

PRIME MINISTER

No. 450/QĐ-TTg

SOCIALIST REPUBLIC OF VIETNAM

Independence – Freedom – Happiness

Hanoi, April 13, 2022

DECISION

**APPROVING NATIONAL ENVIRONMENTAL PROTECTION STRATEGY UNTIL 2030
AND VISION UNTIL 2050**

PRIME MINISTER

Pursuant to Law on Governmental Organization dated June 19, 2015; Law on amendments to Law on Government Organization and Law on Local Governmental Organization dated November 22, 2019;

Pursuant to Law on Environmental Protection dated November 17, 2020;

At request of Minister of Natural Resources and Environment.

HEREBY DECIDES:

Article 1. Approving the “National environmental protection strategy until 2030 and vision until 2050” (hereinafter referred to as “Strategy”) as follows:

I. PRINCIPLES, VISION, AND OBJECTIVES

1. Principles

a) The environment is the requirement, the basis, and the prerequisite for sustainable socio-economic development; environmental protection is both the objective and the task and must be placed at the center of all development decisions; economic development must coexist with nature, respect the rule of nature, and not trade off the environment in order to achieve economic growth.

b) Environmental protection is the responsibility of the entire political system and the society where local governments, enterprises, community, and the general public play a vital role; environmental protection must rely on strict, synchronous, and consistent cooperation among authorities, departments, and the government and utilize opportunities offered by international integration and cooperation.

c) Environmental protection must aim towards protecting the general public’s health. Prioritize prevention and control of pollution, focus on dealing with primary, pressing environmental

issues; remediate pollution, regression, improve environmental quality, combine with nature and biological diversity conservation, and respond to climate change.

d) Environmental protection must be implemented on the basis of institution quality improvement and effective law execution; promote accountability, publicity, transparency, and community supervision; promote administrative procedure reform, renovation, application of achievements of the fourth industrial revolution, digital transformation; promote general management methods and approach on the ecosystem, interregional, interdisciplinary basis, and development of circular economy, green economy, and low-carbon economy.

dd) Investment in environmental protection is an investment in sustainable development; promote mobilization of social resources and increased budget spending; effectively implement the principles where individuals causing environmental pollution must incur the costs for remediation and compensation, and individuals generating revenues from the environment; continue to promote participation of enterprises, organizations, community, and the general public in environmental protection.

2. Vision until 2050

Vietnamese environment has high quality and guarantee the right to live in a health environment and safety of the general public; biodiversity is preserved, maintained; ecological balance is guaranteed; actively respond to climate change; society exists in harmony with nature; circular economy, green economy, low-carbon economy are established and developed towards carbon neutral by 2050.

3. Objectives to 2030

a) General objectives

Prevent the increasing trend of environmental pollution and degradation; deal with pressing environmental issues; gradually improve and remediate the environment; prevent the loss of biodiversity; improve climate change response capacity; ensure environmental security, develop and built circular economy, green economy, low-carbon economy models, aim to achieve 2030 sustainable development objectives of the country.

b) Specific objectives

- Negative impacts causing environmental pollution, degradation, and emergencies are actively prevented and controlled;

- Primary and pressing environmental issues are essentially dealt with; environment quality is gradually improved and restored;

- Increase protection of natural heritages, restore ecosystem; and prevent the trend of biodiversity loss;

- Improve the capacity for adapting to climate change and promote green house gas emission reduction.

Specific criteria and roadmap for implementation and assessment of implementation of the Strategy are specified under Appendix I.

II. TASKS IN THE STRATEGY

1. Actively prevent and control negative impacts on the environment and negative impacts on the environment.

a) Develop the economy following ecological economy, circular economy, green growth, promote sustainable production and consumption

- Continue to promote conversion to growth models that depend on productivity, scientific and technological advances, renovation and effective use of natural resources, and aim towards achieving both economic growth and environmental pollution, degradation reduction.

