



Democratic Socialist Republic of Sri Lanka

National Environment Policy

Ministry of Environment

National Environment Policy

Policy Planning and Monitoring Division
Ministry of Environment
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Battaramulla.

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1. Introduction

1.1. Environment Profile

Sri Lanka, with an area of 65,610 square kilometers lies between latitudes 5° 55' and 9° 55' north of the equator and between the eastern longitudes 79° 42' and 81° 52'. It has a maximum length of 435 km North to South and a maximum breadth of 240 km East to West. It is an island in the Indian Ocean dominated by the astonishingly varied features of topography and environmental resources. The environmental resources of the country comprise of, *inter alia*, a rich base of fertile land, a sizeable endowment of freshwater and marine aquatic resources, a diverse range of ecosystems housing numerous species, a variety of mineral resources and groundwater, and abundant sources of hydro, solar and wind energy. Sri Lanka is blessed with a diverse array of tropical ecosystems, which offers many services for the wellbeing of the people, creating a habitable environment nearly all over the country. Due to the richness of ecological assets, the island nation, along with the Western Ghats of India, has been identified as one among thirty-six global biodiversity hotspots.

The country's rich legacy of environmental resources also constitutes a productive base of natural assets-a stock of natural capital-that support the livelihoods of people in various ways. Besides fulfilling the essential life-support needs of people, this stock of natural capital serves as a rich base of productive resources for economic, social, and cultural activities too. The agriculture sector, still a major source of employment in the economy, relies heavily on land and water

resources. Being the dominant user of natural resources, agricultural land occupies nearly half of the land cover. Forests and fisheries resources also support the livelihoods of significant sections of the population. In addition to supporting the livelihoods of a large section of the population occupied in agriculture, the country's rich profile of environmental resources offers significant prospects for industrial and service-based growth too. Forests wetlands, wildlife and coastal and marine environments around the island are major attractions that provide a strong foundation for the country's tourism, recreation and leisure industry. Sri Lanka also possesses a considerable wealth of commercially viable mineral resources that can more efficiently be harnessed for value-added industrial production.

Historically, this natural endowment had supported the development of the classical 'hydraulic civilization' that flourished on the island for over a millennium. It enriched the natural capital stock further with an intricate network of human-made water management facilities-a 'naturalized' system of human-made assets-that serves the nation's food security goals even today, embodying the true meaning of sustainability. The country's economic prospects had significantly been shaped by strategic advantages offered by geographic location closer to historical and modern-day economically viable sea routes connecting the East and West. The evolution of Sri Lanka's economic fortunes highlights the capacity of its natural capital stock to cater needs of people under changing conditions.

1.2. Current Environmental Policy Context

Sri Lanka aims to become a low-carbon, climate-resilient green economy by adopting sustainable development policies. Achieving sustainable development depends on wise and responsible management of the country's environmental resources. Achieving

sustainable development implies fulfilling the needs of the current generation without compromising the prospects of future generations to realize their own aspirations. The rich endowment of environmental resources provides an essential launching pad for achieving the sustainable development goals of the country. Whether this endowment would bring in desired improvements to the lives of people of the present as well as future generations is a matter of how sensibly it is managed.

Achieving sustainable development demands a delicate balancing of human actions towards the environment. It needs the support of well-coordinated policies and strategies that could safeguard the environment while ensuring the continuous flow of ecosystem services. Sri Lanka has introduced several policies, legislations, plans, and programs over the years to address environmental issues. Among others, the National Environmental Policy and Strategies (NEPS) formulated by the Ministry of Environment and Natural Resources in 2003, has been the key policy document that guided decisions on environmental problems/issues in Sri Lanka. The NEPS is an overarching policy that guides decisions on a broad range of issues related to the environment. It articulated objectives, principles, desired policy outcomes, statements of policy actions and strategies for overcoming respective environmental issues. As the umbrella policy overlooking all aspects of the environment, the NEPS has a shared scope with other national policies, sometimes overlapping with the mandate areas of other line Ministries as well.

Since the formulation of NEPS in 2003, the Ministry has also introduced several other national policies which have direct implications on areas covered by the NEPS (e.g. National Policy on Wetlands, National Policy on Waste Management) as well as areas not covered by the NEPS (e.g. National Climate Change Policy).

Some of the relevant national policies, such as the National Forest Policy (1995) and National Wildlife Policy (2000), predate the NEPS. Currently, the Ministry of Environment oversees 18 national policies that deal with different aspects of environmental management (Refer Annex 1). There are also national policies introduced by other Ministries which include sections relating to the environment (e.g. National Fisheries Policy, National Energy Policy, National Disaster Management Policy) (Refer Annex 2). In addition, the country has recently introduced a policy framework on sustainable development for the implementation of Sustainable Development Goals (SDGs), which has a direct bearing on the NEPS.

1.3. Need of the Policy

Since the formulation of the NEPS in 2003, significant changes have taken place nationally and globally, that affect our environment too. Economic, social, and cultural factors that give rise to changes in the environment have also evolved. Since Sri Lanka met the criteria for being a global biodiversity hotspot, a significant loss of vegetation has occurred. Global threats to the environment such as climate change and ozone depletion create new challenges to the economic environment and social life. Sri Lanka was ranked second in the world in Global Climate Risk Index (GCRI) in 2018. The country has experienced significant losses to life and property due to climate change-induced disasters recently. Such new environmental challenges have not sufficiently been covered in the NEPS.

Overwhelming evidence suggests that expansion of human economic activities creates increased pressure on ecosystems leading to degradation of air, water and land resources in rural and urban areas with many negative spill-over effects. Deforestation is a clear example of the adverse impacts of human actions on the environment.

According to the Global Forest Watch, the total area of humid primary forest in Sri Lanka has decreased by 1.7% from 2002 to 2020. The decline of forest cover has led to a loss of ecosystem services, sometimes in an irreversible manner, resulting in impacts such as increased scarcity of water, loss of fertile soil, and degradation of productive land assets. Overexploitation of coastal fisheries and pollution of water bodies have threatened the livelihoods of many that depend on fishing as a livelihood. Activities pertaining to the extraction of mineral resources such as gem/sand/graphite mining and quarrying are also found responsible for significant environmental damages. Overall, adverse impacts on the environment due to human actions could lead to derailing the process of sustainable development resulting in a collapse of life support systems, degradation and exhaustion of productive natural capital, a decline of productivity, and increased exposure of life and properties to natural hazards.

In the last couple of decades, there have also been changes in the collective response to environmental issues and the government has adopted several recently established Multilateral Environmental Agreements (MEAs) in pursuit of integrating environmental development with economic and social development. These include the United Nations 2030 Agenda for Sustainable Development; Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC); the Paris Agreement to the UNFCCC and Stockholm Convention on Persistent Organic Pollutants; etc. Also, a substantial body of international environmental law has emerged over the years because of such international and regional treaties and conventions. Moreover, scientific knowledge and new technological innovations in environmental management have been introduced, and the necessity of incorporating the wisdom of

traditional and local knowledge systems has been emphasized. As mentioned earlier, there were significant developments in the formulation of new national policies. As a result, the relevance of NEPS as the principal policy statement guiding action on sustainable management of the environment appeared to have diminished.

Against the backdrop, the necessity of updating NEPS has been stressed by many parties highlighting the changing priorities of environmental management, new challenges emerged since the formulation of NEPS, and altered landscape of policy with the introduction of other relevant national policies and MEAs. The Ministry of Environment, considering these changes that have taken place since the formulation of NEPS in 2003, recognized the necessity of amending the policy. The overall objective of this exercise is updating the NEPS so that its position as the foremost national policy statement on the environment in Sri Lanka will be restored, enhancing its relevance in line with other follow-up national policies formulated by the Ministry as well as related policies introduced by other ministries.

1.4. Purpose and Context

Parallel to the updating of NEPS 2003, the Ministry has also taken steps to prepare the National Environmental Action Plan (NEAP). The NEAP is intended to identify ‘strategies’ as a part of the hierarchy of planned interventions that convert policy statements into implementable actions. Hence, the updated policy can be more appropriately named as the National Environment Policy (NEP), since it focuses only on policy statements without identifying strategies, unlike the NEPS 2003.

The main purpose of NEP is to guide decisions taken to manage environmental issues that arise in the country at national as well as

sub-national levels. It takes an anticipatory and forward-looking approach towards addressing environmental challenges faced by Sri Lanka while serving as the sentry that would safeguard the natural resources of the country. It places the environment in the centre of the sustainable development of the country, identifying the vision, mission, goals and objectives of the NEP in line with broad national agenda towards sustainable development, albeit not restricting only to SDGs. Hence, the other policies that contribute directly or indirectly to the broader goals of sustainable development in the country are expected to accord with the broader guidelines stipulated by the NEP. Furthermore, NEP ensures that all sectoral policies comply with the international conventions, for which the Government of Sri Lanka is a party.

The NEP has been prepared through a consultative process. This process included stakeholder consultations covering ‘Policy Thematic Areas’ (PTAs) of land and water resources; biodiversity and ecosystems; coastal and marine resources; environment pollution prevention control and waste management; climate change and global environmental challenges; built environment and green development; and cross-cutting issues and challenges shared by all PTAs. The draft policy has undergone further validation including a round of public comments before submitting for the approval of the Cabinet of Ministers. PTAs were selected to cover all environment sectors, as elaborated in the National Environmental Act. No. 47 of 1980 and its amendments which describe the environment as ‘the physical factors of the surroundings of human beings including the land, soil, water, atmosphere, climate, sound, odours, tastes and the biological factors of animal and plants of every description.

1.5. Rationale

The Constitution of Sri Lanka considers the environment as a national priority and every citizen must protect nature and conserve its riches. Thus, the rationale of the NEP is to introduce a smoothly functioning, stable and consistent environment policy regime comprised of a set of technical solutions, conducive policy incentives and institutional mechanism for implementation that help to fulfill the conditions necessary for sustainable development in Sri Lanka. Besides, ensuring essential life-support services for all living beings, maintaining the flow of material inputs and services necessary for regular functioning and growth of the economy also is a necessary condition for sustainable development. Due to growing demand from the economic system, some resources are being exhausted, some are renewed subject to sustainable use, or some get depleted due to overexploitation while others are being degraded in terms of quality and becoming scarcer. Growing demands by economic drivers have not only placed them under severe stress but also threatened the capacity for fulfilling even the most fundamental life support needs at sufficient levels. Issues arising from poor quality of air, water and land in neighbourhood environments have direct, negative impacts on the lives of the public.

