change (SAPCC) 2.0

Kerala's greenhouse gas emissions declined to 21.86 $MtCO_2e$ in 2021—a 6.8% reduction from 2005—marking steady progress toward a low-carbon development pathway

IV. Local Action Plans for Climate Change (LAPCC)

Complementing RKI's focus on infrastructure, Kerala has empowered panchayats and municipalities to craft Local Action Plans on Climate Change (LAPCCs). These are community-driven micro-plans identifying localized climate impacts and adaptation measures. Initially piloted under a Climate Change Innovation Programme, KILA trained representatives in four flood-vulnerable districts to draft LAPCCs in 2019–20. The success of this pilot led the State to make LAPCC preparation a part of every LSG's planning cycle. Now, all local bodies are expected to conduct vulnerability assessments (e.g. mapping flood- prone areas, saltwater intrusion, heat exposure) and integrate findings into development plans. For instance, most of the Grama Panchayats along the Pamba River basin have formally adopted LAPCCs, with projects ranging from flood mitigation to heat-resilient buildings. The process is participatory: local self-government institutions and citizens collaborate on the plans, ensuring that community needs and traditional knowledge inform actions. Over time, this bottom-up planning approach aims to build "climate adaptive governance" at the grass-roots, aligning with Kerala's State Action Plan on Climate Change.

V. Disaster and Climate Action Tracker (D-CAT)

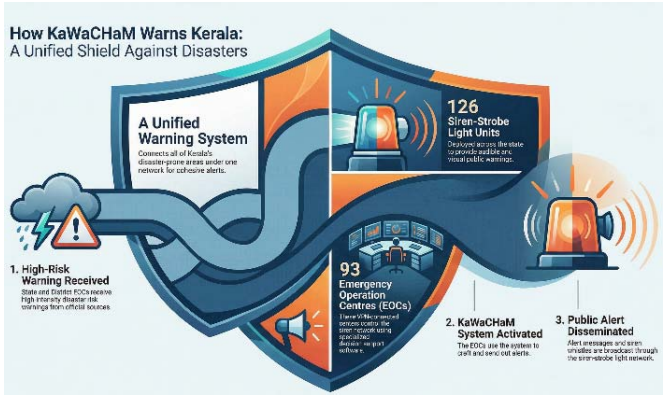
To monitor and motivate local climate action, Kerala has deployed the DCAT (Disaster Risk Reduction and Climate Action Tracker), a data- driven performance tool. As part of the Rebuild Kerala Initiative, KILA is given the responsibility of Disbursement Linked Indicators four and five (DLI 4 and 5). The DLI 5 of the Rebuild Kerala Initiative (RKI) requires that the Local Self-Governments must integrate climate and risk information into their planning process and annual plans. KILA developed the DCAT tool for steering and capacitating the LSGs towards achieving the goals and targets of DLI 5 and to monitor the progress.

VI. KaWaCHaM (Kerala Warnings, Crisis and Hazard Management system)

As part of ensuring the availability of state-of-the-art systems for disaster management activities in Kerala, the state has established the KaWaCHaM (Kerala Warnings, Crisis and Hazard Management system) disaster risk warning system. The KaWaCHaM system has been implemented by the Kerala State Disaster Management Authority (KSDMA) with financial assistance from the National Disaster Management Authority (NDMA) and the World Bank as part of the National Cyclone Risk Mitigation Project. The working method of the KaWaCHaM system is to bring all disaster- prone areas in Kerala under a unified warning system.

KaWaCHaM establishes a unified, state-wide disaster warning system, integrating real-time alerts to protect communities across Kerala

KaWaCHaM comprises a network of 126 siren-strobe light units, 93 VPN-connected Emergency Operation Centres (which control them), their Decision Support Software, and a Data Centre.



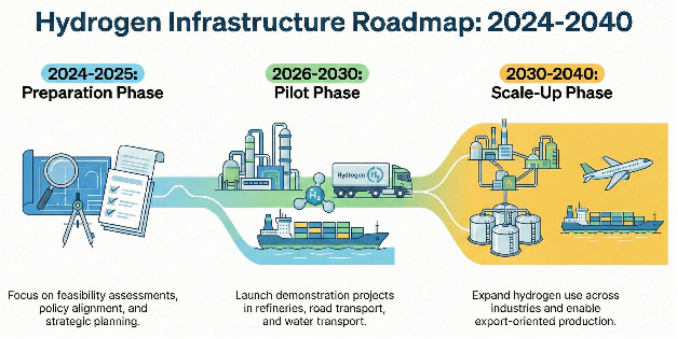
Upon receiving warnings regarding high-intensity disaster risks from the State

and District Emergency Operation Centres and nodal departments, the public will be given alert messages and siren whistle messages through the siren- strobe light network installed as part of the KaWaCHaM system.

VII. Kerala Green Hydrogen Valley (Kochi)

Kerala has set its sights on the emerging green hydrogen economy, and in 2024, the Government released a Kochi Green Hydrogen Valley Roadmap focused on developing an integrated hydrogen ecosystem across Kochi and nearby industrial areas. The roadmap outlines a phased development plan aimed at creating shared infrastructure for hydrogen production, storage, transport, and off take to support decarbonisation of industry and mobility. Implementation is structured in three stages: a preparation phase (2024–25) that emphasizes techno- commercial feasibility assessments, policy alignment, and planning; a pilot phase (2026–2030) involving demonstrations in sectors such as refinery operations, road transport, and water transport; and a scale-up phase (2030–2040) that expands hydrogen use across industries and enables export-oriented production of green ammonia and green hydrogen derivatives. The roadmap, prepared with the Indo-German Energy Forum and MEC Intelligence, also highlights the strategic potential of Kochi and Vizhinjam ports for future green ammonia handling and export. Alongside these developments, the Government of Kerala is formulating a state green hydrogen policy to provide enabling regulation and investment support. Together, these initiatives position the Kochi Green Hydrogen Valley as a major step toward integrating renewable energy with advanced clean-fuel technologies and establishing Kerala as a regional leader in the green hydrogen transition.

The Kochi Green Hydrogen Valley positions Kerala as a regional leader in the green hydrogen transition, integrating renewable energy with advanced clean-fuel technologies



VIII. Kerala ESG Policy 2025

Kerala has approved a comprehensive Environmental–Social– Governance (ESG) Policy in September 2025 to steer sustainable industry growth. The policy's purpose is to make Kerala a "hub for sustainable, socially conscious and transparent industries". Framed on the principles of "Nature, People, and Industry", it mandates that new and expanding enterprises meet clear ESG benchmarks. Implementation will be overseen by the Kerala State Industrial Development Corporation (KSIDC) as the nodal agency. The policy promises a suite of incentives for compliance: subsidized loans, tax reimbursements, subsidized power tariffs and priority in government procurement for ESG-certified companies. It also aligns with global norms by drawing on frameworks like the Global Reporting Initiative and SASB metrics. By codifying ESG into industrial policy, Kerala aims to attract green investment and foster low-pollution clusters, positioning itself as a climate-conscious economic destination. This policy complements sustainable initiatives by providing formal incentives for responsible business, and signals to industry that ecological stewardship and profitability must go hand-in-hand.

Kerala's ESG Policy positions the State as a hub for sustainable, socially conscious, and transparent industries by embedding environmental and social responsibility into industrial growth

IX. Malinya Muktham Nava Keralam (MMNK)

The Malinya Muktham Nava Keralam (MMNK) campaign is a transformative waste-management and cleanliness initiative launched by the Government of Kerala under the leadership of local self- governments to make the State fundamentally waste-free and environmentally healthier. Triggered in response to critical waste challenges such as the Brahmapuram dumpsite fire, MMNK brings together government departments, institutions, communities and citizens to establish scientific, inclusive and systematic solid waste management across Kerala. Under this campaign, strategic objectives include thorough gap assessment of existing waste facilities through community engagement, ensuring comprehensive in-situ and community

bio-waste management, achieving complete door-to-door collection of non-biodegradable waste, and ensuring public spaces and water bodies remain litter-free. The initiative emphasises citizen participation, digitisation of waste systems (e.g., through the Haritha Mithram app), bio-mining of legacy dumpsites, and the institutionalisation of Haritha Karma Senas for segregation and collection with over 36,000 such workers engaged in door-to-door collection of non-bio waste. MMNK also drives the construction and upgrading of waste-management infrastructure, promotion of new technologies and safety measures, community awareness campaigns, and continuous policy and procedural improvements to strengthen waste governance across urban and rural local governments in Kerala.

CHAPTER 2

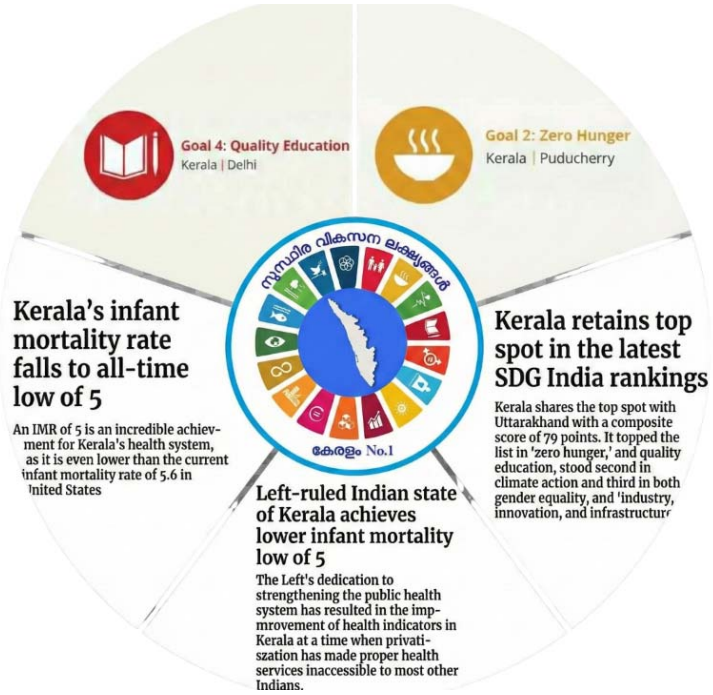
Alignment with National and International Environmental Goals

Kerala's development trajectory demonstrates a conscious effort to harmonies economic growth, social inclusion and ecological integrity. The State's response to environmental and climate challenges, articulated through initiatives such as the Nava Kerala Mission, SAPCC 2.0, Rebuild Kerala Initiative, decentralized climate planning, sector- specific mitigation strategies, and governance reforms, reflects a deliberate alignment with global environmental frameworks and national policy commitments. This alignment ensures that

Kerala's development process remains consistent with internationally agreed sustainability principles while responding to its unique geographic vulnerabilities, including high population density, fragile ecosystems, and increasing climate-induced disasters.

2.1 Alignment with UN Sustainable Development Goals (SDGs)

The Kerala Environment Budget 2026–27 demonstrates a robust alignment with the United Nations Sustainable Development Goals (SDGs), particularly those addressing climate action, water security, clean energy, sustainable cities, and ecosystem restoration. Kerala's approach integrates environmental priorities directly into fiscal decision-making, promoting sustainable development across sectors.



I. SDG 3: Good Health and Well-Being

Kerala's environmental interventions directly support public health outcomes by addressing climate-sensitive diseases and environmental health risks. The State Action Plan on Climate Change and Human Health (SAPCCHH) identifies climate-induced disease burdens such as heat stress, vector-borne diseases, and water-borne illnesses, and outlines adaptive health system responses. Waste management reforms under Malinya Muktham Nava Keralam (MMNK) reduce exposure to environmental pollutants and disease vectors, while improved disaster preparedness and early warning systems (KaWaCHaM) minimise mortality and morbidity during extreme events.

II. SDG 6: Clean Water and Sanitation

River basin rejuvenation programmes, floodplain restoration, and groundwater recharge initiatives directly advance SDG 6 targets. Programmes such as stream rejuvenation and pond revival enhance water availability and quality while reducing flood risks. MMNK ensures scientific management of solid and liquid waste, preventing contamination of surface and groundwater sources. Climate-resilient water governance is further strengthened through LAPCCs, which identify localised water vulnerabilities, including salinity intrusion and drought risk.

The increasing population in Kerala is posing a major challenge to waste disposal. Accumulation of garbage leads to air and water pollution, threatening clean food, air, and water. Dumping waste in public places and polluting water bodies endanger healthy living. To address this, extensive cleaning programmes are being implemented with public participation, Local Self-Governments, and various organizations, continuing till the International Day of Zero Waste."

Shri. Pinarayi Vijayan, Chief Minister of Kerala

III. SDG 7: Affordable and Clean Energy

Kerala's transition toward renewable energy and clean fuels aligns strongly with SDG 7. The Kochi Green Hydrogen Valley initiative promotes green hydrogen production and use in industry and mobility, supporting long-term decarbonisation. Energy efficiency measures, renewable power expansion, and electric mobility interventions under SAPCC 2.0 collectively strengthen clean energy access while reducing dependence on fossil fuels.

IV. SDG 9: Industry, Innovation and Infrastructure

Climate-resilient infrastructure development under the Rebuild Kerala Initiative (RKI) advances sustainable and risk-informed infrastructure planning. The Kerala ESG Policy 2025 promotes innovation in environmentally responsible industrial practices, incentivizing low- carbon technologies, cleaner production processes, and transparent governance. Digital platforms such as DCAT and climate data portals enhance institutional innovation and evidence-based decision-making.

V. SDG 11: Sustainable Cities and Communities

Kerala's emphasis on decentralized climate governance directly supports sustainable urban and rural settlements. Local Action Plans for Climate Change (LAPCCs) enable local governments to integrate climate risk into land use, housing, drainage, and public infrastructure planning. MMNK improves urban livability by ensuring waste-free public spaces, while upgraded drainage systems and flood-buffering measures reduce disaster vulnerability in densely populated areas.