- Strictly control industrialization in an environmentally friendly manner. Green industrial production sectors and promote development of green industries, hi-tech industries, and ecological industrial parks. Promote the use of environmentally friendly materials, ingredients, and fuel.

- Promote the development of ecological agriculture, agriculture utilizing hi-tech, and organic agriculture; increase reusing of agricultural by-products; restrict the use of inorganic fertilizers, plant protection chemicals, and antibiotics in cultivation, husbandry, and aquaculture.

- Urbanize sustainably, develop urban together with developing environmental protection infrastructure; prioritize development of green spaces, green structures, ecological urban areas, smart urban areas resistant to climate change.

- Promote implementation of environmental protection affairs under the National target program for new agricultural development; control the pollution, and develop sample residential area, route, etc. models, develop green - clean - appealing scenery; maintain and improve environment quality of rural areas.

- Integrate and implement circular, green economy in socio-economic development strategies, plans, programs, schemes, and plans. Implement the National action program for sustainable production and consumption in the period of 2021 - 2030 under Decision No. 889/QĐ-TTg dated June 24, 2020 of Prime Minister.

b) Separate environment zones, improve the effectiveness of strategic environment assessment and environment impact assessment, and manage based on environment permit.

- Separate environment zones with appropriate socio-economic development activities; establish mechanisms for controlling and preventing development activities that impact the environment in each zone; pay special attention to strictly protected areas and emission control areas.

- Review and develop regulations, continue to improve effectiveness of strategic environment assessment in order to minimize development tendencies that harm the environment in strategies and planning.

- Classify new investment projects based on the level of impact on the environment after approving investment guidelines in order to control throughout the life cycle; pay special attention to projects that potentially pose negative impacts on the environment.

- Control environmental pollution from manufacturing, business, service facilities via environment permit based on environmental impact assessment, environmental protection planning, pollution load of the environment, and environmental technical regulations.

c) Actively control facilities that pose a high risk of environmental pollution; prevent negative impacts on the environment.

- Classify manufacturing, business, and service facilities by level of risk of environmental pollution; focus on strictly controlling facilities with high risks of environmental pollution and/or high emission. Implement the roadmap for application of best available techniques (BAT) for manufacturing, service, business facilities that pose risk of environmental pollution.

- Develop and adhere to roadmaps for environmental safety distance from residential areas of manufacturing, business, service facilities and warehouses containing flammable, combustible, toxic chemicals, posing negative impacts on human health, and polluting water sources.

- Strictly control persistent organic pollutants (POPs) and persistent toxic substances (PTSs).

- Exhaustively deal with facilities causing severe environment pollution.

d) Actively prevent and respond to environment emergencies, control environmental issues on a cross-border basis.

- Produce and implement plans for responding to environmental emergencies in all levels where environmental emergencies are more frequent; prioritize organizing training and response drills for environmental emergencies.

- Implement 4 on-the-spot principles (on-the-spot commanders, forces, instruments, and logistics), reach an agreement, strictly cooperate, disclose information, and mobilize participation of community in responding to environmental emergencies.

- Actively prevent and respond to ocean and island environmental emergencies, toxic chemical emergencies, oil spill emergencies at sea or river; increase safety management of chemicals, radiation, and nuclear.

- Enhance measures for preventing illegal import of waste in form of scraps, import of old, obsolete, energy-consuming, or polluting technologies.

- Monitor, supervise, actively prevent and respond to air pollution, ocean pollution, multinational rivers, safety radiation, nuclear emergencies, and diseases relating to the environment originating from cross-border sources.

2. Deal with primary, pressing environmental issues; remediate environment pollution and degradation; maintain and improve environment quality

a) Improve pollution control, maintain and improve air quality in urban areas

- Produce and implement national and provincial plans for air quality management, pay special attention to major urban areas and key locations regarding air pollution.

- Promote development of automatic air monitoring stations in major urban areas; regularly issue warning and disclose information air quality in special urban areas and type I urban areas.

- Boost the progress of public transport system and mass rapid transit (MRT) system, restrict the rise in number of personal transportation in major urban areas. Develop and expand parks, trees, reduce noise pollution in urban areas and residential areas.