The necessary conditions for sustainable development cannot be fulfilled alone by introducing technical solutions for growing environmental problems. Technical solutions should be complemented by appropriate schemes of incentives set in place through regulatory mechanisms, market-based instruments, or support schemes to ensure compliance by key stakeholders. Not only that, but the implementation of solutions also has to be facilitated through an enabling system of institutional arrangements that may include both formal and informal institutions covering all concerns.

To achieve this, specific roles of the government, private sector, inter governmental organizations, civil society and communities are upheld by the NEP. The Government, as the trustee of all environmental resources of the country on behalf of the public, is vested with the overall responsibility of implementation of the policy to the benefit of the present as well as future generations. State interventions in the forms of setting regulatory mechanisms, creating market-based incentives, benefit redistribution measures and providing complementary factors for sustainable change are ubiquitous in every aspect of the policy. The policy also upholds the community participation of resource management through collective efforts of co-management. The private sector and civil society also have key roles to play in this regard. The private sector has been recognized as the engine of economic growth in the country. Hence, it is left with the primary responsibility of complying with rules and regulations while enjoying incentives created by the policy regime to ensure sustainable use and management and protection of environmental resources pursuing their business motives. Civil society and community have important roles to play here as participants, stakeholders and watchdogs of implementation of policy to establish a transparent, accountable and inclusive process of environmental governance and justice. The direction provided by the NEP is expected to facilitate the efforts of the government, private sector, communities and civil society to make rational and informed decisions on complex issues relating to environmental resources, thereby creating enabling conditions for achieving sustainable development in Sri Lanka. NEP is also expected to ensure that the sectoral developmental policies do not surpass the ecological boundaries.

2. Vision, Mission, Goals and Objectives

This section includes a broad vision statement and a set of key policy goals and objectives.

2.1. Vision

Safeguarding the Environment while ensuring ecological sustainability for the Present and the Future

2.2. Mission

Ensure sustainable use, management and protection of environmental resources to create enabling conditions for sustainable development in Sri Lanka through a well-defined policy framework

2.3. Goals

The policy goals of the NEP are key aspirational statements that will lead Sri Lanka to achieve the above vision and mission. These goals form the basis of the policy objectives of the NEP. The table below lists the thematic policy goals.

Policy Goal	Relevant PTA
A sound land use planning system will be in place for the allocation of land resources according to scientific criteria based on well-defined systems of land use zoning and land suitability classification.	Land and Water Resources

The integrated approach for managing land, water and forest resources including underground resources will be mainstreamed in decision-making, planning, and management at national, provincial and local government levels.	Land and Water Resources
The extent of forest resources will be raised to one-third of the total land cover of the country and maintained at that level as a minimum limit.	Land and Water Resources
All critical and sensitive ecosystems of the country will be covered by a well-managed network of protected areas with clearly defined rules for conservation and sustainable use of resources for the benefit of the present as well as future generations.	Biodiversity and Ecosystems
A robust system of pollution prevention and control will be developed and implemented to ensure healthy atmospheric, water and soil conditions in all urban and rural areas in the country.	Pollution Prevention, Control and Waste Management
An integrated system for solid, liquid and gaseous waste management covering all local government areas in the country will be in place for effective management of general and all forms of hazardous	Pollution Prevention, Control and Waste Management

waste including household and municipal waste, agricultural and industrial waste, construction and demolition waste, e-waste etc.	
The foundation for a climate-resilient sustainable economy will be laid by mainstreaming climate change adaptation in all vulnerable sectors, building the adaptive capacity of key stakeholders, managing losses and damages due to climate-induced disasters and enhancing national, sub-national, and community capacity through awareness creation, education, research and development, technology transfers and information dissemination.	Climate Change and Global Environmental Challenges
The country will be placed in a path of low-carbon development by implementing appropriate mitigation measures in the priority sectors of Energy, Transport, Industry, Waste and Agriculture-Forestry-Other Land Use (AFOLU) with high Greenhouse Gas (GHG) reduction potential.	Climate Change and Global Environmental Challenges
Essential conditions for a sustainable ‘blue economy’ will be fulfilled by strengthening safeguard measures and investments to ensure conservation and	Coastal and Marine Resources

sustainable use of coastal and marine resources of the country.	
Innovative practices of green development and production such as eco-friendly agriculture, resource-efficient cleaner production, green building, eco-tourism and nature-based tourism will be mainstreamed in key economic sectors such as agriculture, industry, construction, transportation, tourism and energy.	Built Environment and Green Development
Traditional knowledge systems and practices from potential areas such as agriculture, forestry, water, land resource management, and biodiversity, nature-based medical and health systems, eco-friendly buildings and energy use that were proven to enhance sustainability by scientific studies will be brought into practical use in initiatives for sustainable development wherever applicable.	Cross-Cutting Issues and Challenges
Valuation of ecosystem services and application of environmental economics analytical tools will be made mandatory in the evaluation of all investment and resource allocation decisions.	Cross-Cutting Issues and Challenges

<p>Compliance with multi-national environmental agreements will be mainstreamed and international cooperation will be sought to address global environmental challenges including loss and damage, also taking the advantage of emerging global knowledge on green development initiatives and nature-based solutions including ecosystem-based risk reductions.</p>	<p>Cross-Cutting Issues and Challenges</p> <p>Climate Change and Global Environmental Challenges</p>
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2.4. Objectives

The overall objective of the NEP is to provide guidance and direction for the sustainable management of environmental resources in the country so that the goals of the policy can be achieved in a time-bound manner. This overall objective is to be attained through realizing the following specific objectives:

- To identify effective nature-based and technological solutions and sustainable practices that can overcome environmental issues observed in atmosphere, land, water, coastal and marine eco systems in the country and promote adoption of such solutions and practices by the public, private sector, community and civil society stakeholders.
- To encourage prevention of all forms of environmental pollution while ensuring the restoration of contaminated and degraded sites due to pollution.

- To create incentives for investing on sustainable practices in agriculture, industry and services for win-win economic, environmental and social outcomes.
- To strengthen the implementation of the existing legal and regulatory framework to safeguard critical environmental assets and ecosystem services.
- To introduce new legal instruments to fill the gaps in the existing laws and regulations wherever they are found to be ineffective and/or inadequate.
- To promote the use of market-based instruments to address pollution and degradation of environmental resources and ecosystem services to the extent possible along with regulatory and participatory means to enhance the transparency and overall effectiveness of policy solutions.
- To build institutional capacity of public organizations with mandates deal with environmental issues and strengthen the institutional coordination among them.
- To mobilize necessary resources for the implementation of interventions identified in the NEP and any plans developed based on proposed policies.
- To increase the awareness of the public including youth and school children on environmental issues and environmentally friendly products through formal, informal and non-formal education programmes, awareness campaigns in media and training programmes.

- To ensure the participation of the community in the preparation, implementation, monitoring and evaluation of environmental policies, plans, programmes and projects.
- To create awareness among investors and the public on the objectives and direction of the policy, i.e. NEP, with respect to investment projects at any stage of development-conceived, proposed or in the pipeline.
- To recognize and promote the use of proven and relevant traditional knowledge and practices where applicable to enhance the environmental management in all areas to the maximum extent possible.
- To create new partnerships and strengthen the existing ones for mobilization of resources to face global environmental challenges, especially for adapting to climate change impacts and mitigating GHG emissions.
- To adopt innovative approaches such as payments for ecosystem services, polluter pays, extended producer responsibility, nature-based solutions to balance development and conservation needs.
- To create a multi-stakeholder mechanism to fulfill national commitments to international covenants and MEAs.

3. Key Policy Principles

The NEP is based on eleven main principles of environmental management. Policy measures proposed to achieve the goals and objectives in the section on ‘policy statements’ were identified according to the guidance provided by these principles.

3.1. Sustainable Development and Green Economy

Sustainable Development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. While Sri Lanka has taken several measures to accelerate the implementation of SDGs, much remains to be done especially related to the conservation and sustainable use of its natural resources for meaningful socio-economic development. In a green economy, growth in employment and income is driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services. The notion of a green economy does not replace sustainable development but creates a new focus on the economy, investment, capital and infrastructure, employment and skills.

3.2. Polluter Pay, Beneficiary Pay and the Compensation

The Polluter Pays Principle (PPP) assigns the liability so that those who are responsible for pollution must bear the associated external costs, such as damages to human health and the environment. PPP is usually applied to guide decisions when negative environmental impacts are involved. In contrast, the Beneficiary Pays Principle (BPP) is applied when positive impacts in the form of ecosystem services are involved. The BPP lays out that an agent who benefits

from service due to the actions of others has an obligation to compensate the service provider of that service. It is also widely applicable in market-based instruments such as Payment for Ecosystem Services (PES). The compensation can be considered as a form of BPP which is applicable when private costs are incurred for the public benefits.

3.3. Life Cycle, Circular Economy and 3R

The Life Cycle Principle (LCP) provides a holistic approach for assessing the environmental impacts at each stage of a particular product's life cycle. The Circular Economy (CE) is a new way of creating value, where products are designed for durability, reuse and recyclability, and materials for new products are obtained from old/used products by extending product lifespan through improved design and servicing and relocating the waste from the end of the supply chain to the beginning-in effect, using resources more efficiently by reusing/using them over and over, not only once. The 3R concept refers to Reduce, Reuse and Recycle in the context of consumption and production. It emphasizes the need for increasing the ratio of recyclable materials, reusing waste as raw material and decreasing manufacturing wastes and, the overall reduction in resources and energy. Recently, extended versions of the concept such as 5R (Refuse, Reduce, Reuse, Repurpose, Recycle) and 7R (Rethink, Refuse, Reduce, Reuse, Repair, Regift, Recycle) have emerged which keeps on expanding. The NEP recognizes these as logical extensions of the 3R concept and is complementary to LCP and CE.

3.4. Safe Minimum Standards

The Safe Minimum Standards (SMS) approach to environmental protection is a collective choice process that recommends protecting a minimum level of a renewable natural resource unless the social costs of doing so are by some means excessive or intolerably high. The rationale behind the SMS approach is about minimizing possible losses as long as the social costs of actions are acceptable. It is a supplement to cost-benefit analysis which places greater emphasis on the protection of the environment when thresholds of irreversible damage are involved.

3.5. Precautionary Principle

The precautionary principle is a philosophical and legal approach that emphasizes caution when making decisions in situations with a high level of uncertainty. It facilitates environmental decision-making and comprises four components namely, taking preventive actions in the face of uncertainty, shifting the burden of proof to the proponents of activity, exploring a wide range of alternatives to possibly harmful actions and increasing public participation in decision making.