VI. SDG 12: Responsible Consumption and Production

MMNK operationalizes circular economy principles by promoting waste segregation, recycling, bio-waste management, and bio-mining of legacy dumpsites. The initiative encourages behavioral change at the household and institutional levels, reducing resource consumption and landfill dependency. The ESG Policy further reinforces sustainable production standards across industrial sectors.

VII. SDG 13: Climate Action

While India targets net zero emissions by 2070, Kerala is charting a faster, people-driven path to carbon neutrality by 2050 through the 'Net Zero Carbon Keralam Janangalioode' campaign."

Shri. Pinarayi Vijayan, Chief Minister of Kerala

Climate action forms the core of Kerala's environmental governance framework. SAPCC 2.0, the State Greenhouse Gas Inventory, and net- zero targets for 2050 provide a comprehensive mitigation and adaptation roadmap. Disaster risk reduction

systems, early warning mechanisms, and climate-responsive planning under RKI and LAPCCs strengthen adaptive capacity at all governance levels. Kerala's climate budgeting approach further ensures that fiscal resources are aligned with climate priorities.

VIII. SDG 14: Life Below Water

Coastal resilience measures, fisheries adaptation strategies, and pollution control initiatives support marine and coastal ecosystem protection. Waste management reforms reduce plastic and solid waste leakage into rivers and coastal waters, while climate adaptation planning addresses sea-level rise, coastal erosion, and saline intrusion affecting livelihoods and biodiversity.

IX. SDG 15: Life on Land

Afforestation, biodiversity conservation, ecosystem restoration, and river basin rejuvenation contribute directly to terrestrial ecosystem health. Floodplain restoration and hill-area risk management reduce land degradation and landslide susceptibility. SAPCC 2.0 integrates forest and biodiversity actions as key adaptation strategies, reinforcing ecological resilience.

X. SDG 16: Peace, Justice and Strong Institutions

Kerala's environmental governance emphasizes transparency, accountability, and participatory planning. Tools such as the GHG Inventory portal, DCAT, and decentralized planning frameworks strengthen institutional capacity and data-driven governance. Citizen participation through local governments and community-based planning enhances trust and institutional effectiveness.

XI. SDG 17: Partnerships for the Goals

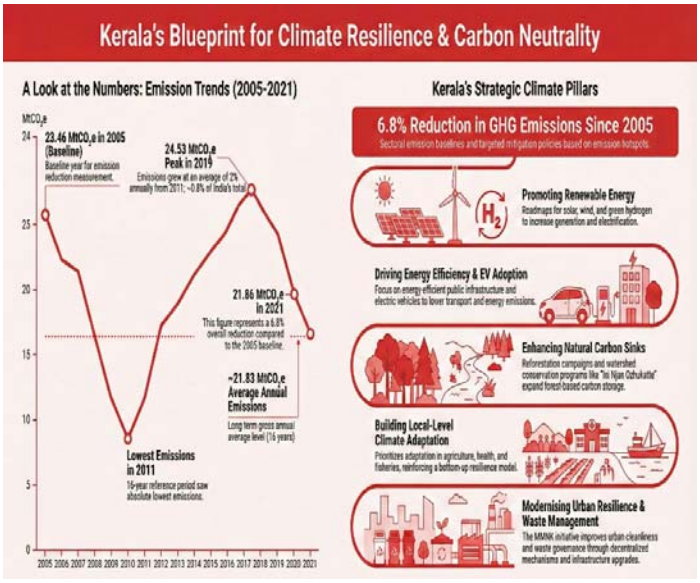
Kerala actively leverages partnerships with multilateral agencies (World Bank, NDMA), international collaborations (Indo-German Energy Forum), academic institutions, and civil society to advance environmental objectives. These partnerships enable access to climate finance, technical expertise, and global best practices, reinforcing the State's contribution to global sustainability goals. Overall, the Environment Budget enhances policy coherence across Kerala's development

strategy by ensuring that investments and interventions are explicitly linked to measurable SDG outcomes.

2.2 Alignment with India's Nationally Determined Contributions (NDCs) under the Paris Agreement

Kerala's climate strategy directly supports India's updated Nationally Determined Contributions (NDCs) under the Paris Agreement, submitted in 2022. These include reducing emissions intensity of GDP by 45% by 2030, achieving 50% of cumulative electric power from non-fossil fuel sources by 2030, and creating a carbon sink of 2.5–3 billion tonnes of CO_2-equivalent through forest and tree cover.

The Kerala Environment Budget aligns with and advances these commitments in the following ways:



Kerala's Environment Budget translates climate commitments into action—cutting emissions, accelerating clean energy, strengthening carbon sinks, and building climate-resilient cities through people-centered and data-driven

- **Emission Reduction**: Kerala's GHG Inventory (2024) confirms a 6.8% reduction in total emissions since 2005. By establishing sectoral emission baselines and developing emission hotspots, the State strengthens its ability to formulate targeted mitigation policies and track progress.
- **Promotion of Renewable Energy**: The SAPCC and Green Hydrogen Valley roadmap outline pathways for increasing renewable energy generation and electrification, especially through solar, wind, and green hydrogen. These efforts complement the national target of 50% installed capacity from non-fossil sources.
- **Energy Efficiency and EV Adoption**: Kerala's focus on energy- efficient public infrastructure and electric vehicles supports India's goal of lowering emissions intensity, especially in the transport and energy sectors.
- **Carbon Sink Enhancement**: Reforestation campaigns and watershed conservation (e.g., "Ini Njan Ozhukatte") contribute to India's commitment to enhancing forest-based carbon sinks. These programs also deliver co-benefits such as flood mitigation and biodiversity protection.
- **Climate Adaptation**: Kerala's SAPCC 2.0 emphasizes adaptation in critical sectors like agriculture, health, and fisheries—key areas identified in India's adaptation

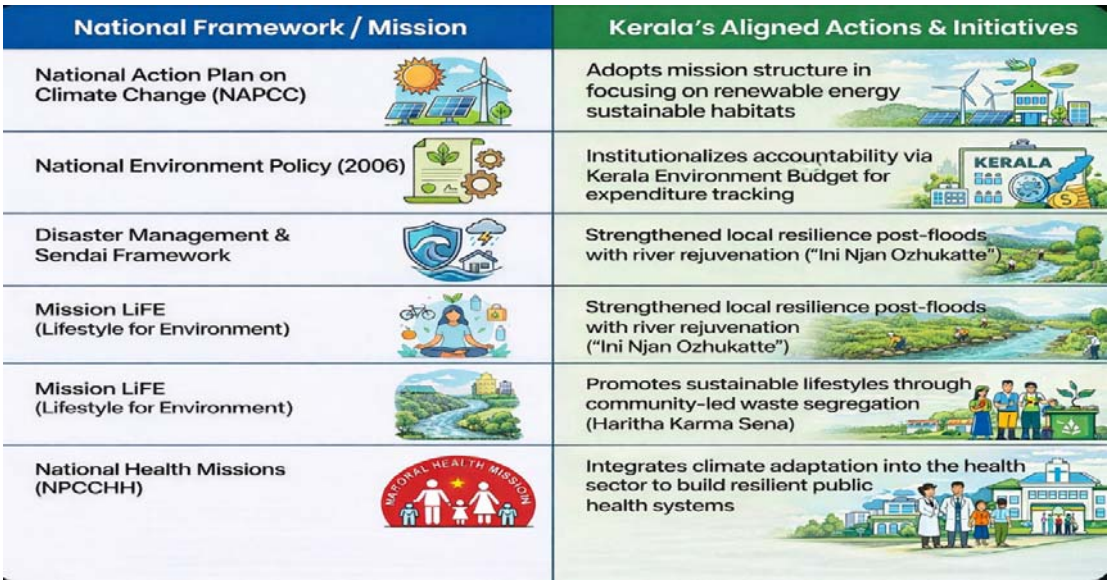
framework. Local-level climate resilience plans (LAPCCs) and the SAPCCHH for health-sector adaptation further reinforce Kerala's contribution to India's bottom-up adaptation model.

- **Waste and Urban Resilience**: The MMNK initiative aligns with national missions for Swachh Bharat and Smart Cities by modernising waste governance and urban cleanliness through decentralised mechanisms and robust infrastructure improvements.

Kerala's coordinated and multi-sectoral approach not only aligns with national NDC goals but often serves as a model for sub-national innovation and integrated climate governance.

2.3 Alignment with National Environmental Policy

The Kerala Environment Budget is firmly aligned with India's overarching environmental policies and missions. The planning and implementation mechanisms adopted in Kerala mirror key national policy frameworks, enhancing vertical coherence across governance levels.



- **National Action Plan on Climate Change (NAPCC)**: Kerala's SAPCC 2.0 adopts the structure and sectoral mission approach of the NAPCC, and its emphasis on renewable energy and climate-resilient development mirrors the goals of the National Solar Mission, National Mission for Sustainable Habitat, and Green India Mission.
- **National Environment Policy (2006)**: The Kerala Environment Budget institutionalises the NEP's call for integrating environmental sustainability into all

development sectors. The systematic tagging of schemes, tracking of expenditures, and transparency through a standalone budget volume embody the NEP's principles of environmental accountability and participatory governance.

- **State Disaster Management Plan and Sendai Framework**: In the aftermath of the 2018 and 2019 floods, Kerala institutionalised disaster resilience by creating LSG-level working groups and flood-risk mapping. The "Ini Njan Ozhukatte" river basin program has rejuvenated over 92,000 km of streams and revived 29,000+ ponds, reducing flood risk while supporting water security and irrigation.
- **Mission LiFE (Lifestyle for Environment)**: Kerala's community engagement through MMNK, Haritha Karma Senas, and sanitation drives promotes sustainable lifestyles, aligning closely with national efforts under Mission LiFE.
- **National Health Missions**: Through SAPCCHH, Kerala aligns its health sector with climate adaptation goals under the National Programme on Climate Change and Human Health (NPCCHH), enabling preventive public health infrastructure development in climate-stressed zones.

These integrated policies ensure Kerala's development remains environmentally sustainable while supporting the implementation of centrally sponsored missions.

2.4 Contribution to Global Environmental Goals

Beyond its national commitments, Kerala's environmental initiatives contribute significantly to global environmental goals and multilateral climate ambitions. The Environment Budget is designed to reflect and reinforce global climate priorities as laid out in international frameworks such as the Paris Agreement, the Kunming-Montreal Global Biodiversity Framework, and the UN 2030 Agenda for Sustainable Development.

Key contributions include:

- **Carbon Neutrality by 2050**: Kerala's explicit target of net-zero emissions by 2050 places it ahead of India's national 2070 timeline and aligns with the Intergovernmental Panel on Climate Change's (IPCC) 1.5°C pathways. Through its Green Hydrogen Valley, EV adoption, and afforestation efforts, Kerala is contributing sub-national leadership toward global mitigation.
- **Transparency and Climate Reporting**: The launch of the State GHG Inventory, using IPCC guidelines, and its regular update through a dedicated portal, reflects

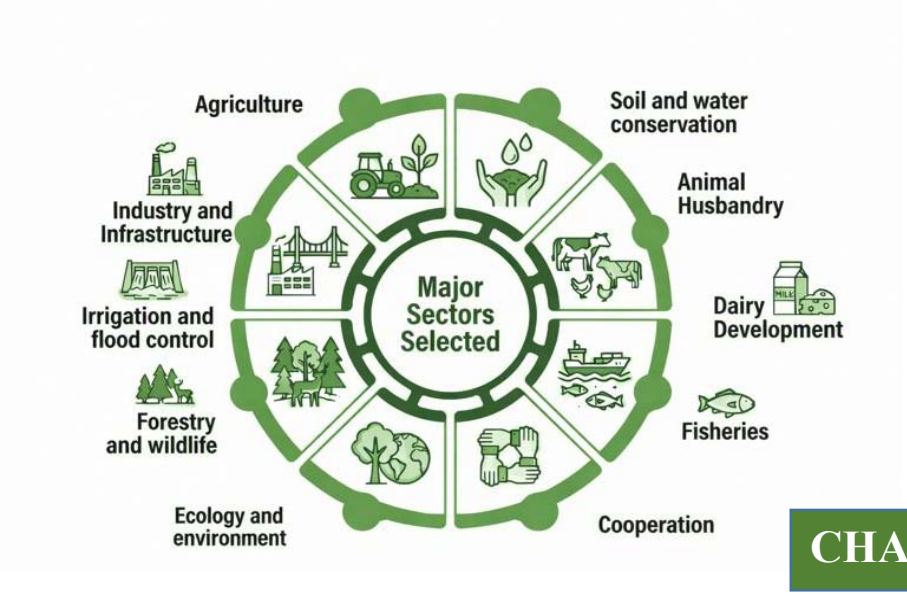
Kerala's commitment to transparency and data-driven decision-making, a principle central to the Enhanced Transparency Framework under the Paris Agreement.

- **Biodiversity Conservation**: Kerala's afforestation, mangrove restoration, and wetland protection efforts contribute to global biodiversity goals. Many of Kerala's ecosystems fall within the Western Ghats, a UNESCO World Heritage site, further enhancing the international relevance of its conservation actions.

Kerala's 2050 net-zero target, IPCC-aligned emissions accounting, and transparent GHG reporting reflect a sub-national pathway consistent with the Paris Agreement's 1.5°C ambition

- **ESG and Climate Finance**: Kerala's ESG Policy 2025 draws on international standards (GRI, SASB) to ensure industry compliance with global sustainability metrics. The policy sets a precedent for other subnational entities seeking to attract climate-aligned investment and accelerate green industrialization.
- **International Collaboration**: Kerala's Green Hydrogen Valley initiative, developed in partnership with the Indo-German Energy Forum and MEC Intelligence, exemplifies cross-border cooperation on clean technology and supports the global transition toward decarbonized economies.