- Control emission of motorized vehicles, review, complete, and promulgate standards, national technical regulations on emissions of motorized vehicles; gradually improve fuel consumption standards.

- Promote the use of non-motorized, environmentally-friendly vehicles (bicycles, electric vehicles, vehicles using clean energy, renewable energy); develop and implement roadmaps for converting, eliminating vehicles using fossil fuel and vehicles causing environment pollution.

- Control and prevent violations within management, finalize standards in order to improve petrol quality, prioritize diesel oil standards; develop and widely utilize biological fuel, clean energy, environmentally-friendly energy.

- Control and prevent dust pollution from urban constructions; control the ignition of plants in the paddies and outskirts.

- Develop roadmap and gradually eliminate the use of coal in daily activities of urban areas. Develop and apply regulations, standards regarding indoor air protection.

- Enhance the control of industrial facilities with large volume of emission such as thermoelectricity, cement, steel, chemical, etc. facilities; encourage the application of clean technologies utilize fuel, materials, and energy effectively and efficiently.

b) Increase management of solid waste and hazardous wastes

- Promote the development and application of circular economy throughout product service life from design, production, distribution, consumption to waste management; develop and execute action plans regarding circular economy.
 - Focus on investing in management of municipal solid wastes in special urban areas and type I urban areas. Segregate at source and charge by the amount of solid waste produced in order to encourage reduction, reuse, and recycling.
 - Increase reduction, collection, reuse, and recycling of solid wastes by developing and applying sharing economy, conducting business based on digital platform and leased services.
 - Increase investment and modernization of collecting equipment and transfer stations in urban areas, expand the solid waste collection service network in rural areas.
 - Organize effective implementation of regulations on extended producer responsibility.
 - Promote extensive development of recycling industry, establish recycling industrial parks; encourage investment and development of recycling facilities with modern technology; gradually scale manual or small-scale recycling facilities causing environmental pollution in craft villages down.
 - Establish networks of interregional and/or interprovincial concentrated solid waste treatment facilities with appropriate technologies for the region. Promote the application of modern and environmentally-friendly technologies, co-incineration technology; pay environmental protection deposits for waste burial operation, gradually restrict the direct burial of municipal solid wastes.
 - Increase reduction, recycling, reuse, collection, and treatment of plastic wastes. Following 2025, single-use plastic products (SUPs) and non-biodegradable plastic bags are no longer in circulation and used in shopping malls, supermarkets, hotels, and tourist resorts; following 2030, cease to manufacture and import SUPs, non-biodegradable products, and commodities, goods containing microplastic; promote development of environmentally-friendly products and materials as substitutes. Effectively implement the Scheme for enhanced management of plastic wastes in Vietnam under Decision No. 1316/QĐ-TTg dated July 22, 2021 of the Prime Minister.
 - Boost reuse and recycling of construction solid wastes and regular industrial solid wastes satisfying regulations on the environment and technical requirements; reduce post-harvest losses in agriculture activities, reduce, reuse, and recycle food wastes.
 - Continue to promote management of hazardous wastes in industrial manufacturing, agricultural production, and medical sector; effectively prevent illegal dumping of hazardous wastes. Gradually segregate, collect, and treat hazardous wastes in municipal solid wastes; prioritize management of electronic wastes.
- c) Increase wastewater management, promote control, management, and protection of water environment and river basins

- Develop and implement surface water quality control plans for rivers and lakes; prioritize protecting river basins, especially basins of Nhue - Day rivers, Cau River, Ma River, Vu Gia - Thu Bon rivers, and Dong Nai River.

- Enhance domestic wastewater collection and treatment system combining with renovation and restoration of lakes, canals in major urban areas. Execute wastewater treatment plans, restore seriously polluted rivers, canals, channels such as To Lich River, Set River, etc. (Ha Noi), Tan Hoa - Lo Gom canals; Tau Hu - Ben Nghe canals, Xuyen Tam Canal, etc. (Ho Chi Minh City), etc.