3.6. Rewards, Stewardship, and Reciprocity

Human action towards the environment is frequently motivated by non-profit and non-financial rewards based on the norms of reciprocity. i.e., offering affirmative responses to positive actions of others and the rewards from nature. Such behaviours can be expected to make a strong contribution to sustainable use, management and protection of environmental resources. Often, such contributions are greatly enhanced by the role of stewardship played by certain individuals and organizations who are responsible for caring for the nature on behalf of other members of the society as well without

entirely being driven by motives of private gain and/or ownership; even so, still getting a higher level of satisfaction from their actions. The NEP recognizes the value of such contributions to achieving the goals of the policy and upholds and actively encourages such norms of behaviour without commandeering commons or shutting out the local communities that have the first right to conserve the environment as the primary users.

3.7. Equity, Inclusiveness and No One Left Behind

The NEP is guided by the equity principle in the sense that benefits of sustainable development and ecosystem services are to be distributed among all members of the society and be shared and accessed equitably to the maximum extent possible. Similarly, it upholds the inclusion of members of all sections of the society in conservation and sustainable use of environmental resources regardless of gender, class, age, racial or cultural differences and disabilities. Moreover, all interventions aimed at achieving the goals and objectives of the policy are envisaged to be designed in such a way that no one is left behind.

3.8. Efficiency in Resource Use

Efficient use of environmental resources is applied in the sense of reduction in the use per unit of economic output to minimize adverse environmental impacts. This policy principle is guided by the fact that the inefficient use of resources has triggered critical scarcities and caused environmental challenges such as climate change, ozone depletion and environmental degradation - all of which have negative impacts on the well-being of the planet and its people.

3.9. Planetary Boundaries

The planetary boundary notion aimed to define the environmental limits within which humanity can safely operate. It presents a set of nine planetary boundaries namely; biosphere integrity, climate change, novel entities, stratospheric ozone depletion, atmospheric aerosol loading, ocean acidification, biochemical flows, freshwater use, and land system change. It invigorates the case for international cooperation so that the world community can maintain their actions within the limits of safe operations.

3.10. Common but Differentiated Responsibilities

The common but differentiated responsibilities principle is applied, especially in international environmental challenges, to imply that all states are responsible for addressing global challenges yet may be with differentiated responsibilities. While acknowledging the common responsibility for finding solutions to global problems by all states/parties, the principle also recognizes the necessity of assigning differentiated responsibilities to each state/party/actor according to variable contributions by different parties/actors to the problem concerned, stage of development of respective countries and their distinct capacities to address the problem.

3.11. Public Trust Doctrine

The Public Trust Doctrine (PTD) is the most promising legal norm upon which the citizens can rely to realize their right to a sound environment. The main idea behind this doctrine is that the government is not an absolute owner, but as the trustee of all natural resources, the government must manage them in the sole interest of its citizens. The PTD provides the legal foundation to impose

accountability upon the government for maintaining the environment in the public interest which supports sustainable environmental management.

4. Policy Statements

This section constitutes the main body of NEP. It presents the policy statements formulated to achieve the vision, mission, goals and objectives of the NEP. Policy statements are presented under seven Policy Thematic Areas (PTA) from 4.1. to 4.7., namely;

- Land and Water Resources
- Biodiversity and Ecosystems
- Coastal and Marine Resources
- Environment Pollution Prevention, Control and Waste Management
- Climate Change and Global Environmental Challenges
- Built Environment and Green Development
- Cross-Cutting Issues and Challenges

The policy statements identified under each PTA are further categorized under several sub-sections from 4.1.1. to 4.7.9. The policy statements that are being presented from 4.1.1.1. to 4.7.9.3. broadly cover technical solutions, incentives-positive and/or negative-to create enabling environment for those solutions as well as institutional mechanisms for implementation of these.

4.1. Land and Water Resources

Land and Water Resource Management is critical to enhancing the sustainability of the economy of Sri Lanka, especially agriculture production since the unrestricted expansion of cultivation area is no longer possible. Efforts to intensify productivity of lands through conventional methods have resulted in unsustainable outcomes with

various forms of degradation of land and water such as soil erosion, water depletion and pollution and destruction of biodiversity. The main user of water resources in the country is also the agriculture sector. Major technical issues involved here are low water productivity in agriculture and rapid pollution of water due to excessive use of chemical inputs such as fertilizer and pesticides. Increased competition for land and water resources between agricultural and non-agricultural uses has also become an emerging issue. Among these is a growing demand for land and water from industry, infrastructure, residential and energy sectors which need to be balanced with demand from agriculture. Tenure of land is also beleaguered with adverse incentives that lead to land fragmentation and encroachments, negatively affecting initiatives for sustainable management of land. Hence, land and water resources management calls for urgent policy attention.

4.1.1. Integrated Management of Land and Water Resources, National Spatial Strategy and Land Use Planning

- 4.1.1.1. Land and Water Resources in the country will be brought under a framework of integrated resource management so that competing demands for land and water are balanced to optimize economic, social and environmental benefits that are shared more equitably.
- 4.1.1.2. With the participation of relevant institutions, a National Spatial Strategy (NSS) to guide decisions on sustainable management of land resources will be developed for rational allocation of land resources among competing demands from Agriculture, Industry, Energy, Infrastructure and Residential sectors by matching the requirements of land uses

with physical and socio-economic suitability of lands using appropriate scientific and technical criteria.

- 4.1.1.3. Scientific land use planning tools will be applied in the NSS for zoning of lands in the country to guide decisions on development planning and conservation of resources at national, provincial and local levels.
- 4.1.1.4. Development of legally enforceable management plans will be made mandatory for all zonal demarcations of land and water resources covering environmentally sensitive areas as well as areas identified for development purposes.
- 4.1.1.5. Regardless of land ownership, appropriate strategies to conserve protected areas of rivers, canals, reservoirs, lakes and other water bodies will be introduced with community participation.
- 4.1.1.6. All critical and sensitive areas will be demarcated and appropriate measures for sustainable use, management and protection of resources will be implemented.
- 4.1.1.7. Land areas pertinent to development will be identified and necessary regulatory, coordination and monitoring mechanisms will be established for competitive, rational and sustainable use of land and associated resources-i.e., water and ecosystems
- 4.1.1.8. Current strategies on land boundary demarcation, land ownership, access to land registration information, the

safety of documents and land transfer will be further strengthened with scientific and digital basis.

- 4.1.1.9. The environmental impact of land plot size reduction/fragmentation will be investigated, and proper actions will be taken to demotivate land division.
- 4.1.1.10. The vertical village concept/high-rise buildings will be promoted in selected regions where land utilization should be improved for sustainable development and green growth through public-private partnerships.
- 4.1.1.11. Sustainable use of agricultural lands will be ensured through the measures such as eco-friendly cultivations and other conservative practices focusing on environmental health, food security and income generation.

4.1.2. Environmentally Sensitive Land and Water Resources

- 4.1.2.1. Environmentally sensitive land and water resource assets in critical locations will be earmarked for strict conservation allowed.
- 4.1.2.2. Agricultural land uses especially in environmentally sensitive areas will be brought under sustainable land and water use practices by strengthening the regulations and institutional capacities strict implementation of them; promoting integrated water resource management approaches creating awareness among relevant stakeholders to prevent from actions leading to further degradation of lands, erosion of soil,

pollution of water and destruction of watersheds / catchments.

- 4.1.2.3. Critical watersheds and other sensitive land and water resource systems will be classified according to the level of degradation taking into consideration their biological, hydrological and other sensitivities and ‘integrated land use and water resource management plans’ will be prepared and implemented based on the type of classification of lands.
- 4.1.2.4. Necessary rehabilitation, restoration and conservation measures will be initiated for already degraded patches and contaminated sites by application of land use planning measures, promoting sustainable land-use practices and by streamlining the process to restore ecosystem services through a ‘Restoration Fund’ with a mechanism to ensure that parties responsible for degradation would bear the financial burden of restoration.
- 4.1.2.5. Rivers and associated systems of riverine resources will be brought under scientific management by developing river basin plans, establishing guidelines for ecologically-required minimum river flows while giving both upstream and downstream focus, restoration of river banks and catchments, protection of sensitive ecosystems, strengthening legal and regulatory provisions to control illegal interventions and setting up institutional arrangements for river

basin and trans-basin management with necessary capacity building measures.

- 4.1.2.6. The existing system of managing ‘landslide-prone areas’ to reduce the vulnerability to landslides will be strengthened further by undertaking scientifically designed actions to stabilize identified locations (especially in sloping areas), establishing regulatory and monitory mechanisms, increasing public awareness, establishing early warning systems, enhancing disaster preparedness, facilitating emergency evacuation and relocation of vulnerable groups including involuntary resettlement.
- 4.1.2.7. Sustainable land and water management and systemic rehabilitation of age-old cascade and individual tank systems without harming the existing natural ecosystem will be promoted to mitigate floods and droughts, provide ecosystem services for people and animals and to share resources equitably without conflicts.
- 4.1.2.8. Regulatory measures will be introduced to ensure sustainable management of scarce groundwater resources both regolith and hard-rock aquifers, together with guidelines for; (a) scientific assessment of aquifers, types and potential storage capacity, (b) monitoring their extraction levels to control overexploitation and (c) optimal use of shallow groundwater in conjunction with surface water sources and rainfall.

4.1.2.9. Natural and artificial recharge of aquifers that augment groundwater storage will be promoted with a view; to mitigate floods and droughts, to provide water supply for domestic, irrigation and industrial sectors, to contribute to maintaining ecologically required minimum environmental flows in the rivers, and to prevent salinity intrusion in the dry seasons at river mouths.

4.1.3. Participatory Management of Land and Water Resources

4.1.3.1. Consultation of all relevant stakeholders in preparation of ‘integrated land use and water resources management plans’ and participation of local communities in the management of sensitive land and water resource systems such as critical watersheds will be made mandatory.

4.1.3.2. Effective tenurial reforms will be introduced to promote efficient and sustainable use of land and water resources after careful investigation of existing tenurial problems with special attention to co-management and gender-inclusive community-based management solutions with the participation of local communities, village-level government officers and civil society organizations.