In sum, Kerala's Environment Budget elevates the role of subnational governments in achieving global environmental objectives, demonstrating how localised planning, integrated budgeting, and community engagement can create meaningful contributions to the nation's collective climate and ecological goals.



CHAPTER 3

MAJOR SECTORS SELECTED

Environmental challenges present a profound threat to Kerala's social and economic development, the livelihoods of its communities, and the integrity of its environmental management systems. With extreme climatic events expected to become more frequent and intense, the State faces substantial impacts on vital natural resource sectors such as fisheries, forests, and water resources, as well as on socio-economic systems including agriculture, public health, and communities across districts. Climate change and variability directly impact the natural resources that provide essential services such as food, clean water, pure air, healthcare, and recreational opportunities. To enhance environmental resilience, Kerala must strengthen environmental literacy and promote decentralized, community-based efforts for climate adaptation and mitigation.

In this context, the Environment Budget 2026–27 prioritizes schemes from environmentally sensitive areas that demonstrate measurable and positive impacts on the

environment, focusing on climate change adaptation and mitigation, environmental management, biodiversity conservation, and pollution and waste management. Only those schemes that contribute tangibly to environmental sustainability and resilience have been included in the Environment Budget 2026–27, underscoring the State's commitment to a green, inclusive, and climate-resilient development pathway. The Environment Budget 2026–27 identifies and prioritizes 96 schemes across 10 key sectors, with an allocation of Rs.947.89 crore, each demonstrating a direct and positive impact on the environment.

3.1 OVERVIEW OF SECTORS SELECTED

1. Agriculture

Agriculture is both a contributor to and a victim of climate change. Rising temperatures, unpredictable rainfall, droughts, and floods severely impact crop yields, soil health, and livestock, posing significant risks to global food security. On the other hand, agricultural activities such as livestock rearing, fertilizer use, and deforestation release large amounts of greenhouse gases like carbon dioxide, methane, and nitrous oxide.

Kerala's agricultural strategy integrates climate adaptation and mitigation—climate-smart farming, soil carbon management, risk insurance, and institutional strengthening—to build resilient, productive, and sustainable food systems

To address these challenges, adaptation strategies in agriculture aim to enhance climate resilience by promoting climate-smart, sustainable practices that improve productivity and profitability across the value chain. These efforts focus on climate-proofing production systems, reducing post-harvest losses, and strengthening critical institutions like Krishi Bhavans, markets, storage facilities, and financial and insurance services. Since soil is crucial for agriculture, effective mitigation strategies must address soil management and carbon storage. Mitigation efforts should prioritize carbon neutral farming, sustainable conservation practices, enhance soil organic matter, promote carbon sequestration, and implement efficient soil testing programs.

The Agriculture Department supports these initiatives through various schemes, including the organic farming and good agricultural practices, soil health management and productivity improvement, crop diversification schemes, vertical axial flow pumps, and risk mitigation programs like crop insurance and contingency plans for natural disasters, pests, and diseases. Additionally, Weather-Based Crop Insurance Scheme (RWBCIS) help to safeguard agricultural productivity. In 2026–27, an amount of Rs 27887.00 lakh has been earmarked through 8 schemes for environmental components in the agricultural sector under the environment budget.

2. Soil and Water Conservation

Despite the challenges posed by climate change, urbanization, and extreme weather events, Kerala has made remarkable progress in soil and water conservation through a comprehensive and integrated approach. The State's strong commitment to terracing, contour ploughing, agroforestry, and sustainable agricultural practices has been instrumental in protecting the environment and enhancing resilience. The Soil Survey and Soil Conservation Department plays a pivotal role in implementing a range of schemes that contribute significantly to climate change mitigation and adaptation across the State. As part of watershed and catchment treatment initiatives, the Department undertakes activities such as in situ moisture conservation, renovation and stabilization of natural drainage lines, construction of water harvesting structures and check dams, and the revival of traditional water bodies. These efforts are complemented by the promotion of agroforestry, adoption of vegetative measures in catchment areas, soil

health management support, and the creation of a comprehensive databank for land classification. Through sustained initiatives in rainwater harvesting, coastal protection, and integrated land and water management, Kerala continues to strengthen its ecological balance and advance sustainable development.

Collectively, these actions safeguard vital natural resources, enhance community well-being, and position Kerala as a model for environmental stewardship and resilience in the face of a changing climate. In 2026–27, an amount of Rs 1131.00 lakh has been earmarked through 5 schemes for environmental components in the soil and water conservation sector under the environment budget.

3. Animal Husbandry

In Kerala, the livestock sector is embracing a holistic, climate-resilient approach that integrates improved animal nutrition, housing, breeding, and healthcare to reduce climate stress while enhancing productivity and environmental sustainability. The Animal Husbandry Department has implemented diverse strategies and schemes that safeguard animal health and rural livelihoods, aligning with the state's broader goals of sustainable agriculture and disaster-resilient veterinary infrastructure. Key initiatives promote climate-resilient livestock, lower greenhouse gas emissions from milk production, and boost farm incomes through backyard poultry and circular economy models, such as converting poultry waste into animal or fish feed. Strengthened veterinary healthcare systems, disease surveillance, and upgraded facilities ensure environmentally friendly and efficient services. At the same time, practices like balanced feeding, bioclimatic-specific breeding, efficient waste management, and sustainable fodder production are actively encouraged. Complementary measures-including community biogas plants, crop residue management, and fodder banks-further support sustainable livestock farming, fostering both rural resilience and environmental health across Kerala's diverse climatic zones.

Notable schemes under this framework include the expansion of crossbreeding facilities, development of a biological production complex, provision of doorstep and domiciliary veterinary services, and the implementation of special livestock development programmes-all contributing to a more resilient and eco-friendly livestock sector in Kerala. In 2026–27, an amount of Rs 1800.00 lakh has been earmarked under a scheme for environmental components in the animal husbandry sector through the environment budget.

4. Dairy

The dairy sector in Kerala plays a vital role in supporting rural livelihoods by providing income, employment, and essential nutrition, driven by the strong demand for milk and milk-based products. While offering significant economic opportunities, the sector also presents avenues for environmental improvement through reducing methane emissions, optimizing water use, and enhancing waste management. To promote sustainability, initiatives such as efficient manure management, water conservation, and organic farming are being actively implemented, ensuring the sector's continued economic growth alongside environmental protection and ecosystem health. However, climate change poses serious challenges to dairying by increasing heat stress in cows-leading to reduced milk production and impaired reproduction-while also affecting the availability and quality of feed and water due to extreme weather events like droughts and floods. Moreover, it heightens the risk of diseases, thereby impacting milk quality and causing economic losses for farmers.

To address these challenges and promote sustainable growth, major schemes such as the production and conservation of fodder in farmers' fields and dairy cooperatives and the milk shed development programme are being implemented across the state. In 2026–27, an amount of Rs 985.00 lakh has been earmarked through 2 schemes for environmental components in the dairy development sector under the environment budget.

5. Fisheries

Climate change poses significant challenges to Kerala's fisheries sector, impacting both inland and marine ecosystems through shifts in fish populations, breeding behavior, and production levels. Rising sea levels, frequent storms, and coastal erosion threaten marine life, coral reefs, and coastal habitats, endangering the livelihoods of fishing communities. To address these challenges, Kerala has adopted a range of adaptation and mitigation strategies emphasizing nature-based solutions that restore coastal resources and prevent ecosystem degradation. Key initiatives include modernization of the fishing fleet, stock enhancement programs, and ecosystem conservation efforts to build resilience. Human-centered adaptation measures such as improving relief shelters, ensuring safe housing, and strengthening rescue and rehabilitation systems are being implemented alongside investments in climate-resilient housing and post-harvest facilities, which serve both adaptation and mitigation goals. The "Suchitwa Sagaram" project focuses on reducing marine plastic pollution, while other efforts aim to boost aquaculture production, develop climate-resilient coastal villages, diversify fisherfolk livelihoods, and improve post-harvest infrastructure. With coastal erosion worsening due to climate change, the Punargeham Project-a flagship rehabilitation initiative relocates families living within the 50 meter High Tide Line (HTL).

Collectively, these measures aim to safeguard marine biodiversity, ensure food security, and promote sustainable, climate-resilient livelihoods for Kerala's coastal communities. In 2026–27, an amount of Rs 17520.00 lakh has been earmarked through 10 schemes for environmental components in the fisheries sector under the environment budget.

6. Co-operation

The co-operative sector plays an important role in addressing climate change through collective action, community participation, and sustainable resource management. The State has developed an extensive network of co-operatives engaged in diverse sectors such as agricultural credit, the public distribution system, supply of agricultural inputs, health, education (including professional education), housing, agro-processing, and the development of Scheduled Castes and Scheduled Tribes, along with initiatives for women's empowerment and fisheries. Emphasizing the concept of nature-positive production, which promotes synergies between ecosystem restoration and food or biomass production while strengthening linkages between biodiversity, nature, and agriculture, the State has launched the "Co-operative Initiative in Technology-Driven Agriculture (CITA)". This program focuses on five key areas: soil and water conservation, soil enhancement, evolutionary crop populations, the integration of crops, forestry, livestock, and aquaculture, and integrated pest management, all aimed at restoring vital habitats, protecting watersheds, and enhancing soil health. Thus, CITA not only modernizes agriculture but also supports climate change mitigation and adaptation, contributing to sustainable, resilient, and eco-friendly rural development. In 2026–27, an amount of Rs 3500.00 lakh has been earmarked under a scheme for environmental components in the corporation sector through the environment budget.

7. Environment

The Directorate of Environment and Climate Change (DoECC) serves as the agency coordinating environmental initiatives in the State, working in close collaboration with the State Biodiversity Board, State Pollution Control Board, and the Kerala State Climate Change Adaptation Mission (KSCCAM). It led the development of the first Kerala State Action Plan on Climate Change (SAPCC) with contributions from various departments, agencies, and research institutions. All environmental

sector programs, whether directly or indirectly related to climate change, are incorporated within the Environment Budget.

The DoECC oversees the implementation of climate change mitigation and adaptation strategies under the SAPCC, supported by allied agencies such as the Biodiversity Board and Pollution Control Board in managing environmental resources and conserving biodiversity. In 2026–27, an amount of Rs 2782.00 lakh has been earmarked through 12 schemes for environmental components in the ecology and environment sector under the environment budget.

8. Forest and Wildlife

Despite the state's impressive forest coverage, certain districts experience lower biodiversity, reduced forest area and coverage, inadequate protection, and fewer water bodies within forests. The sector's vulnerability is further intensified by limited field-level human resources and conservation facilities, alongside increasing forest fires and human-wildlife conflicts. Strengthening adaptive capacity requires enhancing forest biodiversity, managing invasive species, and effectively addressing these challenges. Additionally, recurring natural disasters especially floods have caused significant vegetation loss, landslides, erosion of nutrient-rich topsoil, and overall degradation, reducing the forest floor's water retention capacity.

Therefore, eco-restoration of climatically and ecologically fragile regions, including forests and adjoining hilly areas within agro-ecosystems, is essential. Forests must also be prioritized as key carbon sinks to mitigate greenhouse gas emissions from other sectors. In 2026–27, an amount of Rs 22480.00 lakh has been earmarked through 32 schemes for environmental components in the forestry and wildlife sector under the environment budget.

9. Irrigation and Flood Management

Climate change is fundamentally a water crisis, with its impacts increasingly evident through floods, rising sea levels, droughts, and other extreme weather events. Protecting and restoring freshwater ecosystems not only helps reduce greenhouse gas emissions but also strengthens resilience against these climate extremes. Adopting more efficient water-use technologies, such as improved irrigation management, can help conserve water while boosting yields.

Water management must evolve to meet the challenges posed by climate change, while also contributing to its mitigation. Regular maintenance of canals and upgrades to irrigation systems can deliver significant water, energy, and carbon savings. Furthermore, investing in water infrastructure such as treatment plants, distribution networks, and storage facilities can improve water quality and reliability, helping communities better withstand and adapt to the impacts of a changing climate.

In 2026–27, an amount of Rs 8604.00 lakh has been earmarked through 9 schemes for environmental components in the irrigation sector under the environment budget.

10. Industry and Infrastructure Sector

a) Energy Sector

The energy sector plays a crucial role in shaping both the economy and the environment, acting as a major driver of economic growth while also being a significant source of environmental harm. The production of energy from fossil fuels such as coal, oil, and natural gas leads to pollution, environmental degradation, and contributes to climate change. However, the sector also holds the potential to mitigate these adverse effects through the transition to renewable energy sources like wind, solar, and hydropower, which can substantially cut carbon emissions and reduce reliance on fossil fuels. These renewable sources are sustainable and have a much smaller environmental impact compared to traditional energy production methods.