- Promote treatment of wastewater produced by agricultural production activities and craft villages. Implement non-concentrated wastewater treatment models for areas where wastewater collection conditions are unavailable; promote wastewater and sludge reuse. Treat wastewater in a qualified manner in all industrial parks, industrial clusters, industrial facilities, and hospitals.

- Assess pollution load, establish zone classification and limit of wastewater discharged into surface water; execute solutions for reducing pollution sources and remediate river environment. Invest in flow regulatory structures in order to reduce water environment pollution.

- Investigate and assess general quality of groundwater sources, identify seriously polluted areas; develop and implement solutions for protecting and improving groundwater quality.

d) Treat environmental pollution in craft villages, remediate areas polluted by residual chemicals, and protect soil environment.

- Integrate craft village environmental protection in the national target programs regarding development of new rural area and regional, provincial planning; execute policies incentivizing and assisting the protection of craft village environment.

- Prepare and execute solutions for protecting craft village environment. Enhance the control of environment protection operation of manufacturing facilities and households in craft villages.

- Gradually convert lines of business with risk of environmental pollution, fire, explosive, involving obsolete assembly lines, machinery, or equipment; relocate or change the lines of business of manufacturing facilities and households which are not encouraged for development.

- Promote treatment, renovation, and remediation of soil environment in polluted areas, areas polluted with residual chemicals, plant protection chemicals, closed or relocated solid waste landfills. Treat areas polluted by Dioxins during the war in Bien Hoa Air base (Dong Nai), Phu Cat Airport (Binh Dinh), A So Airport (Thua Thien Hue); deal with explosive ordnances in severely polluted areas.

- Investigate, assess, classify, and monitor soil quality development; develop and execute plans for treating, renovating, and restoring areas with severely polluted soil environment.

dd) Enhance sea and island environmental pollution control

- Control and prevent pollution in coastal areas; invest and reinforce infrastructure and equipment, collect and treat hazardous waste, wastewater, and municipal solid waste satisfactory to environment standards in coastal provinces.

- Actively prevent, minimize, and treat pollution sources created by mineral, petroleum extraction, transport, and aquaculture at sea; identify areas at sea and islands facing risk of environmental pollution, and closely monitor dumping activities at sea. Develop and execute schemes for protecting and conserving marine ecosystem while maintaining national defense and security.

- Continue to implement the Plans for execution of Appendices III, IV, V, and VI of the International Convention for the Prevention of Pollution from Ships under Decision No. 795/QĐ-TTg dated May 11, 2016 of the Prime Minister.

- Implement the National action plan for management of marine plastic litter by 2030 under Decision No. 1746/QĐ-TTg dated December 4, 2019 of the Prime Minister.

- Develop and implement closed-loop models of collecting, classifying, reusing, and treating wastewater, municipal solid waste, and hazardous wastes in islands, especially major islands such as Phu Quoc, Con Dao, Cat Ba, etc.

e) Continue to supply clean water, maintain environment hygiene, and prevent environmental factors harmful to human health.

- Implement water source security measures, especially for tap water; research, control, and prevent water source pollution caused by microplastic and microorganisms.

- Continue to expand clean water service provision radius, minimize water losses in urban areas; increase investment in construction of clean water supply system satisfactory to standards of Ministry of Health for rural area inhabitants.

- Implement contents and solutions regarding environmental hygiene in the National target programs for development of new rural areas; continue developing and exercising civilized lifestyle, eliminating backward customs, and encourage cremation among the general public.

- Actively prevent, respond, and protect community health against diseases caused by environmental factors. Identify, issue warnings, and deal with pollution sources of toxic pollutants such as PCB (polychlorinated biphenyl), dioxins, asbestos, etc. aim toward ceasing to use construction materials that negatively affect human health and environment.

3. Preserve nature and biodiversity, promote environmental protection in extraction and use of natural resources.

a) Protect environment of natural heritage, expand sanctuaries and biodiversity corridors.