4.1.3.3. Payment for Ecosystem Services (PES) schemes will be introduced on a pilot scale with innovative benefit and incentive structures to harmonize the interests of providers and users of ecosystem services in short, medium and long-term horizons in selected

landscapes such as critical watersheds. Successful models identified in pilot testing will be scaled-up to sensitive land uses to ensure sustainable use and protection of ecosystem services

- 4.1.3.4. Institutional arrangements involved in the management of land and water resources will be reviewed with associated legal/regulatory frameworks to address poorly defined tenure/ownership rights, scattered responsibilities, overlapping mandates and enhance policy coherence and to ensure institutional coordination in case of multi-agency projects.
- 4.1.3.5. Erosive land-use practices that lead to soil degradation will be discouraged and traditional land-use practices with a time-tested track record of sustainable use of land and water resources, tank cascade systems will be promoted together with traditional knowledge systems associated with them.
- 4.1.3.6. Regulatory mechanisms involved in extractive uses of land-based resources will be revisited and necessary amendments introduced for balancing the interests of commercial uses and needs of environmental conservation including mandatory conditions for the restoration of sites after permit period in line with arrangements proposed for restoration proposed in 4.1.2.4.
- 4.1.3.7. With the participation of relevant institution, guidelines on undertaking mining activities with minimum onsite and offsite impacts on the

environment will be developed, focusing also on activities that can compensate for degradation caused by mining and ways of restoring and recovering project sites after the termination of mining activities and building relationships and mutual understanding between the project management teams and the communities affected by the relevant project to ensure the sustainable use and management of mineral resources in the country.

4.2. Biodiversity and Ecosystems

Sri Lanka is fortunate to be blessed with a diverse portfolio of ecosystems and rich profile of biodiversity. Natural forest cover together with the wildlife it houses is the prominent component of this endowment. However, rapid deforestation in the past several decades due to expansion of agriculture and development of supportive infrastructures such as irrigation and settlements has resulted in a loss of many ecosystem services offered by natural forests. This can be considered as an inevitable outcome of transforming the relationship between forests and agriculture from a complementary to competitive one. Deforestation due to the conversion of natural forests to agricultural lands in the periphery of forests has become a major resource issue. A similar trend of human-induced degradation can be observed in other ecosystems such as rural and urban wetlands and coastal mangrove forests. Emerging evidence suggests that adverse impacts of climate change and pollution can lead to further imbalances. Complementarity between ecosystems and economic activities in peripheral areas has to be revoked and the competition for land at the extensive margin has to

be resolved in favour of both sides. This needs both technical and institutional solutions with a correct set of incentives in place.

4.2.1. In-Situ Conservation of Flora and Fauna

- 4.2.1.1. The existing cover of natural forests will primarily be conserved and managed for supportive ecosystem services such as conservation of biodiversity, carbon sequestration and soil and water resources conservation.
- 4.2.1.2. Urgent action will be taken to enlist sizeable patches of undeclared natural habitats by demarcating boundaries and gazetting them under suitable categories of Protected Areas (PAs) managed by the Forest Department and Department of Wildlife Conservation jointly with local communities.
- 4.2.1.3. Under the supervision of the concerned authorities, the management and monitoring of all categories of PAs will be strengthened by mandatory formulation of management plans including community-based management and monitoring circles, and introduction of new surveillance techniques such as satellite-based monitoring, drone technology and Geographical Information Systems (GIS) analytical tools to ensure evidence-based scientific management.
- 4.2.1.4. Periodic revision and updating of management plans for PAs will be undertaken with possible improvements in areas that include but are not limited to:

- Revisiting the existing classification of PAs based on enhanced scientific criteria.
 - Internal zonation of PAs for sustainable management of resources.
 - Strengthening the elements of ecosystem-based management.
 - Establishing a Management Information System (MIS) for PA network to improve the efficiency of governance, monitoring progress and evaluation of performance.
- 4.2.1.5. Measures will be taken to identify degraded areas of natural forests using modern surveillance technologies proposed in 4.2.1.3 and to reinstate them by applying ecosystem-based approaches; using the funding arrangements proposed in 4.1.2.4 where applicable.
- 4.2.1.6. Small patches with unique biodiversity located outside the protected areas and ecotones will be brought under the conservation as a multi-stakeholder process with the participation of local Communities, Civil Society Organisations (CSOs), Community-Based Organisations (CBOs) and the private sector through co-management and public-private partnership.

4.2.2. Conservation of Wetlands

- 4.2.2.1. The existing profile of natural and man-made wetlands will be classified according to the

significance of their ecosystem services and necessary measures will be taken to inventorize them with ownership (i.e., state-owned; privately-owned) for sustainable management.

4.2.2.2. Wetlands management will be integrated by:

- Organizing the management under participatory ‘integrated land use and water resource management plans’ in local areas.
- Strengthening inter-agency coordination.
- Linking fragmented patches using vegetation corridors to protect biodiversity.
- Restoring degraded wetlands with the support of local communities and multiple stakeholders including CSOs, CBOs, youth and the private sector.

4.2.2.3. Disposal of solid waste into wetlands will be controlled by introducing new regulations to strengthen the conservation of wetlands and strictly implementing participatory management plans.

4.2.2.4. The existing legal and regulatory framework will be strengthened and necessary measures to bring privately-owned wetlands under sustainable management will be introduced.

4.2.3. Regulating, Controlling and Monitoring Losses, Threats and Conflicts on Biodiversity

- 4.2.3.1. Recovery plans for threatened species and habitats will be prepared and implemented with the participation of relevant stakeholders to ensure regular monitoring and tracking of endangered species to protect them from extinction.
- 4.2.3.2. Entry of Invasive Alien Species (IAS) will be brought under strict control by strengthening the regulation over imports and other means of entry and enhancing inspection, monitoring and quarantine facilities.
- 4.2.3.3. Replacement plans for IAS will be prepared and implemented with the participation of relevant stakeholders to ensure regular monitoring and tracking of IAS to prevent them from further spread.
- 4.2.3.4. The existing legal framework will be revisited and necessary amendments introduced to prevent illegal international and domestic trade of fauna and flora.
- 4.2.3.5. The current strategy to minimize the Human-Elephant Conflict (HEC) by confining the elephant population within PAs will be revisited and an integrated approach for managing elephants in village areas as well as inside PAs will be explored with a special focus on:
 - Assisting the establishment of community-managed electric and biological fences in villages around residential areas and cropping fields.

- Facilitating migratory behaviour of elephants by studying their migratory patterns using scientific methods.
 - Creating elephant corridors and facilitating movements in crossing points in roads, railways, streams, etc., when development projects are planned in areas where HEC is observed.
 - Establish sustainable solutions to supply food and other necessities for elephants within PAs.
 - Establishing early warning systems.
 - Establishing transitory facilities such as elephant detaining centres for caring for wounded animals and translocation.
 - Controlling human activities in elephant corridors and natural habitats of elephants.
 - Establishing and maintaining elephant fences in strategic locations around PAs.
 - Offering compensation for losses caused by HEC.
 - Introduction of market-based risk management instruments such as insurance products to cover wild elephant risk.
- 4.2.3.6. The situation of economic damage from other fauna than elephants will be assessed through surveys and necessary measures will be taken to assist local communities in mitigating losses by organizing

economic relief through risk management instruments such as insurance products.

4.2.4. Sustainable Use of Biological Resources and Ecosystems

- 4.2.4.1. Biological Resources of the country will be harnessed sustainably for eco-tourism and nature-based tourism under the well-designed protocols to prevent compromising the protection provided for critical habitats, ensuring a sustainable flow of income for local communities and the national economy.
- 4.2.4.2. Management of existing facilities for ex-situ conservation of biodiversity will be strengthened by enhancing the nexus between in-situ and ex-situ conservation facilities to achieve a higher overall outcome of conservation of species and genetic diversity and establishing new facilities to support conservation, research and education, recreation for public and income generation.
- 4.2.4.3. Sustainable models of community forestry, forest plantations and agro-forestry systems, training and pruning of woody trees in home gardens to obtain high timber yields and controlled use of non-timber forest products will be promoted for win-win outcomes of economic welfare, poverty alleviation, rural development while providing a continuous flow of ecosystem services.
- 4.2.4.4. Tree growing in homesteads and agro-forestry systems in private lands will be promoted with proper

monitoring and verification to increase the tree cover for enhancing the supply of life-support systems in human settlement areas, especially supply of clean air and stream flow of water.

- 4.2.4.5. Sustainable use, management and protection of fisheries and other aquatic resources in freshwater and brackish water bodies and in marine environments will be encouraged through the facilitation of community-based and co-management systems for resources and strengthening legal and regulatory provisions to monitor, evaluate and control human-induced actions of degradation such as illegal fishing methods.

4.3. Coastal and Marine Resources

Sri Lanka's coastline is a 1,710 km long low-lying belt rich with numerous coastal and marine ecosystems such as mangroves, salt marshes, dunes, beaches, barriers and spits, coral reefs, sea grass beds, lagoons and estuaries and other water bodies around the island. Coastal habitats fulfill numerous ecosystem services that help to maintain ecological balance in coastal, inland as well as near shore marine areas. Beyond the coastal zone surrounding the entire island is located the endowment of maritime resources of the country comprised of Exclusive Economic Zone (EEZ), Contiguous Zone, Territorial Sea and Historical Waters. Sri Lanka has also claimed for a seabed zone that extends beyond the EEZ into international waters under the United Nations Convention on Law of the Sea (UNCLOS). Among the key environmental issues faced by coastal and marine resources are coastal erosion, degradation of coastal and marine habitats, coastal and marine pollution and rising incidence of ocean

acidity. Coastal erosion due to both natural and manmade causes leads to shoreline retreat, intrusion of saltwater, development of salinity and loss of productive lands. Coastal and marine environments get polluted by land-based as well as ocean-based pollutants. The most difficult challenge is the majority of pollutants come from non-point sources. Two of the most critical ecosystems that have faced the threat of destruction are mangroves and coral reefs. Usually, the drivers that cause coastal erosion and pollution are responsible for the degradation of coastal habitats too.

4.3.1. Conservation of Coastal and Marine Ecosystems

- 4.3.1.1. Integrated coastal and marine resources management plans will be developed to optimize the benefits from economic development to all stakeholders while minimizing negative impacts and protecting the environment from unnecessary and irreversible damages.
- 4.3.1.2. Information on coastal and marine ecosystems including mangroves, sea grass and coral reefs will systematically be collected and updated periodically to monitor, report and review the changes in systems so that better evidence-based decisions can be taken on the conservation and management of resources.
- 4.3.1.3. Management of coastal zone will be strengthened by the application of new surveillance techniques including satellite-based monitoring, drone technology and GIS analytical tools to monitor threats, evaluate changes in habitats and control the drivers of degradation.