Additionally, advancements in energy efficiency and cleaner technologies, such as carbon capture and storage (CCS), further minimize the negative effects of energy generation. The state's vision for its power sector is to provide economically affordable and environmentally clean energy to all, aiming to achieve 100% renewable energy by 2040 and net zero emissions by 2050. This vision is to be realized through a phased transition emphasizing non-conventional and renewable energy sources, along with promoting energy efficiency and management systems. The Agency for Non-conventional Energy and Rural Technology (ANERT) and the Energy Management Centre (EMC) are the key agencies responsible for implementing and regulating renewable energy initiatives in Kerala. ANERT focuses on promoting and executing programs related to renewable and rural technologies, as well as encouraging carbon-neutral governance through renewable energy and electric mobility, while EMC implements schemes to enhance energy efficiency across various sectors through research, training, demonstration programs, and awareness campaigns, fostering a sustainable energy ecosystem in the state. Additionally, the State Action Plan on Climate Change (SAPCC) sets moderate emission reduction targets to prevent future increases in greenhouse gas emissions, requiring substantial transformations such as reduced fossil fuel dependence, the adoption of low-emission technologies, and strengthened energy conservation measures to achieve a sustainable and resilient energy future.

b) Scientific Service & Research (Science and technology institutions)

Science and technology institutions in the State focus on addressing environmental issues through high-quality research and development activities, while also proposing effective strategies for environmental management. Major institutions in this field include the Jawaharlal Nehru Tropical Botanical Garden and Research Institute (JNTBGRI), the Malabar Botanical Garden and Institute of Plant Sciences (MBGIPS), and the Kerala Forest Research Institute (KFRI). In addition, the Institute of Climate Change Studies (ICCS) concentrates on assessing the State-specific impacts of climate change on various sectors and regions, conducting relevant research, developing strategies, and proposing appropriate actions for

climate change management in collaboration with other institutes, universities, and line departments.

c) Medium and Large Industry

Industries play a major role in driving climate change by emitting large amounts of greenhouse gases through energy consumption, manufacturing processes, and transportation activities. These emissions trap heat in the atmosphere, leading to global warming and environmental issues such as rising temperatures, melting ice caps, and more frequent extreme weather events. To reduce their environmental impact, industries can adopt renewable energy sources, enhance energy efficiency, recycle waste materials, and implement cleaner production technologies.

In 2026–27, an amount of Rs 8100.5 lakh has been earmarked through 16 schemes for environmental components in the industry and infrastructure sector under the environment budget.

ENVIRONMENT BUDGET 2026-27				
SUMMARY STATEMENT				
Sl. No	**Sectors**	**No. of schemes selected**	**Budget allotted for environment component (Rs. lakh)**	**Remarks**
1	Agriculture	8	27887.00	Schemes such as soil health, KAU, development of rice, coconut, fruits, flowers, vegetables, and spices, Organic Farming and Good Agricultural Practices are included.
2	Soil and water conservation	5	1131.00	Schemes such as Resource Survey at Panchayat and Block level, KSREC, Revival of Traditional Water bodies, Development of micro watersheds, Protection of catchment of Reservoirs of water supply schemes are included
3	Animal Husbandry	1	1800.00	Scheme such as strengthening of department farms and conservation is included.
4	Dairy Development	2	984.93	Schemes such as Production and conservation of fodder in farmers' fields and Dairy Co-operatives and Commercial Dairy and Milkshed Development Programme are included.
5	Fisheries	10	17520.00	Schemes such as conservation of fisheries resources, Aquaculture Development, Sea safety and sea rescue operations, Reservoir Fisheries Development, Cleaning of Vembanad Lake, Suchitwa Sagaram, and Modernization/Up-gradation of Fishing Fleet, Punargeham, and Basic Infrastructural Facilities are included.
6	Cooperation	1	3500.00	The CITA scheme is implemented using the Integrated Farming System (IFS) method. Furthermore, activities such as value addition, micro-irrigation, formation and assistance to Farmer Service Centers etc. are included in the scheme. Initiative to develop Kerala as a High-Value Horticulture Hub is also adopted.

Sl. No	Sectors	No. of schemes selected	Budget allotted for environment component (Rs. lakh)	Remarks
7	Ecology and environment	12	2782.00	All 12 schemes from the sector are included
8	Forestry and wildlife	32	22480.00	Schemes of forest protection, biodiversity conservation, eco-development and eco-tourism, wildlife sanctuaries, national parks, forest fire protection works, Tiger reserves and Project Elephant, Human-animal conflict management, bio-sphere reserves, and eco-restorations programmes are included.
9	Irrigation and flood control	9	8604.00	Schemes such as Flood Management Programmes in Kuttanad, Thottappally Project, Coastal Zone Management, restoring polluted stretches of rivers based NGT Order, Renovation of Tanks and Ponds under Haritha Keralam, Rejuvenation of Rivers and Streams and Establishing Flood Early Warning Systems, ground water artificial recharge, control and regulation of ground water exploitation are included.
10	Industry and Infrastructure	16	8100.5	Schemes including Research & Development Institutions under Kerala State Council for Science, Technology and Environment, KSCSTE - Institute of Climate Change Studies Kottayam, Programmes on Renewable Energy, green energy hub (The scheme supports various activities to achieve Net Zero target by 2050 and 100 per cent Renewable Energy State by 2040), energy conservation fund (The activities under the scheme supports Net Zero initiatives of the State), Petro Chemical Park, Kochi, upgradation of infrastructure in industrial parks, upgradation of infrastructure in industrial parks under CDP are included.
Total		***96***	***94789.43***	***Outlay of Rs.947.89 crore in 96 schemes under 10 sectors***

CHAPTER 4

INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL SUSTAINABAILITY

4.1 Kerala State Disaster Management Authority (KSDMA)

1. **Role and Activities of KSDMA in Environmental Conservation, Mitigation and Sustainability**

   The Kerala State Disaster Management Authority (KSDMA), constituted under the Disaster Management Act, 2005, plays a central role in integrating environmental conservation and sustainability into Disaster Risk Reduction (DRR) and development planning. Prioritizing prevention over response, the KSDMA integrates environmental conservation into Disaster Risk Reduction (DRR). It mainstreams DRR into local planning through strict land-use regulations, such as quarrying restrictions and protecting natural drains. By notifying state-specific hazards and utilizing climate-inclusive assessments, KSDMA guides long-term policy.

2. Environmental Disasters, Vulnerabilities, and Adaptation/Mitigation Strategies

The Kerala State Disaster Management Authority (KSDMA) has fundamentally shifted the state's disaster management strategy from a response-centric approach to one prioritizing prevention, mitigation, and resilience. Facing acute vulnerability to over 39 natural and anthropogenic hazards—including recurrent floods, landslides, and emerging climate risks—KSDMA integrates environmental conservation into Disaster Risk Reduction (DRR) by mainstreaming it into local self-government planning through strict land-use regulations and climate-inclusive assessments. To support this evidence-based planning, the Authority has conducted comprehensive Hazard, Vulnerability, and Risk Assessments (HVRA) for all local bodies and established KaWaCHaM, an advanced early warning system that integrates real-time sensor data with multi-channel alerts. Through initiatives like urban flood mitigation projects (e.g., Operation Anantha) and specific action plans

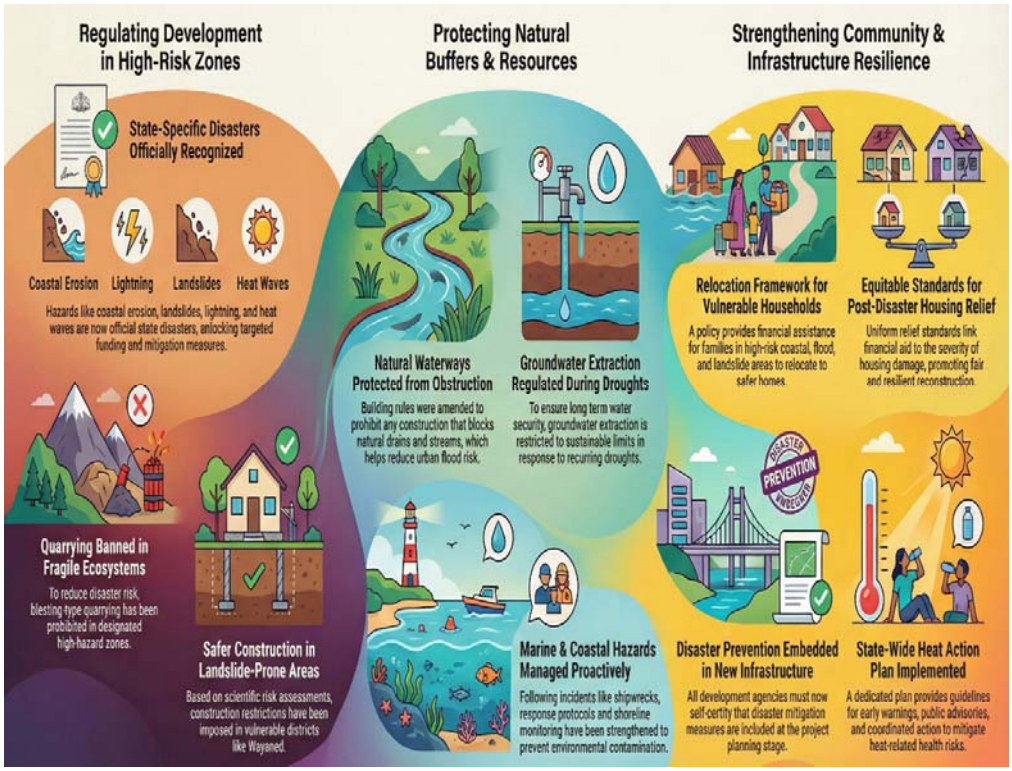
MoU signed to install doppler radar in Wayanad

A memorandum of understanding (MoU) was signed on Wednesday for setting up a Doppler Weather Radar at Pazhassiraja College, Pulpally, in Wayanad. The MoU was signed in the presence of Chief Minister Pinarayi Vijayan by Bathery Diocese Vicar General Father Sebastian Keepally, Neetha Gopal, Head of the India Meteorological Department Centre, Thiruvananthapuram, and State Disaster Management Authority Member Secretary Shekhar L. Kuriakose.

for heat and drought, KSDMA fosters sustainable development while significantly enhancing the state's anticipatory capabilities and environmental resilience.

3. Public Involvement and Inter-Departmental Coordination in Disaster Management and Climate Action

KSDMA prioritizes a people-centric, community-based approach to disaster management, empowering citizens as first responders through volunteer forces like Aapda Mitra, Samoohika Sannadha Sena, and Civil Defence units, alongside initiatives for disability-inclusive DRR and school safety. This grassroots resilience is bolstered by institutionalized coordination across all government levels, engaging national agencies like NDMA and international partners such as UNICEF for structured collaboration in capacity building and recovery. Ultimately, by integrating strong governance and scientific risk assessment with active community participation and inter-agency cooperation, KSDMA positions disaster management as a critical pillar of Kerala's environmental conservation and sustainable development.



4.2 Kerala Institute for Local Administration (KILA)

KILA strengthens the capacity of local self-government institutions to plan and respond to environmental and climate challenges by providing training, research, and action-oriented support in areas such as climate change adaptation, ecosystem-based disaster risk reduction, and sustainable local development planning. Major ventures undertaken by KILA are as follows:

- **Emergency Management Exercises for Improving Disaster Resilience (RKI – DLI 5)** - KILA implemented large-scale emergency preparedness exercises under the Rebuild Kerala Initiative to improve disaster readiness in flood-prone LSGs of the Pamba basin. Through mock drills, tabletop exercises, and coordination meetings, local governments strengthened response systems, inter-agency coordination, and community preparedness. Over 16,000 participants were trained, directly supporting Sendai Framework priorities.
- **Panchayat Climate Parliament** - This initiative mobilises youth and elected representatives to build grassroots climate governance. Using a three-stage model—mobilisation, deliberation, and action—students and youth collect local climate data, prepare action plans, and debate solutions through mock parliaments. The programme has generated actionable proposals for waste management, water restoration, and climate emergency preparedness at the Panchayat level.
- **Detailed Project Report (DPR) – Edavanna Grama Panchayat (Climate Change)** - KILA supported the preparation of DPRs addressing climate-induced water stress and agricultural vulnerability in Edavanna GP. The reports propose pond and stream rejuvenation, rainwater harvesting, climate-resilient agriculture, soil management, and local weather monitoring. These DPRs provide technically sound, fund-ready solutions for local climate adaptation.
- **Local Action Plan for Climate Change (LAPCC) – Edavanna & Muriyad GPs -** LAPCCs were prepared to help Panchayats systematically respond to climate risks such as floods, soil degradation, and rainfall variability. Using downscaled climate projections from KSDMA and participatory planning tools, the plans identify sector-specific adaptation and mitigation actions. LAPCCs integrate climate priorities into annual Panchayat planning and SDG implementation.

- **Localization of SDGs – Clean and Green Village** - This capacity-building programme trained LSG representatives and frontline workers to implement environmentally sustainable village-level initiatives. Sessions focused on sanitation, waste management, climate adaptation, and disaster risk reduction, aligned with SDGs 6, 7, 12, 13, 14, and 15. The programme strengthened institutional readiness for clean and climate-resilient local governance.

- **Watershed Development – Water Sufficient Village** - KILA conducted intensive training on watershed-based development to improve water security and ecological sustainability. Combining classroom learning with field exposure in Attappadi, the programme enhanced participants' understanding of watershed conservation, planning, and implementation. This supports drought resilience and sustainable land–water management.

- **Integrated Waste Management Training -** Through district-level and specialised training programmes, KILA strengthened the capacity of LSG functionaries in decentralised waste management. The initiative promotes climate-resilient waste systems, resource recovery, and community participation. With over 5,250 participants trained, it contributes directly to emission reduction, sanitation improvement, and Swachh Bharat goals.

- **Risk-Informed Master Planning (RIMP) -** Under World Bank–supported PforR, KILA provided technical support and training for the preparation of Risk-Informed Master Plans in vulnerable urban areas. RIMPs integrate disaster risk analysis, land-use planning, and climate adaptation measures. Alappuzha's RIMP has been sanctioned, while others are nearing public consultation.