- Establish, recognize, manage, and protect the environment in natural heritages. Assess impact of socio-economic activities on natural heritages in strategic environment assessment and environmental impact assessment. Develop and implement biodiversity offsets schemes, especially for forest and mangrove forest ecosystems.

- Promote the establishment of sanctuaries; encourage organizations, enterprises, community, and individuals to invest, establish, manage, use, and sustainably develop natural heritages and biodiversity stewardship sites.

- Effectively manage sanctuaries and harmoniously combine preservation and development. Promote biodiversity evaluation; continue to expand the application of payment for ecosystem services for natural ecosystems, especially forests, mangrove forests, sea, mountain, caves, and geoparks.

- Establish and sustainably manage biodiversity corridors connecting habitats which are houses to endangered, rare, precious species prioritized for protection.

b) Protect and restore ecosystem

- Integrate protection and restoration of natural ecosystem in development policies, strategies, planning, programs, and plans. Promote implementation of ecosystem preservation and sustainable use models; prioritize in preserving and developing urban biodiversity.

- Develop and implement plans for restoration and sustainable use of natural and depressed ecosystems, especially mangrove forests, coral reefs, seagrasses, and wetlands; manage based on recovery ability of coral reefs.

- Strictly manage, protect, and restore natural forests; cease to extract wood from natural forests. Effectively intercept the extraction of wild plants and animals and animals and illegal deforestation. Enhance forest fire prevention capacity, reduce the number of cases and area of burned forest.

- Promote the connection between preservation and development, continue to assign forests to households and community; promote sustainable forest management. Develop policies combining extraction of economic value of the forest for poverty reduction, socio-economic development, and experimentation of policies for planting herbal medicines in forest shade.

- Organize implementation of programs and schemes of the Vietnam forestry development Strategy for the period of 2021 - 2030, vision to 2050 approved under Decision No. 523/QĐ-TTg dated April 1, 2021 of the Prime Minister.

c) Prevent the losses of number of species and genetic resources, maintain biosecurity

- Continue to develop and implement conservation programs for endangered, rare, and precious animal, plant, domestic animal species prioritized for protection. Develop ex-situ conservation facilities, animal rescue centers, animal gardens, plant gardens, herbal medicine gardens.

- Prevent the extraction, hunting, stealing, and illegal trading of wild, rare animals and plants; closely control the breeding of wild animals. Periodically update the list of endangered, precious animals prioritized for protection.

- Promote the preservation of rare, precious, endemic, and endangered genetic resources. Promote access to genetic resources and benefit sharing, develop and commercialize products produced by genetic resources appropriate to international agreements. Promote the registration for traditional knowledge ownership regarding genetic resources; develop database regarding genetic resources and develop genomic libraries.

- Enhance control and prevention of infiltration, development, and impact of invasive species. Continue to control risks of genetically modified species, prioritize the management of import, permit issuance, and breeding of genetically modified species, especially crops such as maize, soya bean.

d) Enhance environmental protection in extraction and use of natural resources; protect and develop natural sources.

- Implement technologically advanced measures in agriculture to protect and improve soil quality; prioritize prevention of erosion, desertification, soil degradation, salinity invasion, bank and coastal erosion, especially in coastal areas of the south central coast and the Mekong Delta.

- Enhance management of water resources by river basins together with preservation of biodiversity, aquatic ecosystem, protection, extraction, and use of water resources. Extensively promote efficient and effective use of water in production and daily activities.

- Control and prevent environmental pollution, degradation, and emergencies in extraction and processing of minerals; control areas with toxic minerals. Effectively implement regulations on paying deposit for environmental remediation; utilize post-mining remediated environment for socio-economic development.

- Continue to control, prevent, and eliminate destructive aquaculture practices. Promote co-management, apply ecology certificate, and develop aquaculture models combined with sustainable cultivation

- Promote investment in protection and development of natural sources. Integrate environmental protection and biodiversity conservation requirements in natural resource extraction and use planning; strictly control the repurposing of forest land, water surface, sea surface.