- 4.3.1.4. Comprehensive zonal mapping and criteria for identification of critical coastal and marine ecosystems and buffer zones will be developed and selected sites will be brought under scientific management with the participation of local communities and community organizations such as fisheries cooperatives through the establishment of co-management systems to ensure sustainable use, management and protection of resources.
- 4.3.1.5. Scientifically designed natural succession programmes and artificial planting programmes to restore degraded patches of coastal and marine ecosystems will be organized with the participation of community organizations, private sector and civil society organizations with benefit-sharing schemes for local communities in line with the financial mechanism proposed in 4.2.1.4 that assigns the burden to parties responsible for degradation.
- 4.3.1.6. Measures will be taken to identify, restore and manage coastal wetlands that serve as critical flood detention sites for major cities located in the coastline together with wetlands located in and around those cities as buffer systems against flood hazards.
- 4.3.1.7. Necessary amendments will be introduced to strengthen the existing legal and regulatory provisions to monitor, evaluate and control human-induced actions of degradation of coastal and marine ecosystems such as illegal constructions, illegal

aquaculture farming and recreational activities, plastic and polythene waste dumping, and ensure strict implementation of remedial measures to prevent converting them into other land uses.

4.3.2. Management of Coastal Erosion

- 4.3.2.1.** Ecosystem-based approaches will be mainstreamed to enhance the beach stability and control shoreline retreat, also ensuring the conservation of coastal and marine ecosystems including mangroves, coral reefs, sand dunes and areas around shipwrecks and restoration of coastal and marine habitats through Marine Protected Areas (MPAs) where necessary, to replenish the depleted ecosystems and coastal habitats.
- 4.3.2.2.** Facilities for monitoring sea-level rise and ocean acidification on coastal stability will be established in strategic locations and data from those facilities will be analysed regularly to demarcate critical areas and vulnerable sites and to develop timely response strategies for sustainable use, management, and conservation.
- 4.3.2.3.** Necessary amendments will be introduced to strengthen the existing legal and regulatory provisions to control drivers of coastal erosion such as sand mining to enhance the beach stability and control the process of shoreline retreat.

4.3.3. Management of Coastal and Marine Pollution

- 4.3.3.1. Public awareness on marine and coastal pollution including transboundary pollution will be increased to enlist maximum public support to prevent the pollution at their sources and to encourage active participation of all stakeholders in the process of monitoring and reporting the local level pollution and cleaning of polluted areas.
- 4.3.3.2. The existing legal and regulatory provisions available to control coastal and marine pollution including transboundary pollution will be reviewed and necessary safeguard measures introduced to control the pollution at their sources.
- 4.3.3.3. Undertaking regular baseline surveys will be made mandatory in the coastal zone to set up benchmarks to assess the impacts of events that include natural hazards, transboundary pollution including shipping accidents, chronic accumulation of pollutants as well as illegal destruction of coastal habitats so that proper Natural Resources Damage Assessments (NRDA) can be carried out for restoration work, preparation of accurate claims for compensations and providing relief to affected parties.
- 4.3.3.4. Coordination with the relevant agencies will be done to prepare a sophisticated emergency preparedness plan to minimize the environmental damages from natural hazards, shipping accidents, etc., with the participation of relevant institutions and communities.

4.4. Environment Pollution Prevention, Control and Waste Management

Economic activities generate waste and harmful by-products which are at times freely disposed into the environment. With the growth of industries and services such as energy and transportation and rapid urban sprawl around major cities, Sri Lanka has witnessed a rapid increase in atmospheric, water, soil, noise and visual pollution that create increased pressure on life-support systems. Light, thermal and radiation pollution too are emerging with development activities. Poor quality of air, water and neighbourhood environments resulting due to pollution have deprived people of safe access to basic life needs such as fresh air, drinking water and safe foods while also creating health and sanitation problems. This situation has further been aggravated by urban sprawl around Colombo and other provincial capitals. Despite government efforts to address the situation through various policy measures, the problems appear to persist and aggravate. The NEP aims to guide in finding innovative and robust solutions which are effective under local conditions so that national aspirations towards sustainable development are met successfully.

4.4.1. Management of Atmospheric Pollution

- 4.4.1.1. Air quality status throughout the country will be monitored regularly by establishing an integrated network of air quality monitoring facilities in strategic locations. The information generated from these facilities will be made accessible to the public to create awareness on level and impacts of pollution.

- 4.4.1.2. Air pollution from stationary sources such as power generation plants, industrial facilities, waste

management facilities will be minimized by promoting alternatives that include but limiting to resource efficient cleaner production technologies, improving the energy efficiency, fuel switching and improving combustion efficiency, high-efficient end of the pipe treatment technologies and renewable sources of energy.

- 4.4.1.3. Air pollution due to emissions from mobile sources (i.e., transport emissions) will be reduced by adopting a multi-pronged strategy comprised of measures including but not limiting to improving the Vehicle Emissions Testing (VET) programme, promoting people-friendly methods including the "Mass Rapid Transport (MRT)" system and a more practical public transport system with advanced facilities to reduce the use of private transport, adopting demand management measures to reduce transport needs, increasing the quality of fuel used in vehicles, controlling traffic congestions, introducing Intelligent Transport Systems (ITS) and encouraging the use of environment-friendly transport modes by promoting non-motorized, hybrid and electric vehicles through appropriate incentive schemes while encouraging the electrification of all public transport systems.
- 4.4.1.4. Indoor air pollution will be brought under the control by introducing improved household cooking and heating technologies, less-polluting household fuels and better structural designs of household facilities

including encouraging research on the same as specified in 4.7.4.1.

- 4.4.1.5. Open burning of solid waste including post-consumer plastics will be minimized by efficient implementation of relevant legal and regulatory instruments and supporting market-based mechanisms inclusive of Extended Producer Responsibility (EPR) and 3R systems in all economic activities and sectors with the collaboration of private sector and local authorities.

4.4.2. Management of Water Pollution

- 4.4.2.1. Water quality in rivers, streams, reservoirs and groundwater sources will be improved by building up facilities necessary for regular and real-time monitoring of physicochemical and biological parameters and controlling discharges of liquid pollutants from domestic, agricultural, industrial and waste management sources and dumping of solid waste so that the water available from surface and groundwater sources are generally safe for drinking and other domestic purposes and for uses in industrial and agricultural production.
- 4.4.2.2. The situation of waste water management in all urban and suburban areas will be enhanced by establishing modern systems of sewerage with centralized treatment facilities, waste water recycling facilities, ensuring safe conditions of sanitation at households

and working places and preventing sewage from entering surface and groundwater bodies.

- 4.4.2.3. The intrusion of saltwater (saline water) into rivers and other water sources in coastal areas will be brought under control by maintaining river flow levels through efficient flow management and nature-based solutions, controlling sand mining in areas near river mouths, strengthening monitoring systems, establishing essential infrastructure facilities and building the institutional capacity of relevant organizations at national and sub-national levels.
- 4.4.2.4. Routine systematic and scientific research to detect water quality (lagoon, estuaries, and sea) and nonpoint source water pollution will be encouraged to strengthen policy responses on measures to control water pollution in coastal ecosystems.

4.4.3. Sustainable Management of Solid Waste

- 4.4.3.1. A holistic approach towards Solid Waste Management (SWM) based on Life Cycle Approach, Sustainable Production and Consumption, Circular Economy ,3R and related principles will be mainstreamed at all levels of operation-household, local government, provincial and national.
- 4.4.3.2. An integrated national system of solid waste management will be established by adopting measures that include but are not limited to:

- Developing and updating National Solid Waste Management Standards and Guidelines as required.
- Logically organizing the operational system of waste management covering major steps that include segregation at the source of generation, recycling of non-biodegradable waste, systematic collection from sources, promoting alternative ways of management such as organic fertilizer production.
- Introducing appropriate technologies at different levels for multiple types of operation.
- Building the capacity of Local Government Authorities (LGAs) and other provincial and national level stakeholders by providing necessary technical facilities and training.
- Ensuring occupational health and safety of waste handlers at all levels.
- Safe closure, restoration and rehabilitation of waste dumps as required.
- Setting up of Measurement, Reporting and Verification (MRV) systems.
- Promoting public-private partnerships for handling waste management activities.

- Instituting an apex body to coordinate and monitor waste management activities implemented by different agencies.
- 4.4.3.3. The situation of managing hazardous waste that involves clinical waste from health facilities, various types of toxic industrial waste and Persistent Organic Pollutants (POPs) will be upgraded by introducing new technology, establishing required infrastructure, amending existing laws and regulations and enhancing institutional capacity for implementing programmes and strengthening the monitoring at local, provincial and national levels on regular basis.
- 4.4.3.4. The existing laws and regulations will be strengthened to prevent dumping of waste of other countries in Sri Lanka and the institutional capacity of relevant organizations will be enhanced for efficient implementation.
- 4.4.3.5. Disposal of construction and demolition waste will be streamlined by establishing recycling facilities through public-private partnership investments and setting up material supply chains with the partnership of local authorities, the private sector and Sri Lanka Railways.
- 4.4.3.6. Management of electronic waste will be improved by establishing E-Waste recycling facilities strengthening regulations on disposal and promoting Extended Producer/Importer Responsibility (EPR) mechanisms.

- 4.4.3.7. Plastic waste generation will be reduced by strengthening the regulations and adopting market-based economic instruments on the production, import, use and disposal of synthetic, non-biodegradable materials such as polystyrene and plastics.
- 4.4.3.8. Public awareness will be raised to change attitudes towards waste such that ‘waste is a resource rather than a nuisance’ by conducting awareness campaigns along with supportive measures for offering incentives to reuse and recycling of waste, extending the coverage of waste collection to all households, making necessary adjustments in the legal and regulatory framework and strengthening institutional capacity to monitor actions of negligence.

4.4.4. Managing Other Forms of Pollution: Noise, Visual, Thermal, Light, and Radioactive Pollution

- 4.4.4.1. The current situation of noise, visual, thermal, radioactive and light pollution will be assessed by undertaking a baseline survey and necessary regulatory changes will be introduced to overcome the problems together with measures to build the capacity of responsible agencies for effective implementation.
- 4.4.4.2. The evidence on possible sources of radioactive waste will be investigated using scientific methods and necessary measures will be initiated to strengthen the existing technical protocols and guidelines, develop new protocols/guidelines if required, strengthen

monitoring facilities, build the capacity of relevant agencies by providing essential facilities and skilled staff, and to introduce necessary legal and regulatory changes for effective implementation.