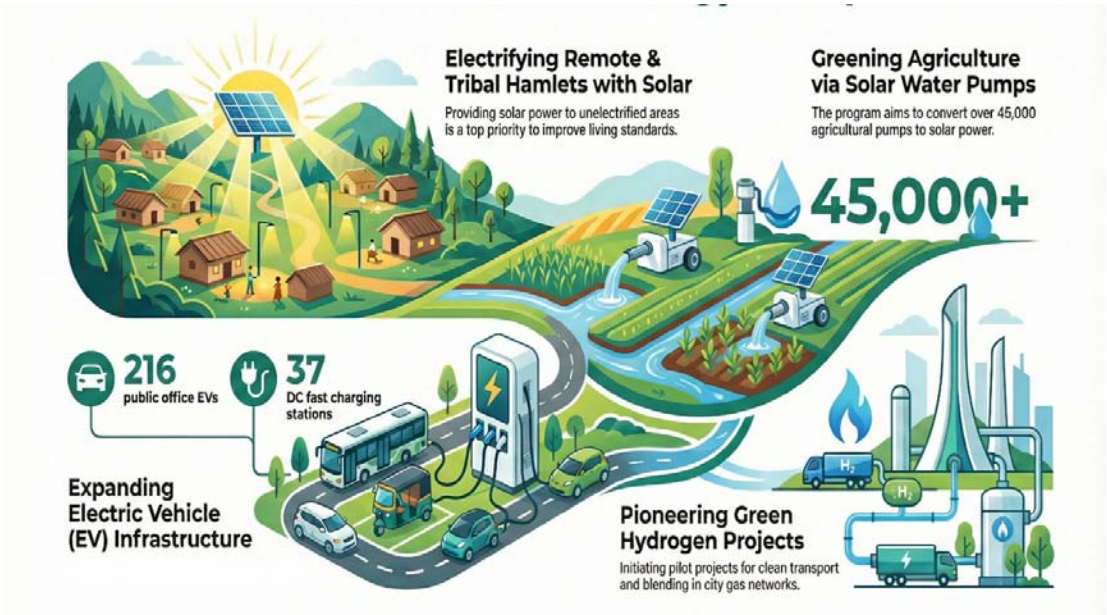
- **International Centre for Climate Innovation (ICCI) at KILA**- ICCI functions as a state-level hub for climate research, data generation, and innovation. It develops high-resolution climate information and decision-support tools for LSGs, while promoting partnerships with national and international institutions. ICCI anchors Kerala's local climate action within global frameworks like the Paris Agreement and SDGs.

- **Climate Co-benefit Performance Incentive Grants to LSGIs -** Performance-based climate incentive grants were awarded to LSGs implementing disaster risk reduction and climate-resilient actions. Assessment was conducted using the Disaster and Climate Action Tracker (DCAT). The initiative incentivises measurable climate outcomes and mainstreams resilience into local annual plans.

- **Kerala Urban Policy Commission** – Climate Actions- KILA supported youth and child consultations and policy dialogues to integrate climate resilience into Kerala's urban development framework. Inputs from over 1,000 students and scientific institutions informed policy discussions at the Kerala Urban Conclave. The initiative promotes nature-based solutions and climate-informed urban regulation.

4.3 Agency for New and Renewable Energy Research and Technology (ANERT)

ANERT functions as the State Government's nodal agency for renewable energy development and promotion, focusing on mitigation and sustainability in the energy sector. Its activities include assessment and deployment of renewable energy resources, promotion of carbon-neutral governance through solar energy and electric mobility, and advancement of emerging areas such as Green Hydrogen.



Environmental Outcomes and Success Stories

- Installation of solar power plants through micro-grids and stand-alone systems in remote hilly and forest areas has enabled electricity access without causing environmental degradation.
- Over 510 public buildings under Thiruvananthapuram Municipal Corporation have been solarized with a capacity addition of 17 MW under the Smart City project.
- Across the State, ANERT has solarized 1,677 public buildings over the last five years, adding a total solar capacity of 30 MW.
- The cumulative solar capacity of domestic and public buildings solarized by ANERT in Kerala is about 60 MW, leading to an estimated annual carbon emission reduction of around 40,000 tonnes.
- More than 210 electric vehicles are currently in use in various Government offices, reducing greenhouse gas emissions by over 300 tonnes per year.
- A network of over 37 public DC fast-charging stations has been established across the State to promote electric mobility.

4.4 Energy Management Centre (EMC)

The Energy Management Centre (EMC) facilitates the implementation of energy conservation projects across Kerala by providing financial assistance at concessional interest rates. The assistance is extended with a structured repayment mechanism through equal monthly instalments over a maximum period of five years, enabling institutions and stakeholders to adopt energy-efficient technologies in a financially sustainable manner

- **Kerala State Energy Conservation Fund** - EMC supports energy conservation projects across Kerala by providing concessional financial assistance with structured repayment mechanisms. During FY 2025–26, ₹3.91 crore was released to M/s TCC for replacing energy-intensive electrolysers and membranes at the AGC plant, resulting in significant energy savings.
- **Angan Jyothi**- The Angan Jyothi initiative promotes electric cooking and energy-efficient interventions in Anganwadis, empowering women and demonstrating carbon-free energy self-sufficiency. Phase I covered 2,809 Anganwadis with

induction cooking, rooftop solar PV systems, efficient appliances, and EV charging facilities. The programme was expanded with the installation of 262 BLDC fans, yielding annual savings of about 21,800 kWh and avoiding nearly 17,000 kg of CO_2 emissions.

- **Kerala State Energy Conservation Awards (KSECA)-** KSECA recognises excellence in energy conservation across sectors, including industries, buildings, institutions, and promoters of energy-efficient technologies. EMC coordinates the programme, conducts awareness campaigns, organises district-level events on National Energy Conservation Day, and facilitates knowledge sharing through best-practice dissemination and exposure visits.
- **Capacity Building and Awareness Creation-** EMC conducts training programmes, workshops, and seminars across multiple sectors, focusing on electric mobility, electric cooking, and clean technologies. Outreach initiatives include media campaigns, NGO partnerships, a dedicated energy helpline, student programmes, and the establishment of energy efficiency demonstration laboratories in schools.
- **Energy Talks with EMC -** "Energy Talks with EMC – അറിവിനു ഊർജം പകരാം" is a weekly YouTube series aimed at enhancing public energy literacy. With 25 episodes aired, the programme disseminates expert insights on energy conservation, renewable energy, and sustainable living, supported by social media outreach.
- **SUSTHIRA Campaign-** Under the Kerala Building Cell, EMC conducted 11 awareness programmes with over 450 participants, strengthening institutional readiness for compliance with sustainable and energy-efficient building practices.
- **Unarvu – Energy Conservation Campaign-** The Unarvu campaign promotes energy awareness among students and teachers. In its third phase, 35 programmes were conducted, reaching 2,060 participants through interactive sessions, lab visits, and exposure to emerging technologies.
- **Energy Club** - The Energy Club is a statewide student engagement initiative covering over 9,000 schools and 10 universities. It promotes climate literacy, energy audits, and community outreach, positioning students as change agents for sustainable energy behaviour.

- **Electric School Bus** - A stakeholder consultation workshop was conducted to explore the development of an electric school bus ecosystem in Kerala, marking progress towards clean and sustainable transport in the education sector.
- **International Energy Festival of Kerala (IEFK)** - The second edition of IEFK (2025) expanded its focus to renewable energy integration, energy storage, and smart grids, facilitating global knowledge exchange through exhibitions, discussions, and B2B meetings.
- **S.T.R.E.E. – Electric Cycles for Rural Entrepreneurs-** Under the S.T.R.E.E. scheme, 600 electric bicycles were distributed at subsidised rates to Kudumbashree women entrepreneurs in Palakkad and Kannur, promoting sustainable livelihoods and clean mobility.
- **Smart Electric Kitchen -** India's first carbon-neutral electric kitchen for mid-day meals was implemented in a government school in Kasaragod, demonstrating scalable clean cooking solutions for public institutions.
- **SHP and PSP Development -** EMC is advancing hydropower self-sufficiency through DPR preparation for Small Hydro Power (SHP) and Pumped Storage Projects (PSP). Draft SHP and PSP policies were submitted, and ten PSP sites were identified, with pre-feasibility studies completed for five major projects.
- **Asia Low Carbon Building Transition Programme (ALCBT) -** The ALCBT project assessed 80 buildings, selecting 16 for retrofitting under a low-carbon life-cycle framework. Capacity-building workshops on low-carbon transition and building registries were also conducted.
- **International Workshop on Energy Efficiency and Net Zero -** An international workshop held in September 2025 facilitated global knowledge exchange on energy efficiency, renewable energy, hydrogen, storage, and low-carbon policies, reinforcing Kerala's leadership in the energy transition.
- **National Painting Competition 2025 -** The state-level National Painting Competition engaged 100 students selected from over 16,000 district-level winners, promoting energy conservation awareness among school children.
- **Energy Conservation and Sustainable Building Code Implementation** - Kerala became the first state to notify ECSBC Rules and integrate them into municipal and panchayat building rules, entrusting implementation to 1,034 Local Self Government Institutions statewide.

4.5 Kerala Solid Waste Management Project (KSWMP)

The Kerala Solid Waste Management Project (KSWMP), supported by the World Bank and AIIB, aims to strengthen institutional capacity, infrastructure, and service delivery systems for scientific solid waste management across Urban Local Bodies (ULBs) in Kerala. The project focuses on legacy waste remediation, development of sanitary landfills, upgrading waste processing facilities, environmental safeguards, and large-scale awareness and capacity building.

- **Biomining and Bioremediation of Legacy Dumpsites** - Under KSWMP, 20 legacy dumpsites covering about 4.5 lakh MT of waste are being taken up for biomining and bioremediation, reclaiming nearly 67 acres of land. Biomining has begun at nine priority sites and is targeted for completion by March 2026, despite monsoon delays. A key milestone was the completion of biomining at the Malappuram (Puliyettummel) dumpsite in October 2025. In the next phase, seven additional dumpsites and the Njeliyanparambu dumpsite in Kozhikode (≈2 lakh MT) are being included, with feasibility studies completed and bidding in progress
- **Environmental, Health and Safety (EHS) Monitoring -** A robust digital EHS monitoring mechanism has been established using KoBoToolbox for daily reporting from biomining sites. The system captures geotagged data on safety, environmental parameters, and compliance, supported by dashboards, regular inspections, and third-party sampling to ensure regulatory adherence and timely corrective action.
- **Development of Sanitary Landfills -** To comply with Solid Waste Management Rules, 2016, 93 ULBs have been clustered into five regional groups, each with access to a sanitary landfill within 100 km. About 130 acres of land is required statewide. Public land has been identified at Cheemeni (Kasaragod) and Ambalamedu (Ernakulam), with feasibility, EIA and SIA completed for Ambalamedu. Private land identification is underway for other clusters, supported by site suitability assessments conducted by a Government-constituted committee.
- **Solid Waste Management (SWM) Plans -** Comprehensive SWM plans are being prepared for all 93 ULBs. Waste quantification and characterisation studies have been completed, with 75 draft plans prepared and 50 already approved by councils. All plans are expected to be finalised by March 2026. The plans propose advanced

solutions such as biomethanation, bio-CNG, RDF facilities, composting units, incinerators, and modern MCF/RRFs.

- **Environmental Safeguards in SWM Plans -** Each SWM plan includes a dedicated environmental safeguards framework covering screening, impact identification, mitigation measures, and monitoring protocols. Key focus areas include air and water quality, leachate management, occupational safety, traffic management, and community health, supported by routine monitoring and third-party audits.
- **Upgradation and Establishment of SWM Facilities -** KSWMP prioritises upgrading existing SWM facilities through civil and electrical improvements. A total of 105 DPRs have been prepared, with 87 financially sanctioned, 103 works initiated, and 12 completed, significantly improving waste segregation, processing, and resource recovery while reducing landfill dependence
- **Equipment and Vehicle Procurement -** To strengthen SWM operations, over 28 types of machinery and safety equipment have been procured through 394 packages. Additionally, feasibility reports for 36 vehicles have been approved, supply orders issued for 16 vehicles, and procurement initiated, improving waste collection, transportation efficiency, and urban cleanliness.
- **Bio-CNG Plants -** To manage biodegradable waste, Bio-CNG plants are being developed under KSWMP. A 30 TPD Bio-CNG plant is planned at Changanassery, with EIA approved and bidding in progress, supporting circular economy principles and clean energy generation.
- **Environment and Social Audit -** An independent Environment and Social Audit is being conducted by Ultratech LLP to assess compliance across KSWMP subprojects. The audit includes document review, field verification, and stakeholder consultations, with findings guiding corrective actions and strengthening overall safeguards.
- **IEC and Capacity Building -** Extensive IEC campaigns were conducted across all 93 municipalities through social media and public engagement activities, with over 390 digital contents disseminated. Capacity-building initiatives covered 193 training batches across 32 programmes, benefiting more than 11,000 participants and strengthening ULB-level implementation of scientific waste management practices.

4.6 Kerala State Land Use Board (KSLUB)

The Kerala State Land Use Board promotes sustainable development through scientific planning and optimal use of land, water, and natural resources. Using GIS-based mapping and analysis, the Department supports climate change mitigation and adaptation, natural resource conservation, micro-level planning, and awareness creation among students, farmers, and women.

- **SAJALAM -** The SAJALAM project focuses on preparing comprehensive water resource management and conservation plans for semi-critical groundwater blocks. During 2025–26, plan preparation for Kattappana Block in Idukki district is in progress, and during 2026–27 the project will be implemented in three severely affected semi-critical blocks.
- **Natural Resource Data, Publications and Decision Support -** The revised edition of Land Resources of Kerala (LRK-2025) is under preparation. LUB's Natural Resource Database supports planning for major State initiatives such as MGNREGS, food security, wetland conservation, and water conservation. The Department also proposes Panchayat level Natural Resource Data Banks for two districts to strengthen decentralised planning.
- **Sustainable Agriculture and Crop Planning -** LUB undertakes studies on crop sustainability, climate-resilient agriculture, carbon credit linkage, and location-specific land use interventions. Under the Samuchitha Vilanirnaya Padhathi, crop suitability assessments are being conducted at LSGI level, with pilot implementation completed in 10 panchayats and expansion planned to 12 panchayats during 2025–26. The Jaivasamrudhi project supports farmers through registration drives and distribution of planting materials and bio-fertilisers.
- **Land Tagging and Geospatial Planning -** Land tagging has been completed for selected sites, capturing detailed information on land use, soil, slope, geology, and capability classification. This activity will be expanded to additional land parcels during 2026–27 to support precise land-use planning.
- **Natural Resource Management and Watershed Planning -** Natural Resource Management (NRM) plans are being prepared for 23 micro-watersheds in the Keecheri river basin, enabling scientifically integrated planning beyond

administrative boundaries. Integrated land-use plans for special agricultural zones such as Kole, Kaippad, and Pokkali wetlands are planned for 2026–27 to ensure sustainable coexistence of agriculture, fisheries, biodiversity, and flood management.