4.5. Climate Change and Global Environmental Challenges

As economies become globally integrated, their environmental consequences also are increasingly felt beyond national boundaries. The rising threat of climate change, depletion of the ozone layer, loss of global biodiversity and pollution of global commons such as the atmosphere and oceans are major examples. Of these, climate change has emerged as the most prominent global environmental issue with far-reaching impacts projected all over the world. Sri Lanka, being a tropical island located in a turbulent zone of the Indian Ocean is highly vulnerable to the impacts of climate change. The looming threat has imposed additional conditions that sustainable development should be low-carbon and climate-resilient. It has begun to show its destructive capacity in terms of the increased number of disaster victims, rising crop losses and declining agricultural productivity, growing threat on livelihoods and increased cost of environmental hazards in all economic sectors. While climate change has captured international attention recently more than other environmental threats, the situation of many other global challenges also appeared to be worsening. Many of these are interconnected. For instance, many Ozone-Depleting Substances (ODS), as well as substances introduced to replace these, were found to be contributing to climate change. Therefore, finding ways for minimizing the impacts of global environmental threats and coping with ensuing damages have become the inevitable responsibility of policymakers. Sri Lanka cannot overcome the impacts of these global challenges as

a single country. Hence, cooperating with other countries as a party to Multilateral Environmental Agreements (MEAs) to achieve the solution paths proposed by them is the main option available to address international environmental challenges faced by the country.

4.5.1. Climate Change: Adaptation, Mitigation and Loss and Damage

- 4.5.1.1. Periodic assessments on vulnerability to and risk of adverse impacts of climate change will be undertaken and appropriate strategies for adaptation to reduce impacts on vulnerable sectors and regions will be identified.
- 4.5.1.2. Climate Change Adaptation will be mainstreamed in public, private, community, and civil society activities so that timely responses will be offered to reduce the impacts of slow-onset changes as well as extreme weather events.
- 4.5.1.3. The level of vulnerability of individual and community stakeholders in vulnerable sectors/regions/ communities including those with special needs and differently-abled, youth and women will be decreased by introducing appropriate measures to enhance adaptive capacity and resilience of individual stakeholders and organized groups.
- 4.5.1.4. Assistance will be provided to individual and community stakeholders from vulnerable sectors to identify, access and effective use of climate-smart solutions for adapting to critical impacts by

facilitating the transfer of technology according to the guidelines and criteria for selection of best technologies proposed in Technology Needs Assessment (TNA) studies.

- 4.5.1.5. Commitment towards meeting global GHG mitigation targets will be fulfilled by implementing appropriate mitigation measures in priority sectors with high GHG reduction potential.
- 4.5.1.6. Measures for reduction of GHG emissions will be selected to maximize co-benefits such as improvement of environmental quality, increased energy security, enhanced food security, reduced dependency on imported fossil fuels and enhanced health benefits by promoting options that include but are not limited to;
 - Improving energy efficiency
 - Renewable energy
 - Integrated transport solutions
 - Low and zero-emission vehicles including non-motorized vehicles
 - Integrated solutions of waste management
 - Reducing Emissions from Deforestation and Degradation of forests (REDD)
 - Adoption of appropriate Climate-Smart Agriculture (CSA) practices with mitigation co-benefits

- Use of traditional methods for food preservation and storage
 - Resource-Efficient Cleaner Production (RECP)
 - Climate-friendly cooling substances
- 4.5.1.7. An integrated system for Measurement, Reporting and Verification (MRV) of GHG emissions at national, sector and facility levels will be established to enhance the planning of mitigation efforts and facilitate the reporting of GHG emissions and emission reductions.
- 4.5.1.8. Prospects for harnessing Carbon Pricing Instruments (CPIs) represented by emission trading schemes and carbon taxes will be explored and necessary measures will be initiated to establish a globally integrated national carbon market for transacting carbon credits.
- 4.5.1.9. Measures will be initiated to introduce a ‘Climate Change Impact Assessment (CCIA)’ as a part of Strategic Environmental Assessment (SEA) and Environmental Impacts Assessment (EIA) procedures in evaluating investment plans and projects on which climate change is deemed to have significant implications for identifying and quantifying positive and negative contributions of projects to GHG emissions (mitigation impact) and positive and negative contributions to overcome critical impacts of climate change (adaptation impact).

- 4.5.1.10. Local mechanisms to recover losses and damages from climate change impacts will be designed in line with Warsaw International Mechanism (WIM) for Loss and Damage including measures for strengthening weather/climate forecasting, establishing early warning systems, facilitating index-based climate insurance schemes and addressing the concerns of climate-related migrants.
- 4.5.1.11. Proper institutional mechanism for implementing climate change mitigation and adaptation activities will be established with enhanced implementation capacity including data and information system facilities and a mechanism for mobilizing resources from budgetary and donor funding sources as well as private sector contributions.

4.5.2. Other International Environmental Challenges and International Cooperation

- 4.5.2.1. Timely action will be taken to fulfil Sri Lanka's obligations under Multilateral Environmental Agreements to address global environmental challenges.
- 4.5.2.2. Appropriate technological solutions will be introduced and promoted to overcome the global challenges of ozone depletion and climate change, especially focusing on cooling facilities and systems run on non-ozone-depleting substances.
- 4.5.2.3. The Government policy towards joining and ratifying MEAs will be streamlined by developing criteria for:

- Matching the relevance of aims and objectives of respective MEAs with policy priorities identified in the NEP and other environment-related policies;
 - Assessing prospective benefits and damages the country can experience nationally; and
 - Identifying possible contributions Sri Lanka can offer to overcome the relevant problems globally
- 4.5.2.4. The country's strategic interests in the environment will be safeguarded and promoted bi-lateral, regional and international forums and decision-making events by strengthening the institutional and human resources capacity and negotiation skills required for astute engagement in environmental diplomacy and by paying special attention to strategic environmental issues in signing trade agreements.
- 4.5.2.5. Mutual consultation and scientific and technical capacity building will be carried out to draw up and implement national and regional action plans and protocols based on a comprehensive understanding of transboundary environmental issues with the support of regional, international bilateral and multilateral agencies.

4.6. Built Environment and Green Development

In the modern world, the immediate surroundings of humans are usually comprised of the built environment rather than the natural environment. This is more so in urban areas than in rural areas where

residents encounter the natural environment more closely than urban dwellers. The built environment usually refers to human-made surroundings that provide the setting for human activity, ranging in scale from buildings and parks or green space to neighbourhoods and cities that can often include their supporting infrastructures, such as water supply, or energy networks. Hence, ensuring the sustainability of the built environment also becomes a legitimate concern of environmental policies. The recent period has witnessed the emergence of several new concepts and practices that are aiming at greening the built environment such as green buildings, green infrastructure, green designs and sustainable transport. Not only greening the living environment but proactively converting the entire economic development process into a green development (growth) process has been emphasized as the quickest path to sustainable development. This has given rise to several proactive concepts and practices that go beyond the conventional domain of environment policy which responds to environmental problems, both at built and natural environment, in reactive manner. Few examples are Resource Efficient and Cleaner Production (RECP), green manufacturing and green energy. Sri Lanka is in a gradual process of embracing proactive green development initiatives for nearly two decades now and the National Cleaner Production Policy in 2005 and its sectoral policies are important milestones. The Ministry of Mahaweli Development and Environment has introduced the National Policy on Sustainable Consumption and Production in 2019. In parallel, other agencies also have come forward with complementary measures such as Green Building Guidelines by the Urban Development Authority (UDA), projects and programmes of Sustainable Energy Authority (SEA) for energy efficiency improvement and clean energy and Good Agricultural Practices (GAP) introduced by the Department of

Agriculture. Promoting such initiatives can be considered as the most futuristic dimension of environmental policies.

4.6.1. Green Cities and Townships: Greening the Built Environment

- 4.6.1.1. In line with the policy on National Spatial Strategy (NSS) articulated in 4.1.1.2., green urban planning and designing concepts and practices will be made into optimal use with modern techniques of urban planning to ensure eco-friendly zoning, construction and maintenance of the built environment.
- 4.6.1.2. Green development, green building, green projects and sustainable land management concepts will be mainstreamed in urban planning and urban development projects to enhance the liveability and environmental conditions in urban areas.
- 4.6.1.3. All forms of the built environment will be designed to be climate-smart by mainstreaming climate-resilient buildings and infrastructure including cycling infrastructure, promoting nature-based solutions such as green shade around buildings, rooftop gardens, installing permeable brick pavements and cool roofs to cool the environment, and building the flood resilience by conserving and protecting the existing wetlands and creating artificial wetlands.
- 4.6.1.4. Urban forest amenities and greenery will be promoted to enhance the liveability of cities, ensure supply of clean air, water purification, carbon sequestration and

to provide recreation and aesthetic benefits to city-dwellers.

4.6.2. Green Development and Manufacturing

- 4.6.2.1. In line with the policy on National Spatial Strategy (NSS) articulated in 4.1.1.2., eco-industrial parks will be established in zones especially identified for industrial activities by the NSS with well-established safeguard facilities to minimize the environmental damage from industrial facilities.
- 4.6.2.2. Use of RECP technologies and green manufacturing practices will be encouraged to minimize industrial process emissions and to optimize the application of preventive environmental measures thereby reducing the risk of air, water and soil pollution on human health and the environment.
- 4.6.2.3. Subject to environmental assessments referred to in 4.5.1.9., renewable energy, tri-generation facilities will be promoted for ensuring energy efficiency, reduction of GHG emissions and disposal of waste materials in an effective and sustainable manner.
- 4.6.2.4. A proactive and progressive stand will be maintained towards innovative approaches for green development and technology that emerge in Sri Lanka and abroad with the view of adopting them for the optimal benefit of environmental management and sustainable development in the country.

4.7. Cross-Cutting Issues and Challenges

Besides, the technically specific policy statements dealing with above mentioned thematic areas; there are several cross-cutting areas of policy intervention that are generally applicable to one or more of the PTAs. This section presents the common policy statements that support these ‘Cross-Cutting Issues and Challenges’. The list of cross-cutting areas covered in the sections includes: Institutional Coordination; Resource Mobilization; Market-Based Instruments; Research and Development; Data and Information for Monitoring and Evaluation; Traditional Knowledge and Traditional Practices; Community Engagement and Participatory Management; Training, Education and Awareness.

4.7.1. Institutional Coordination

- 4.7.1.1. Appropriate mechanisms will be set up to ensure the coordination among multiple government agencies involved in environmental management, vertically (between national and subnational level agencies) and horizontally (among national or subnational agencies) whenever necessary according to the needs of actions/programmes in operation.
- 4.7.1.2. Necessary institutional and e-communication linkages will be established to enhance the cooperation and coordination between government institutions and key stakeholders including Non-Government Organizations (NGOs), CSOs, CBOs, youth, women organisations, private sector so that the strengths of respective stakeholders are harnessed to better overall outcomes of sustainable development.

- 4.7.1.3. The role of community-based organizations for management of environmental resources will be recognized and necessary measures to facilitate their cooperation in community-based management of Common-Pool Resources (CPR) and/or co-management of ecosystem services in partnership with the government and non-state actors will be ensured and upheld issues with the support of regional, international, bilateral and multilateral agencies.
- 4.7.1.4. Existing legislation will be reviewed and a comprehensive legal framework for an integrated approach for the restoration, protection, management and sustainable use of environmental resources in the country will be created.

4.7.2. Resource Mobilization

- 4.7.2.1. Sustainable means of finance and other resources will be mobilized to support the implementation of plans, programmes and projects to achieve the goals of NEP from a diverse range of sources that include budgetary finance, international donor funding, private sector investments and Corporate Social Responsibility (CSR) funding, sponsorships from other non-state actors and contributions from community- based organizations.
- 4.7.2.2. Innovative schemes of funding for biodiversity conservation, climate change mitigation and adaptation, and disaster risk mitigation through

instruments like Biodiversity Finance Initiative (BIOFIN), Emission Trading Schemes (ETS), Reducing Emissions from Deforestation and Degradation of Forests (REDD), Index Insurance Schemes and schemes of Payment for Ecosystem Services (PES) will be encouraged and facilitated with the partnership of private sector, international donors and CSOs.

- 4.7.2.3. Prospects for introducing nature-based offset, compensation and investment mechanisms for conservation and restoration of affected ecosystems like conservation banking, mitigation banking, habitat banking and tree banking will be explored, and pilot schemes initiated to test the successful models for scaling-up.
- 4.7.2.4. Avenues available to obtain loans/grants/technical assistance from agencies such as Adaptation Fund established under UNFCCC, Green Climate Fund, Blue Carbon Financing, Global Environment Facility, Multilateral Fund of the Montreal Protocol and from bilateral donor agencies will be used to support the implementation of well-designed projects with climate-friendly activities.
- 4.7.2.5. Finances for policy research on nationally important topics relating to environmental resources will be mobilized through e-platform based proposal calls to strengthen policy responses towards environmental

challenges and to secure grassroot level and youth participation.

4.7.3. *Market-Based Instruments*

- 4.7.3.1. Adoption of Market-Based Instruments (MBIs) to find solutions for environmental challenges will be encouraged as a viable and legitimate alternative/complement for command-and-control measures.
- 4.7.3.2. Designing and implementing appropriate pilot schemes of PES to conserve and protect sensitive and critical ecosystems with the participation of key stakeholders including NGOs, CSOs, CBOs, youth/women organisations, private sector entities will be actively promoted through providing economic incentives, capacity building support, education and training and support for institutional development.
- 4.7.3.3. Introduction of innovative insurance products to mitigate the threats like climate-induced disasters and Human Animal Conflict as a market-based risk management tool will be facilitated by providing necessary institutional support.
- 4.7.3.4. Economic valuation of non-market ecosystem services from various environmental resources that can be used for decisions on policy and management of environmental resources will be encouraged by supporting researchers to conduct studies and apply their findings for planning and management purposes

- 4.7.3.5. Adoption of green accounting systems and mainstreaming the use of economic values of ecosystem services in decisions on macroeconomic and sectoral policies in the country will be encouraged and vigorously promoted.

4.7.4. Research and Development

- 4.7.4.1. Research and development activities on technical and socio-economic aspects of environment with a national importance will be encouraged and facilitated by providing financial and institutional support to ensure finding evidence-based solutions for environmental problems/issues.
- 4.7.4.2. New development and/or local adaptation of innovative environmental management technologies and transfer of skills and knowledge on such technologies to relevant multi stakeholders (state, private sector, civil society and community) will be facilitated with the cooperation of research organizations, universities and subject experts.
- 4.7.4.3. All protected areas and conservation zones will be made available for research purposes to ensure creation of further knowledge and improve the management of respective resources using research findings.
- 4.7.4.4. Policy research on nationally important topics relating to environmental resources such as problems of

overexploitation and poor management, gaps in existing policies, and measures to address those gaps will be encouraged to strengthen policy responses towards environmental challenges.

4.7.5. Data and Information for Reporting, Monitoring and Evaluation

- 4.7.5.1. Action will be taken to strengthen strategic data collection facilities on environmental resources and to set up mechanisms for sharing data among stakeholders involved in policy decision making, management of resources, research and development and education and training especially focusing on information digitization.
- 4.7.5.2. Usage of data and information from such facilities for monitoring of progress in implementation of plans, programmes and projects and for evaluation of their outputs and outcomes for sustainable development of the country will be made mandatory.
- 4.7.5.3. Data generated using public funds on the environment will be made accessible to the general public by developing guidelines to ensure open access to data and establishing user-friendly data retrieving facilities.
- 4.7.5.4. Nationally integrated facilities and mechanisms for MRV will be developed for addressing environmental issues, especially mitigation of GHG emissions from priority sectors with special attention on evaluating

the effectiveness of mitigation measures and fulfilling international obligations for periodic reporting of emissions.

- 4.7.5.5. The performance of the reporting and monitoring system of environmental issues will be improved through digitalization and automation concepts including mobile-based applications for handling complaints regarding environmental issues like illegal sand mining, deforestation, illegal hunting, waste dumping, etc.

4.7.6. Local, Traditional and Indigenous Knowledge and Practices

- 4.7.6.1. Local, traditional and indigenous knowledge and practices relating to environmental management will be recognized for their contribution to the conservation of ecosystem services and for upholding cultural, religious and social values.
- 4.7.6.2. Necessary measures will be taken to adopt local, traditional and indigenous knowledge/practices as a whole or in combination with modern science-based practices for sustainable management of land, water, air and biodiversity resources; adaptation to climate change impacts; and disaster mitigation.
- 4.7.6.3. Action will be initiated to compile, document, conserve and create public awareness on local, traditional and indigenous knowledge and practices to

harness them for better environmental and social outcomes.

- 4.7.6.4. Activities that result in the gradual loss of local, traditional and indigenous knowledge will be revisited with suitable national mechanism in line with international Conventions and Protocols.

4.7.7. Community Engagement, Participatory Management and Empowerment of Gender and Youth

- 4.7.7.1. Consultation of local stakeholders (rural and urban) and community organizations will be mainstreamed in all forms of environmental management activities including preparation and implementation of management plans.
- 4.7.7.2. Participation of NGOs, CSOs, CBOs, women and youth groups including differently-abled and those with special needs in the implementation of policy measures and environmental management plans will be enhanced by engaging them to build partnerships and delegating decision-making powers to ensure successful implementation and better environmental and social outcomes.
- 4.7.7.3. Community organizations will be mobilized to take an active role in conserving soil, water, air and biodiversity resources by developing their capacity through creating awareness, offering training and education and providing necessary supportive facilities.

- 4.7.7.4. Enhanced female and youth participation and empowerment of gender and youth in environmental management will be given special attention in all forms of community and stakeholder engagement activities.

4.7.8. Capacity Building, Training, Education and Awareness

- 4.7.8.1. The capacity of provincial and local government officers to handle environment-related issues will be developed by providing well-designed training programmes through a coordinated and planned approach to cater to their needs especially regarding data management and identification of key actions to be implemented.
- 4.7.8.2. Awareness of the public on environmental issues; the values of the environment including biodiversity and ecosystems services and obtaining various permits including Environmental Impact Assessments and Environmental Protection Licenses will be raised by undertaking campaigns on targeted issues in printed and electronic public media and social media channels.
- 4.7.8.3. Content on the environment in the national education curriculum at all levels (early childhood, school, technical/ vocational, higher education) will be updated periodically by introducing selected topics and enriching existing topics with new facts with the support of education professionals.

4.7.9. Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA)

- 4.7.9.1. EIA and SEA procedures in evaluating investment plans and projects will be streamlined with improved public consultation, increased transparency, and continuous pre- and post- monitoring to minimize unethical conduct.
- 4.7.9.2. EIAs and SEAs will be strengthened to include socio-economic, political, and cultural dimensions in addition to the traditional physical and biological dimensions.
- 4.7.9.3. The capacity and technical capability of Central Environment Authority (CEA) and other relevant agencies for administering EIAs and SEAs including monitoring industrial activities to ascertain whether these comply with existing EIA laws and regulations will be strengthened.

5. Applicability and Scope

The scope of the Policy is intended to cover the entire subject of environment, in general, through policy interventions proposed under seven policy thematic areas. The broad set of interventions identified by policy statements under seven thematic areas is to provide guidance and direction when making decisions on respective environmental issues covered by these thematic areas. However, proposed broad interventions also provide room for creative interpretations and applications, which can be considered as an advanced way of using the policy. It is expected that proposed interventions will be converted into implementable actions through plans, programmes and projects through a hierarchical order of intermediate steps such as strategies, options and activities.

6. Policy Implementation

The main responsibility of implementation of the National Policy lies with the Ministry responsible for the subject of Environment. The Ministry of Environment is vested with the leadership in addressing the problems relating to the environment by formulating and implementing appropriate policies, strategies and plans covering broad areas of environmental management. However, the subject of environment is too broad a subject to be handled effectively by a single line ministry or agency in practice. Hence, despite the leadership role to be played by the Ministry of Environment, the institutional responsibility of handling different aspects of environmental management is scattered among several ministries, line agencies and local government bodies. Annex 3 presents a list of government agencies that are vested with responsibilities relating to different aspects of environmental management. For instance, the responsibility of managing solid waste is mainly vested with local government authorities.