- **Climate Resilience, Ecosystem and Vulnerability Mapping -** During 2026–27, LUB will undertake coastal land-use and vulnerability mapping in Thiruvananthapuram and Kannur districts, soil erosion hotspot mapping in the Western Ghats, and springshed development plans for Idukki and Kasaragod districts. These initiatives support climate resilience, water security, and ecosystem protection.
- **Land Resources Information Systems and GIS Support -** The upgraded Land Resources Information System (LRIS) was launched with updated land-use data for multiple districts. Wetland Information System (WLIS) databases have been prepared for seven districts and are being expanded further. GIS support is also provided for paddy land management, urban green and blue space mapping, ecosystem vulnerability assessment, and biodiversity planning in collaboration with relevant agencies.
- **Awareness, Capacity Building and Outreach -** LUD conducts awareness programmes for school children (Thalir), farmers (Prakrithipadam), and women (Avani Mithra – proposed). The Department also publishes a half-yearly newsletter Vibhavakeralam, disseminating information on natural resource conservation and best practices.

4.7 Integrated Rural Technology Centre (IRTC)

The Integrated Rural Technology Centre (IRTC), Palakkad, is a grant-in-aid institution under KSCSTE, Government of Kerala. It functions as a centre of excellence in applied research, technology development, and extension for sustainable rural development, with a strong focus on environmental conservation, climate resilience, and livelihoods.

- **Role in Environmental Conservation and Sustainability** - IRTC develops, demonstrates, and disseminates science-based technologies to support sustainable livelihoods, renewable energy adoption, waste management, biodiversity conservation, and climate action. It serves as a Centre of Excellence in Waste Management and as a hub for participatory research, capacity building, and community-level innovation.
- **Renewable Energy and Carbon Neutrality -** IRTC supports decentralised renewable energy through wind and solar initiatives, including village-level wind potential studies, installation of small wind turbines, and development of low-cost solar concentrators. Carbon-neutral panchayat initiatives include GHG baseline assessments, community-based inventories, and emission reduction planning.
- **Water Resource Management -** Key interventions include drinking water and wastewater quality testing, watershed management projects, irrigation impact assessments, and flood mitigation measures. NABARD-supported soil and fertility improvement works and drainage interventions have strengthened local water security and resilience.
- **Climate Change Mitigation, Adaptation and Disaster Management -** IRTC undertakes carbon-neutral surveys, climate risk zoning, and GIS-based disaster mapping. Drone-based assessments support post-landslide analysis and flood risk mitigation, while awareness programmes promote Mission LIFE and responsible consumption.
- **Solid and Liquid Waste Management -** As a State-accredited agency, IRTC develops indigenous solutions for waste treatment, including microbial consortia for liquid waste, STP/MBR optimisation, integrated composting, bio-remediation of industrial effluents, and plastic waste reduction campaigns. The Haritha

Sahayasthapanam model strengthens decentralised waste management at the local body level.

- Biodiversity Conservation and Ecosystem Restoration- IRTC integrates biodiversity conservation with livelihoods through agroforestry, pulse value chain development, soil health improvement, ecosystem-based disaster risk reduction, and eco-restoration projects such as pond rejuvenation and buffer zone development.
- Environmental Education and Capacity Building- Environmental awareness and skill development form a core mandate. Activities include GIS and remote sensing workshops, air quality training, mushroom cultivation programmes, industry-oriented STP design workshops, student engagement, and community outreach. IRTC has received State recognition for its Haritha Sahayasthapanam initiative.

CHAPTER 5

CONCLUSION AND WAY FORWARD

The Kerala Environment Budget 2026–27 marks a significant step in embedding environmental sustainability within the State's fiscal and development architecture. It demonstrates a clear shift from reactive environmental management to a proactive, risk-informed and resilience-oriented approach that recognises the interlinkages between ecology, economy and social well-being.

Kerala's experience shows that environmental degradation and climate change pose direct fiscal risks through increased disaster losses, infrastructure damage, livelihood disruptions and public health burdens. By prioritising environment-sensitive schemes across sectors such as agriculture, water resources, fisheries, forests, energy and urban development, the State is investing in prevention, mitigation and long-term resilience, thereby reducing future economic shocks.

Going forward, strengthening the Environment Budget will require deeper integration of climate and environmental tagging across all departments, improved outcome indicators, and regular assessment of environmental returns on public investment. Enhanced use of data systems such as greenhouse gas inventories, climate risk assessments, disaster and climate action trackers, and early warning platforms will be critical for evidence-based decision-making.

Decentralised climate governance must continue to be strengthened through Local Action Plans on Climate Change, community participation, and capacity building of local self-governments. At the same time, Kerala must leverage national and international climate finance, private sector participation through ESG frameworks, and innovation in clean energy and nature-based solutions to accelerate its transition to a low-carbon, climate-resilient economy.

In conclusion, the Environment Budget is not an endpoint, but a dynamic policy instrument. As climate risks intensify, Kerala's commitment to transparent environmental budgeting, resilient planning and inclusive development will be central to safeguarding its natural heritage, protecting its people, and ensuring sustainable prosperity in the decades ahead.

ENVIRONMENT
BUDGET STATEMENTS

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

1. AGRICULTURE

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	AGR001	Kerala Agricultural University	2415-01-188-99	7800.00	4300.00	Research	Research programmes giving thrust to crop improvement through new breeding techniques for development of climate resilient, pest and disease resistant, biotic and abiotic stress resistant varieties, development of bio formulations and microbes for plant protection, Development of Integrated Farming System Models.
2	AGR114	Rice Development	2401-00-102-90	9360.00	8070.00	Assistance for group farming of rice with integrated crop management and Royalty to paddy land owners.	Group farming of rice with integrated crop management aims at increased production and productivity in rice. Royalty for conservation of paddy lands as such.
3	AGR114	Vegetable Development	2401-00-119-85	6045.00	1705.00	Support to homestead, urban and semi urban vegetable cultivation, project based intentive vegetable cultivation in institutions.	Promoting vegetable production and productivity in the state in a safe-to-eat manner and attaining self-sufficiency through the promotion of homestead, urban and semi urban vegetable cultivation and project-based intensive vegetable cultivation in institutions.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
4	AGR 005	Coconut Development	2401-00-103-87	7300.00	7100.00	Comprehensive coconut rejuvenation and planting programme and coconut seedling distribution as part of coconut development council and subsidy assistance for introduction of micro irrigation/ fertigation in coconut gardens.	Integrated management & judicious use of resources through popularization of improved varieties and improving efficiency of plantation. It also includes promotion of micro irrigation techniques in coconut gardens that aim at water conservation.
5	AGR 124	Development of Spices	2401-00-108-59	1500.00	1500.00	Area expansion of spices, establishment of decentralized nurseries, support for adoption of improved IPDM management practices in black pepper.	Area expansion of spices, including intercropping and promotion of improved management practices, thus improving crop diversity within the farm and supporting judicious use of resources.
6	AGR 193	Development of Fruits, Flowers & Medicinal Plants	2401-00-119-79	2092.00	1667.00	Distribution of fruit plants, establishment of fruit clusters and promotion of exotic fruit production.	Area expansion of fruit crops that contribute to crop diversification in the farm with special focus to exotic fruit cultivation.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
7	AGR 127	Soil Health Management & Productivity Improvement	2401-00-800-28	3115.00	3115.00	Support of integrated nutrient management in paddy and other crops including soil ameliorants secondary and micro nutrients and soil test campaigns.	Improving soil health and increasing productivity through soil test-based nutrient applications and integrated nutrient management practices. Balanced nutrient application and site-specific management practices. Low external input usage.
8	AGR051	Organic Farming and Good Agricultural Practices	2401-00-105-85	525.00	430.00	Promotion of Organic farming and GAP cultivation in crops including organic certification, branding, packing and labelling, and Organic manure production programme-compost making units and additional support to biogas plants.	Promote safe-to-eat food production through organic practices and Good Agricultural Practices. Low external input usage.
TOTAL				**37737.00**	**27887.00**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

2. SOIL AND WATER CONSERVATION

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	SWC 004	Resource Survey at Panchayat and Block level	2402-00-001-96	184.00	158.00	1. Integrated Land Use Plan for Special Agricultural Zone. 2. Coastal Land Use and Vulnerability Mapping 3. Spring Shed Development and Management Plan 4. Soil Erosion Hotspot Mapping and Management Plan	1. Integrated Land Use Plan for Special Agricultural Zone - To develop an integrated land-use framework that effectively balances agriculture, aquaculture, biodiversity conservation, and flood management is crucial for safeguarding the long-term sustainability of these ecologically fragile and economically valuable wetland regions. 2. Coastal Land Use and Vulnerability Mapping - A Coastal Land Use and Risk Mapping initiative is proposed to generate scientific evidence on erosion, sea-level rise, and land vulnerability, enabling targeted interventions, disaster risk reduction, and sustainable management of Kerala's ecologically sensitive coastal regions. 3. Spring Shed Development and Management Plan - Protecting and restoring springs in Kerala through scientific spring shed management and community participation is essential to ensure sustainable water resources and ecological balance. 4. Soil Erosion Hotspot Mapping and Management Plan - Kerala's hilly regions face severe soil erosion due to fragile soils, heavy rains, steep slopes, and poor land use, worsened by climate change, calling for scientific hotspot mapping and sustainable management.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
2	SWC 003	Kerala State Remote Sensing and Environment Centre	4402-00-188-99	1315.00	315.00	1. Satellite data based report generation of plots related to Wetland and Paddy Conservation Act. 2. Decision Support System for Spatial Planning and Empowering Local Self-Governments in Spatial Governance.	1. Satellite data based report generation of plots related to Wetland and Paddy Conservation Act - to assess the land use status as on August 2008 especially whether paddy and wetland converted to a plantation crop. 2. Decision Support System for Spatial Planning and Empowering Local Self -Governments in Spatial Governance helps to develop comprehensive spatial data base of natural resources which helps conservation of ecology and environment.
3	SWC 063	Revival of Traditional Water bodies	4402-00-102-99	200.00	200.00	The scheme focuses on the revival and development of traditional water bodies.	The scheme focuses on the revival and development of traditional water bodies, such as thalakulams, springs, and drainage sources, to enhance groundwater levels and address drought impacts on agriculture. By implementing scientific water conservation methods, it aims to improve water harvesting, particularly for agricultural use, and treat tributaries and drainage systems of major rivers. The scheme plays a vital role in sustaining water resources, improving groundwater recharge, and supporting environmental resilience against droughts.

Sl.No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
4	SWC 065	Development of Micro watersheds	4402-00-102-98	393.00	393.00	The initiative aims to combat soil erosion and conserve soil moisture, particularly in post-flood and post-landslide areas.	The initiative aims to combat soil erosion and conserve soil moisture, particularly in post-flood and post-landslide areas, by developing micro watersheds. This will promote climate-resilient agriculture and enhance environmental sustainability, improve soil health, reduce erosion, and build resilience to climate change, benefiting both the environment and agriculture.
5	SWC 014	Protection of Catchment of Reservoirs of Water Supply Schemes	2402-00-102-88	65.00	65.00	The scheme focuses on addressing siltation in reservoirs.	The scheme focuses on addressing siltation in reservoirs, which affects the water supply capacity. It aims to improve the reservoirs' ability to hold water by implementing both structural and vegetative conservation measures. These measures include planting grasses, wild vetiver, and other species, as well as using geotextiles to reduce soil erosion. The scheme plays a crucial role in preserving water resources, improving water quality, and promoting environmental sustainability.
TOTAL				**2157.00**	**1131.00**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

3. ANIMAL HUSBANDRY

Sl.No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	AHY 106	Strengthening of Department Farms and Conservation	2403-00-102-81 4403-00-102-96	1800.00	1800.00	Promoting sustainable farming practices and efficient resource use.	The Animal Husbandry Department controls farms for cattle, goats, pigs, rabbits, poultry, and ducks, aiming to modernize and strengthen them as production, breeding, and demonstration centers. The scheme includes infrastructure development, supply of inputs, mechanization support, and the establishment of new farms, benefiting both farmers and the environment by promoting sustainable farming practices and efficient resource use. This helps the environment by optimizing farm operations, reducing waste, and promoting sustainable farming practices through improved training and technology.
TOTAL				**1800.00**	**1800.00**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

4. DAIRY DEVELOPMENT

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	DDT 035	Production and Conservation of Fodder in Farmers Fields and Dairy Co-operatives	2404-00-102-77	750.00	750.00	The scheme aims to address the scarcity of fodder in the dairy sector, which increases production costs, by promoting sustainable fodder cultivation practices.	The scheme addresses fodder scarcity in the dairy sector by promoting sustainable cultivation practices, offering several environmental benefits. It encourages the use of barren land for perennial fodder crops, reducing pressure on forests, and introduces eco-friendly feeding techniques and agroforestry, which support biodiversity and soil health. Additionally, it focuses on drought-resistant crops and efficient irrigation to conserve water, while promoting fodder trees and live fencing for carbon capture and soil erosion prevention. Ultimately, the scheme fosters both environmental sustainability and the economic viability of dairy farming.
2	DDT 012	Commercial Dairy and Milk shed Development Programme	2404-00-109 -93	4000.00	50.00	Construction of elevated cattle shed.	Elevated and community cattle shed: .It will ensure continuity in dairy operations during annual floods, preventing livestock causalities and providing a secure environment for the surviving animals.
			4404-00-109-96 (02)	184.93	184.93	Construction of cattle shed.	Assistance for Construction of Scientific Cattle Shed: Focusing on agricultural practices for disease prevention and ensuring food safety. Scientific designed cattle sheds helps to keep the animal in optimum THI (Temperature-Humidity Index) thus reducing the environmental heat stress and maximize the productivity and thereby ensuring profitability to farmers.
TOTAL				**4934.93**	**984.93**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