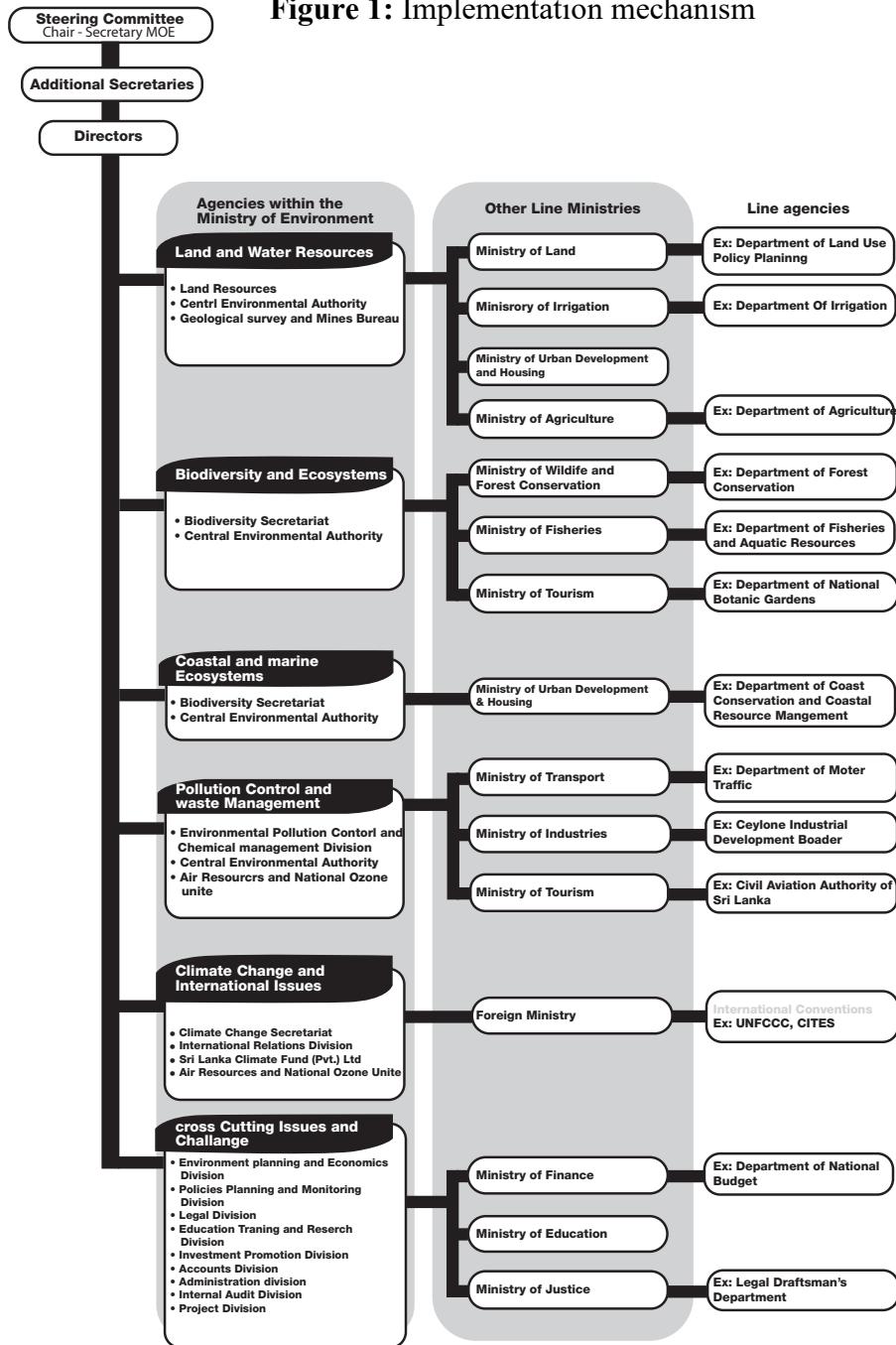
Hence, implementation of NEP requires a complex coordination mechanism where the Ministry of Environment is taking the leadership role while involving other line ministries and line agencies too. To achieve this, the Ministry of Environment is in the process of preparing the National Environment Action Plan (NEAP), which is a dedicated plan to implement the policies identified in the NEP. The NEAP will include a hierarchical order of policy interventions such as strategies and actions that convert the policy statements of NEP into specific time-bound activities together with relevant agencies/stakeholders to implement these. The NEAP will be a rolling plan to be updated periodically with necessary arrangements for monitoring and evaluation also in place. Hence, the NEAP can be

considered as the main implementation mechanism associated with the NEP.

In the process of implementation, the Ministry is required to coordinate not only with its line agencies but with several other ministries. In this connection, depending on the area of policy interventions, the Ministry will be assisted by the line agencies coming under their purview as well as other ministries and line agencies concerned.

The NEP is comprised of interventions that need the support of sub national agencies such as Local Government Authorities and Provincial Councils too. The Ministry will take necessary measures to coordinate with sub national agencies and other stakeholders including the private sector, NGOs, CSOs, CBOs, local communities and the public when their assistance is required for implementation of the National Policy. The Ministry will also take actions to establish new institutional arrangements to implement the proposed policy interventions where it is necessary, as proposed in the policy statement 4.7.1.1.

Figure 1: Implementation mechanism



Glossary

Biological diversity	The variability among living organisms from all sources including <i>inter alia</i> , terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes the diversity within species, between species and of ecosystems.
Biological resources	All components of biological diversity, including genetic resources, organisms or parts thereof, populations, or any other biotic components of ecosystems with actual or potential use or value for humanity.
Carbon sequestration	Natural process by which atmospheric carbon dioxide is absorbed by plants through photosynthesis and held in a solid form for long durations
Resource Efficient Cleaner Production	The continuous application of preventive environmental strategies towards processes, products and services in order to increase the efficiency with which they use materials, water and energy, to improve their productivity and, thus, their competitiveness.

Climate Change	The human-induced changes taking place in the world's climate, especially the trend towards global warming, which will deeply impact on <i>ecosystems</i> . The UN Framework Conservation on Climate Change and its Kyoto Protocol seek to reduce the rate of change by curbing practices that are assumed to accelerate climate change.
Conservation of Resources	The wise use, management and protection of resources for their inherent value and for the benefit of society, bearing in mind that future generations have right to these resources as much as the present generation.
Ecosystem	A complex of living communities of organisms and their non-living environment interacting as an entity of its own.
Environment	The <i>ecosystem</i> of which we are part.
Environmentally Sound Management of Waste	This means taking all practicable steps to ensure that waste is managed in a manner which will protect human health and the environment against the adverse effects which may result from such waste.

Extended Producer Responsibility	An environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.
Genetic Resources	Genetic material of actual or potential value (i.e. Including any plant, animal, microbial or other origins containing functional units of heredity that are of functional or potential value).
Integrated Waste Management	Waste management that includes inter-linkages with waste forms.
Invasive Species	IAS are animals, plants and other organisms introduced by humans into regions which are out of their natural range of distribution, where they become established and disperse, generating a negative impact on the local ecosystem and species.
Life Cycle Management	LCM is the application of life cycle thinking to modern business practice, with the aim to manage the total life cycle of an organization's products and services towards more sustainable consumption and production.

Life Cycle Principle	Designing, producing and using goods and services so as to enhance their agricultural value. Despite extensive testing, many people entertain fears that these could be harmful to health or damage the environment in as yet unknown ways, or prove to be <i>invasive</i> .
Polluter Pays Principle	This is the commonly accepted practice that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment.
Precautionary Principle	Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
Protection	(As opposed to conservation) the prevention of harm, usually by passive means, without intervention and active management.
Renewable Energy	energy resources that undergo cyclic replenishment within a human time scale.
Sustainable Development	National development that meets the needs and aspirations of the present generation without compromising the ability to meet those of future generations, which have as much right to nature and natural resources as we do.

Sustainable Development Goals	A universal call to action to achieve seventeen global goals to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by the United Nations general assembly in 2015
Sustainable Use	Use of components of biological diversity in a way, and at a rate, that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.
Traditional Knowledge	Traditional knowledge is the knowledge of people living in a particular geographical territory or area, their traditional and subconscious knowledge of the area and people or communities within a given geographical territory.
Waste	Waste is defined as any material, substance or by product eliminated or discarded or as no longer required at a particular time and a particular place or form and therefore to be used either as a resource or to be treated and disposed of in an environmentally sound manner if it does not have a utility value.

Annex 1: List of environment-related policies handled by the Ministry of Environment

Subject of the Policy	Year of Introduction
National Forest Policy	1995
National Policy on Wildlife Conservation	2000
National Air Quality Management Policy	2000
National Environment Policy and Strategies	2003
National Watershed Management Policy	2004
National Policy and Strategy for Cleaner Production	2005
National Policy on Wetlands	2006
National Biosafety Policy	2005
National Policy on Elephant Conservation	2006
National Policy on Sand as a Resource for the Construction Industry	2006
National Climate Change Policy	2012
National Policy on Invasive Alien Species (IAS) of Sri Lanka, Strategies and Action Plan	2016

National Policy on Sustainable Consumption and Production	2019
National Waste Management Policy	2019
National Policy and Strategies on Traditional Knowledge and Practices Related to Biodiversity	2020
National Policy on Conservation and Sustainable Utilization of Mangrove Ecosystems in Sri Lanka	2020
National Policy on Access to Biological Materials and Fair and Equitable Benefit Sharing	2020
National Policy on Environmentally Sensitive Areas in Sri Lanka	Draft
National Policy on Chemical Management	Proposed

Annex 2: List of environment-related policies handled by other Ministries

Subject of the Policy	Year of Introduction
National Fisheries and Aquatic Resources Policy	2006
National Agriculture Policy	2007
National Land Use Policy	2007
National Physical Planning Policy and Plan	2018
National Energy Policy and Strategy	2019
National Policy Framework: Vistas for Prosperity and Splendor	2019
National Policy on Natural Gas	2020
National Policy and Strategy on Sustainable Development	2021
National Policy on Mineral Resources	Draft

Annex 3: Key Legislations and Government Agencies Dealing With Environment

Area of the Legislation	Key Legislative Enactments	Main Responsible Agency
Environment: General	National Environment Act	Central Environment Authority
Land Resources	Land Surveys Ordinance	Department of Survey
	Land Settlement Ordinance	Department of Land Settlement
	Land Development Ordinance	Department of Land Commissioner General
	Soil Conservation Act	Department of Agriculture
	Land Reform Act	Land Reforms Commission
	Mines and Minerals Act	Geological Survey and Mines Bureau
Water Resources	Irrigation Ordinance	Department of Irrigation

	Water Resources Board Act	Water Resources Board
	National Water Supply and Drainage Board Act	National Water Supply and Drainage Board
	Mahaweli Authority Act	Mahaweli Authority of Sri Lanka
	Agrarian Development Act	Department of Agrarian Development
Biodiversity, Forestry and Wildlife	Forest Conservation Ordinance	Forest Department
	Fauna and Flora Protection Ordinance	Department of Wildlife Conservation
	National Zoological Gardens Act	Department of National Zoological Gardens
	Botanic Gardens Ordinance	Department of National Botanic Gardens
	Coast Conservation and Coastal	Coast Conservation Department

Coastal and Marine Resources	Resources Management Act	
	Marine Pollution Prevention Act	Marine Environment Protection Authority
	Fisheries and Aquatic Resources Act	Department of Fisheries and Aquatic Resources
	National Aquaculture Development Act	National Aquaculture Development Authority
	Fauna and Flora Protection Ordinance	Department of Wildlife Conservation
Waste Management	National Environment Act	Central Environment Authority
	Municipal Ordinance	Municipal Councils
	Urban Council Ordinance	Urban Councils
	Pardeshiya Sabhas Act	Pardeshiya Sabhas
Air Pollution	National Environment Act	Central Environment Authority

	Factories Ordinance	Department of Labour
	Motor Traffic Act	Department of Motor Traffic