5. FISHERIES

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	FSH 128	Conservation and Management of Fish Resources (Marine)	2405-00-103-91	900.00	900.00	To sustain marine fisheries for nutritional food security, economic growth and ensuring the sole livelihood of fishermen, effective surveillance and management principles in natural marine fisheries have to be effectively implemented. The components include implementation of KMFR Act, online registration and licensing of fishing vessels, co-management of marine fishery resources & functioning of Fisheries Management Councils (FMCs).	To sustain marine fisheries for nutritional food security and economic growth.
2	FSH 128	Conservation and Management of Fish Resources (Inland)	2405-00-101-62	400.00	400.00	To increase the fish production by protecting the natural stock through Fisheries Management Councils (FMCs), by conducting patrolling to prevent illegal fishing, by enhancing the fish stock through ranching, by the establishment of a protected area, restoration of damaged aquatic ecosystems and mangrove afforestation.	To increase the fish production. Establishment of a protected area, restoration of damaged aquatic ecosystems and mangrove afforestation.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
3	FSH 180	Aquaculture Development	2405-00-101-54	7000.00	7000.00	Promotion of different aquaculture systems like cages, bioflocs, seaweed and mussel-oyster farming, aquaponics, riverine and open water systems. It also proposes utilizing the potential resources available in the State for shrimp farming.	To promote different aquaculture systems.
4	FSH 195	Sea Safety and Sea Rescue Operations	2405-00-103-76	300.00	300.00	To enhance sea safety and sea rescue operations. As part of the sea safety measures, grant assistance is envisaged for fishermen for the procurement of essential sea safety equipment, including marine communication equipment, Global Positioning System (GPS), life jackets, life buoys, and Automatic Identification System (AIS) / satellite-based communication and vessel tracking devices.	To enhance sea safety and sea rescue operations and reduce marine pollution.
5	FSH 209	Reservoir Fisheries Development	2405-00-101-51	100.00	100.00	To enhance inland fish production through reservoir fisheries.	To enhance inland fish stock.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
6	FSH 213	Cleaning of Vembanad Lake	2405-00-101-50	100.00	100.00	The scheme envisages protecting and conserving the natural ecosystem of brackish water lakes of Kerala.	To protect and conserve the natural ecosystem of brackish water lakes of Kerala.
7	FSH 239	Modernization/ Up gradation of Fishing Fleet (Traditional/ Mechanized)	2405-00-110-94	150.00	150.00	It is proposed to replace the traditional fishing craft especially plywood craft with modern FRP vessels for more strength, safety efficiency and facilities.	To replace the traditional fishing craft to enhance fuel efficiency and reduce marine pollution.
8	FSH 211	Removal of Plastic from Water Bodies- "Suchitwa Sagaram"	2405-00-103-69	150.00	150.00	The scheme is proposed to reduce plastic waste accumulation in the sea and conservation of aquatic life from the plastic menace.	To reduce plastic waste accumulation in the sea and to conserve aquatic life from the plastic menace.
9	SAD 034	Basic Infrastructural Facilities and Human Development of Fisher folk (Capital Head)	4405-00-103-93	2000.00	2000.00	Envisages a sustainable coastal village including provision for the improvement of basic amenities such as safe drinking water, sanitation, provision for health facilities, houses, setting up of fish marketing centers, construction of fisheries schools.	Envisages a sustainable coastal village.

Sl.No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
10	SAD 034	Basic Infrastructural Facilities and Human development of Fisher folk (Punargeham)	4405-00-103-89	6420.00	6420.00	It proposes the rehabilitation of all families residing within 50m from HTL under the constant threat of sea erosion to safer locations. The evacuated land within 50 meters from the sea coast can be used for the formation of bio-shield.	The rehabilitation of all families residing within 50m from HTL. For the formation of bio-shield.
TOTAL				**17520.00**	**17520.00**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

6. CO-OPERATION

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	COP 086	Co-operative's Initiative in Technology Driven Agriculture (CITA)	2425-00-107-59	1000.00	1000.00	The CITA scheme is implemented using the Integrated Farming System (IFS) method. In order to enhance the competitive-ness and viability of agriculture and allied sectors a new initiative, emphasizing on the technology application and collective efforts in farming. Furthermore, activities such as value addition, micro-irrigation, formation and assistance to Farmer Service Centers etc. are included in the scheme. Initiative to develop Kerala as a High-value Horticulture Hub is also adopted.	Contributes to environmental sustainability by promoting eco-friendly agricultural practices such as organic farming, efficient water usage through micro-irrigation, and reduced dependence on harmful chemicals. The adoption of Integrated Farming Systems (IFS) encourages biodiversity and soil health, while value addition and processing of agricultural products help reduce post-harvest wastage. By supporting the establishment of Farmers Service Centers and Grameen markets, the scheme reduces transportation-related carbon footprints and facilitates local, sustainable food systems. Furthermore, the initiative to develop Kerala as a High-Value Horticulture Hub supports the cultivation suited to the region's agro-climatic conditions.
			4425-00-107-79	1000.00	1000.00		
			6425-00-107-68	1500.00	1500.00		
TOTAL					**3500.00**	**3500.00**	

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

7. ECOLOGY AND ENVIORNMENT

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	EAE 001	Strengthening of the Department of Environment and Climate Change	3435-03-102-89	50.00	50.00	Infrastructure development, Capacity building, procurement of instruments/ software/geo-spatial data for environment monitoring.	Administrative expenditure related to environmental activities.
2	EAE 002	Environmental Awareness and Education	3435-03-003-98	120.00	120.00	Bhoomithra Sena Clubs, Paristhithikam, observance of environmentally significant days, Paristhithimithram awards, other sensitization programmes.	Environment awareness and incentives programmes included in this scheme.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
3	EAE 003	Environment Research and Development	3435-03-103-99	200.00	200.00	Paristhithiposhini and Vidhyaposhini fellowships, recurring funds for ongoing projects, geo-spatial laboratory facility, new projects.	Environment research and development activities included in this scheme.
4	EAE 004	Biodiversity Conservation	3435-03-101-99	1300.00	1300.00	Biodiversity conservation, Access and benefit sharing, Research and Knowledge Hub, Strengthening of the Biodiversity Board.	Bio diversity aspect related to environment.
5	EAE 009	Environment Impact Assessment	3435-04-104-99	160.00	160.00	Capacity building, Statutory functioning and operational costs, Functioning of district level machinery.	The scheme outlay is used for conducting studies and EIA on ecologically sensitive areas.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
6	EAE 016	Climate change	3435-04-104-98	192.00	192.00	State Climate Change Cell, New and Recurring Projects, Ujjwal Post-doctoral Fellowship.	Research activities related to climate change included in the scheme.
7	EAE 022	Kerala State Pollution Control Board	3435-04-188-99	300.00	300.00	Infrastructure development, procurement of instruments for environment monitoring, digitization, awareness creation, and surveillance programmes.	All the activities related to environmental aspects.
8	EAE031	State Wetland Authority, Kerala (SWAK)	3435-03-101-89	150.00	150.00	Administrative functioning of SWAK, Implementation of Wetland Rules (Conservation and Management Rules), 2017. Notification of wetlands and allied activities, and wetland boundary demarcation, wetland education, data augmentation and dissemination campaigns, preparation of integrated management action plans of wetlands as per the Wetland (Conservation and Management) Rules.	Wetland specific activities within the state.

Sl.No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
9	EAE033	Kerala Coastal Zone Management Authority (KCZMA)	3435-03-102-87	120.00	120.00	Operational and administrative expenses, expenses of court cases, transportation expenses, website updation, awareness creation.	The Kerala Coastal Zone Management Authority (KCZMA) ensures proper implementation of CRZ notification in the entire coastal stretches of Kerala.
10	EAE035	State Wetland Authority, Kerala (SWAK) (40% SS and 60 % CSS)	3435-03-101-87 (2)	60.00	60.00	Preparation and implementation of projects based on management action plan for Vembanad, Ashtamudi, Sasthamkotta and other wetlands.	Wetland specific activities within the state.
11	EAE 036	Climate Resilient Farming	3435-03-103-97	30.00	30.00	Development of climate resilient protocol for important agriculture crops, climate change vulnerability and risk assessment of agro-ecological zones of Kerala.	Development of climate resilient protocol for important agriculture crops.

Sl.No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
12	EAE 042	Kerala State Climate Change Adaptation Mission-KSCCAM	3435-03-103-94	100.00	100.00	Adopt Carbon Capture usages & Storage technologies, climate change dialogue series, establishment expenses.	All the activities related to Environment.
TOTAL				**2782.00**	**2782.00**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

8. FORESTRY AND WILDLIFE

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
Management of Natural Forest							
1	FOR002	Forest Protection (Survey of Forest Boundaries and Forest Protection)	2406-01-101-81	2500.00	2500.00	Survey and forest boundary demarcating structures, improvement of eco-system services, livelihood of forest dependent communities, forest protection activities, measures to reduce forest fire incidents and human-wildlife conflict, staff quarters and procurement of equipment and vehicles for protection, digitization.	The scheme is to improve ecosystem services including water and clean air, environmental stability, minimization of forest fire incidents, partnership with forest fringe communities for forest protection, improve the livelihood of forest dependent communities, and to improve the biodiversity of forests.
2	FOR002	Forest Protection (Survey of Forest Boundaries and Forest Protection)	4406-01-101-99 (01)	2500.00	2500.00		

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
3	FOR003	Regeneration of Denuded Forests	2406-01-101-94	225.00	225.00	Raising and maintenance of plantation, fire protection measures, and eco-restoration activities.	The scheme is to convert the degraded forests to natural forest and thereby improving the biodiversity and the ecosystem services.
4	FOR073	Non-wood Forest Products Including Promotion of Medicinal Plants	2406-01-101-80	160.00	160.00	Fencing, awareness programmes, medicinal plantation, fire protection, documentation and mapping, biodiversity conservation.	Supporting the conservation of biodiversity.
TOTAL				**5385.00**	**5385.00**		

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
Improving productivity of plantation							
5	FOR004	Hardwood Species	4406-01-105-87 (01)	500.00	500.00	Raising of plantations and nursery, maintenance of plantations.	Raising of new plantations, eco-restoration sites, treatment and maintenance of existing plantations, eco-restoration sites, and raising of seedlings.
6	FOR104	Assistance to Kerala Forest Development Corporation	4406-01-190-99	150.00	50.00	Bamboo Plantation	Biodiversity conservation
7	FOR143	Minimum Support Price for Minor Forest Produce (25 % SS)	2406-01-105-89 (02)	100.00	100.00	Procurement of wild honey, collection centers of FDA, centralized collection, value addition, processing.	Procurement of wild honey, shatavari and broom grass.
TOTAL				**750.00**	**650.00**		

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
Bio -diversity Conservation & protected area management							
8	FOR 011	Conservation of Biodiversity	2406-02-110-68	597.00	597.00	Habitat improvement, awareness creation, natural resources management, rescue centers, fire protection, camps, Eco development activities, observation of wildlife week, capacity building, research, removal of weeds, roads/paths, captive elephant management, surveys and monitoring.	The main objective of the scheme is conservation of biological resources.
9	FOR015	Eco - Development Programme	2406-02-110-56	350.00	350.00	Participatory conservation of natural resources, resources management, alternative livelihoods, hamlet development, fire protection, facilities and energy management, camps, EDC.	Participatory conservation of natural resources, resources management.
10	FOR016	Eco-tourism	4406-01-800-91	600.00	600.00	Renovation, strengthening and consolidation of sites, procurement of materials and equipment's, maintenance of facilities, protection activities, waste management.	Ensure sustainable tourism practices which include conservation of nature and wildlife, and allow local communities to benefit from tourism.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
11	FOR069	Elephant Rehabilitation Centre at Kappukad	2406-02-110-29	200.00	200.00	Enhancement of facilities in the center.	Ensuring healthy environment for the captive elephants.
12	FOR 107 to 122	Integrated Development of Wild Life Habitat-Management of Wildlife Sanctuaries - 16 nos(40% SS)	2406-02-110-(13-02 to 28-02)	300.00	300.00	Protection of wildlife habitats, mitigation of human-wildlife conflict, eco-development, awareness creation, capacity building, eco-tourism.	Restoration of habitats, and eco-development.
13	FOR 123 to 127	Integrated Development of Wild Life Habitat-Management of National Parks - 5 nos (40% SS)	2406-02-110-(75-02 to 79-02)	120.00	120.00	Protection of wildlife habitats, mitigation of human-wildlife conflict, eco-development, awareness creation, capacity building, eco-tourism.	Restoration of habitats, and Eco-development.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
14	FOR 128	Integrated Development of Wild Life Habitat-Management of Community Reserves-Kadalundi-Vallikkunnu (40% SS)	2406-02-110-72 (02)	9.47	9.47	Protection of wildlife habitats, mitigation of human-wildlife conflict, eco-development, awareness creation, capacity building, eco-tourism, infrastructure facilities, capacity building, camps.	Restoration of habitats, and eco-development.
15	FOR 129 and 130	Project Tiger - 2 Tiger Reserves (40% SS)	2406-02-110-73 and 74 (02)	600.00	600.00	Protection of wildlife habitats, mitigation of human-wildlife conflict, eco-development, awareness creation, capacity building, eco-tourism, infrastructure facilities, capacity building, camps, anti-poaching activities.	Restoration of habitats, and eco-development.
16	FOR 131	National Afforestation Programme - National Mission for Green India (40% SS)	2406-01-102-86 (02)	200.00	200.00	Eco-system services, enhancement of tree cover outside forest, agroforestry and social forestry, restoration of wetlands, alternative energy.	National Mission for Green India, one of the eight missions under the NAPCC, recognizes that climate change will seriously affect and alter the distribution, type and quality of natural biological resources and the associated livelihood of the people.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
17	FOR 132	Integrated Development of Wildlife Habitat (Protection of Wildlife Outside Protected Areas - 40% SS)	2406-02-110-52 (02)	300.00	300.00	Elephant proof walls and trenches, RRTs, squads, wildlife monitoring, relief of victims, study and assessment, monitoring systems.	To reduce Human wild conflict.
18	FOR 134	Forest Fire Prevention and Management Scheme (40% SS)	2406-01-101-77 (02)	200.00	200.00	Forest fire prevention measures, infrastructure support, awareness creation, capacity building.	The scheme is to ensure forest areas free from fire and to enrich biodiversity in forest.
19	FOR 138	Integrated Development of Wildlife Habitat - Wayanad Wildlife Sanctuary - Relocation (40% SS)	2406-02-110-31 (02)	200.00	200.00	Relocation of tribal communities.	Relocation of tribal communities.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
20	FOR 140	Recovery Programme for Nilagiri Tahr	2406-02-110-12 (02)	26.09	26.09	Habitat management, protection of Nilgiri Tahr, awareness creation	The main objective of the scheme is recovery of endangered species like Nilgiri Tahr in Munnar/Silent Valley region
21	FOR 141	Recovery Programme for Critically Endangered Species	2406-02-110-11 (02)	11.44	11.44	Habitat management, protection of vultures, awareness creation, documentaries	The main objective of the scheme is recovery programme for the endangered species of vultures in Wayanad Wildlife Sanctuary.
TOTAL				**3714.00**	**3714.00**		

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
Resource Planning & Research							
22	FOR051	Forest Management Information System & GIS	2406-01-800-57	150.00	150.00	IT Supports and devices/ software/ equipment/ machines, website, electronic equipment, monitoring and evaluation.	E- Governance initiatives
23	FOR064	Measures to Reduce Human - Animal Conflict	2406-02-110-09	10000.00	10000.00	Various measures to mitigate human-wildlife conflict, compensation to victims, insurance, wildlife rescue, relocation of habitats, monitoring and evaluation, RRTs, early warning systems, awareness creation.	Improvement of wildlife habitats one of the major focus.
24	FOR067	Zoological Park, Wildlife Protection and Research Centre, Puthur	2406-02-110-48	600.00	600.00	Construction and maintenance of infrastructure facilities, establishment expenses.	Rehabilitation of the animals

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
25	FOR070	Extension, Community Forestry& Agro Forestry	2406-01-101-78 (01)	600.00	600.00	Seedlings production and distribution, Urban forests, Vidyavanam, Nakshathra Vanam, Forestry Clubs, Sanjeevani Vanam, Medicinal Gardens, Extension Activities, Observation of Important Environment days, awareness creation, Forestry Information Bureau.	The scheme aims at enhancing the green cover outside forests, protect special habitats outside forests, to create awareness among the public on the importance of biodiversity conservation, and to promote urban forestry.
26	FOR076	Resource Planning & Research	2406-01-004-92	100.00	100.00	Fire prevention, plantation, silvi-cultural operations, infrastructural facilities, data collection and analysis, working plans.	Preparation of working plan and management plan for forest.
27	FOR 133	Project Elephant (40% SS)	2406-02-110-35 (02)	350.00	350.00	Protection and improvement of elephant habitats, captive elephant management, mitigation of human-elephant conflicts, anti-poaching activities, fire protection, eco-restoration, compensation to victims, translocation of elephants, awareness creation, elephant day celebrations, infrastructure management.	The objective of the scheme is to protect the elephant and to improve its habitats.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
28	FOR 135	Conservation of Natural Resources and Ecosystems (Nilgiri Biosphere reserve) - 40%SS	2406-02-110-34 (02)	180.00	180.00	Habitat improvement, threated species rehabilitation, NTFP processing, upliftment of local communities, corridors management, research and monitoring.	Habitat improvement activities, rehabilitation of landscape of threatened species and ecosystem.
29	FOR 136	Conservation of Natural Resources and Ecosystems (Agasthyamala Biosphere Reserve)- 40%SS	2406-02-110-33 (02)	120.00	120.00	Habitat improvement, threatened species rehabilitation, NTFP processing, upliftment of local communities, corridors management, research and monitoring.	Habitat improvement activities, rehabilitation of landscape of threatened species and ecosystem.
30	FOR 144	Eco - restoration	2406-01-101-76	31.00	31.00	Replanting and enrichment with native species, forest fire protection, elimination of alien species, protection of river banks and coastal areas and other eco-systems.	To restore areas planned with species like eucalyptus, acasia, wattle, etc., in forest areas to other natural state.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
31	FOR 134	Forest Fire Prevention and Management Scheme -TSP (40% SS)	2406-01-796-98 (02)	100.00	100.00	Fire management with community support through forest management approaches, awareness campaigns, fire watchers.	To ensure forest areas free from fire by using modern technology, to enrich biodiversity of forest, and to protect both flora and fauna.
32	FOR 145	Kozhikode Biological Park (New Scheme)	2406-02-110-06	500.00	500.00	Wildlife conservation, research, ecotourism and environmental education.	Wildlife conservation and environmental education.
TOTAL				**12731.00**	**12731.00**		
				22580.00	**22480.00**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

9. IRRIGATION AND FLOOD CONTROL

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
1	MMI 098	Establishing Flood Early Warning System	4701-80-800-69	100.00	100.00	Real time operation of reservoirs integrated with flood forecasting and warning system for river basins.	This system helps in issuing timely warnings to facilitate disaster preparedness.
2	MMI 101	Thottappally Project	4701-21-800-96	500.00	500.00	Flood control works in Achenkovil, Pamba and Manimala rivers to prevent flooding in low lying areas of Kuttanad.	Protection works on the banks of Pamba river to safeguard the region from flooding.
3	MMI 104	Rejuvenation of Rivers and Streams	2701-80-800-73	200.00	200.00	Improve the water carriage capacity of the existing rivers and streams by desiltation, removal of weeds and other debris and to carryout essential protection works/training works on rivers and streams banks.	Prevent floods, improve ground water level, ensure safety to the life of people, and prevent erosion of banks of rivers, streams and structures on the sides of the bank river.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
4	MIN 003	Scheme for Control and Regulation of Ground Water Exploitation	2702-02-005-93	50.00	50.00	Address complaints of over exploitation of groundwater, registration of drilling rigs and firms/agencies engaged in construction of groundwater abstraction structures and its renewal and conduct mass awareness programmes on groundwater conservation, management and water quality issues.	Control and regulate groundwater development through the implementation of Kerala Groundwater (Control & Regulation) Act 2002 to prevent adverse environmental impacts of groundwater exploitation and to ensure equitable distribution of resources.
5	MIN 007	Conservation of Ground Water and Artificial Recharge	4702-00-102-97	600.00	600.00	Conservation and recharge of ground water through artificial recharge techniques.	Restore supplies from aquifers depleted due to excessive draft or to improve supplies from aquifers lacking adequate natural recharge.
6	MIN 057	Renovation of Tanks and Ponds under Haritha Keralam	4702-00-101-63	750.00	750.00	Renovation and revamping of major existing public/ community ponds.	Revival, conservation and up gradation of local water resources and traditional system of water management.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
7	MIN 062	Restoring Polluted Stretches of Rivers Based on National Green Tribunal Order	2702-01-800-86	200.00	200.00	Reinstate polluted stretches and rivers in Kerala based on NGT order.	The objective of the scheme is to restore the polluted river stretches based on the orders of National Green Tribunal.
8	FC 032	Flood Management Programmes in Kuttanad	4711-01-103-84 (01),(02),(03)	6050.00	6050.00	Mitigate floods in various padasekharams of Alappuzha and Kottayam districts.	Various flood mitigation works to protect the padasekharamas from flooding.
9	FC 012	Coastal Zone Management	4711-02-103-99	154.00	154.00	Construction of new sea wall and reformation of old sea wall.	For protecting the coastal stretches from the wave attack, it is envisaged to construct sea wall using modern technologies.
TOTAL				**8604.00**	**8604.00**		

ENVIRONMENT BUDGET SCHEME WISE DETAILS 2026-27

10. INDUSTRY AND INFRASTRUCTURE

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
SCIENTIFIC SERVICE AND RESEARCH							
1	SSR 002	Research &Development Institutions Under Kerala State Council for Science, Technology and Environment	3425-60-200-71(01)	5920.00	1420.00	Jawaharlal Nehru Tropical Botanical Garden & Research Institute (JNTBGRI)- The Institute undertakes research programmes for the sustainable utilization of plant resources of Kerala and functions as an inventory for conservation of plant wealth.	The institute conducts various R&D activities to sustainable use of plants and conserve them.
					400.00	Malabar Botanical Garden & Institute of Plant Sciences (MBGIPS) - MBGIPS is an institution for the conservation and research on aquatic plant diversity, lower group plants, and endangered plants of the erstwhile Malabar Region as well as disseminating knowledge on various facts of plant sciences.	The institute conducts various R&D activities to the conservation of lower group plants of Malabar region
					1350.00	Kerala Forest research Institute (KFRI) - KFRI envisioned as a Centre of Excellence in Tropical Forestry, conduct research to provide scientific support for decision making on matters related to forestry, with particular emphasis on conservation, sustainable utilization and scientific management of natural resources.	The institute conducts various R&D activities focusing on conservation, sustainable utilization and scientific management of natural resources.

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
2	SSR 060	KSCSTE - Institute of Climate Change Studies Kottayam	3425-60-200-50	130.00	130.00	The institute focuses on State specific impacts of climate change on various sectors and zones of the State, conduct research, develop strategies and propose appropriate action for climate change management.	The institute aims to address environmental issues of Kerala, and develop strategies to solve them.
TOTAL				**6050.00**	**3300.00**		

Sl.No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
ENERGY							
3	NRE 001	Programmes on Renewable Energy	2810-00-800-90 (06)	3350.00	3350.00	Activities including the installation of solar plants with storage to increase the use of renewable energy sources.	Promotion of renewable energy will help in achieving the goal of a carbon neutral state.
4	NRE 001	Green Energy Hub	2810-00-800-78	718.00	718.00	Promotion of projects on Green Hydrogen.	The scheme supports various activities to achieve Net Zero target by 2050 and 100 per cent Renewable Energy State by 2040.
5	NRE 004	Kerala State Energy Conservation Fund	2810-00-104-98 (05)	650.00	400.00	(i) Angan Jyothi (ii) Development and demonstration of clean energy technologies	The activities under the scheme supports Net Zero initiatives of the State.
TOTAL				**4718.00**	**4468.00**		

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
MEDIUM AND LARGE INDUSTRY							
	KINFRA						
6	MLI 009	Petro Chemical Park, Kochi	6885-60-190-99	1700.00	85.00	Aims to set up effluent treatment plant in the park	KINFRA is developing parks with due care for environment and hence include activities like the installation of effluent treatment plants, waste management, development of green spaces etc., as part of infrastructure development .
	MLI 134	**Up gradation of Infrastructure in Industrial Parks**					
7		KINFRA Integrated Industrial and Textile Park, Palakkad	4885-60-190-94	1200.00	60.00	Various maintenance activities in the park including component like STP.	
8		Infrastructure Development Works, Perumbavoor		800.00	40.00	Various activities including installation of ETPs.	
9		Infrastructure Development Works Ramanattukara		400.00	20.00	Various activities including drains, rain water harvesting and landscaping etc.	

Sl.No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
10	MLI 134	Industrial Infrastructure Development Work of Kannur	4885-60-190-94	500.00	25.00	Various activities including installation of ETPs and STPs.	KINFRA is developing parks with due care for environment and hence include activities like the installation of effluent treatment plants, waste management, development of green spaces etc., as part of infrastructure development .
11		Up gradation of Existing Infrastructure in Small Industries Park at Nellad		200.00	10.00	Various activities including drainage facilities and rain water harvesting pond.	
12		Mini food park, Cheruthoni, Idukki		400.00	20.00	Various activities including drainage facilities, pollution control facilities installation of ETPs and STPs.	
13		Mini food park, Kunnukara, Ernakulam		800.00	40.00	Various activities including drainage facilities, pollution control facilities installation of ETPs and STPs.	
14		KINFRA Industrial Park, Kuttichal		400.00	20.00	Various activities including drainage facilities, pollution control facilities installation of ETPs and STPs.	

Sl. No	Scheme code	Name of Scheme	Major Head	Total Budget Outlay (Rs in lakh)	Outlay proposed for Environment (Rs in lakh)	Details of the Environment components	Activities/Justifications
15	MLI 159	**Up gradation of Infrastructure in Industrial Park-MSE Cluster Development Programmes**					
		Upgradation of Infrastructure at KINFRA Apparel Park, TVPM	4885-60-190-91	350.00	7.50	Various activities including revamping of water treatment plant.	
16		Upgradation of Infrastructure KINFRA Park at Kunnamthanam		350.00	5.00	Various activities including drainage maintenance, new solar street lights and solar power plant.	
TOTAL				**7100.00**	**332.50**		
TOTAL (INDUSTRY AND INFRASTRUCTURE)				**17868.00**	**8100.50**		
TOTAL ENVIRONMENT BUDGET					***94789.43***		

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