4. Protect the environment to improve climate change adaptive capacity and reduce green house emission

a) Enhance environmental protection to reduce vulnerability and improve resistance to climate change

- Develop criteria and assess sensitivity and resistance of natural environment under the effect of climate change. Research, forecast, and assess climate change risks of investment projects in the environmental impact assessment.

- Assess impact, loss, and damage to the environment, biodiversity, and ecosystem caused by climate change based on climate change scenarios and socio-economic development.

- Consolidate, develop, and duplicate climate change ecosystem-based adaptation (EbA), solutions and models, nature-based solutions (NbA), biodiversity preservation, environmental remediation, etc. suitable with regions and administrative divisions.

- Cultivate, regrow, and regenerate forest, especially watershed forests, mangrove forests, and protection forests; effectively implement the Scheme for planting 1 billion trees for 2021 - 2025 under Decision No. 524/QĐ-TTg dated April 1, 2021 of the Prime Minister.

- Integrate climate change response solutions in strategies, planning, plans, programs, and project regarding environmental protection. Develop environmental protection technical infrastructures which are resistant to climate change.

b) Develop renewable energy and clean energy, enhance general management of solid wastes, protect and develop ecosystems in order to reduce emission and increase green house gas absorption capacity.

- Promote the development of renewable energy, the use of clean energy, the use of non-baked, environmentally friendly construction materials, gradually reduce the development of coal-fired thermoelectricity; control substances that thin the ozone layer and are produced by production and domestic activities.

- Develop and adopt circular economy, manage solid wastes; promote reduction, reuse, recycling of wastes, treatment/disposal in combination with energy recovery, limit solid waste burial; control and reduce methane emission from solid waste landfills.

- Develop and duplicate low-carbon economy models, economy models combined with biodiversity preservation and development of natural ecosystems.

- Implement the National program for reduce emissions from deforestation and forest degradation in developing countries (“REDD+ Program”) until 2030 approved under Decision No. 419/QĐ-TTg dated April 5, 2017 of Prime Minister.

III. SOLUTIONS FOR IMPLEMENTATION OF THE STRATEGY

1. Renovate mindset of governments of all levels; raise environmental protection awareness and responsibility of enterprise, community, and the general public

- Disseminate and raise awareness of departments and governments of all levels regarding the viewpoint where “the environment is the requirement, platform, and prerequisite for sustainable

socio-economic development” according to Conclusion No. 56-KL/TW dated August 23, 2019 of the Politburo. Gradually change mindset of central governments regarding the role of environmental protection in development policymaking.

- Clarify responsibilities of central and local governments regarding environmental protection; include environmental protection criteria when assessing operation of the heads. Organize assessment and ranking of environmental protection results of provinces.

- Enhance education on the environment, the love for nature, develop environmental protection culture of Vietnamese nationals. Include environmental protection in education programs of all education levels and training levels; promote training in environmental majors; develop advanced and typical models regarding environmental protection in education institutions.

- Comply with regulations and law, fully implement social responsibilities regarding the environment of enterprises. Raise awareness and understanding regarding circular economy, green economy, low-carbon economy; encourage enterprises to execute standards and commitments regarding the environment on a voluntary basis. Assess and rank sustainable development enterprises on an annual basis.

- Continue to promote communication regarding the environment on mass media; increase and utilize strengths of new communication technologies, social networks, online forums, etc. Raise awareness and implement environmental protection. Form and develop green lifestyle, comply with regulations and law on environmental protection, especially in waste management and environmental hygiene.

- Discover, exemplify, promptly commend, create movements, and duplicate good models regarding environmental protection; continue to review and issue the Vietnamese environment award periodically.

- Raise awareness regarding gender equality and children’s right in environment; highlight the role and position of women in environmental protection.

2. Continue to develop policy and legal systems regarding environmental protection suitable for the market economy.

- Review and amend the Law on Biodiversity 2008, the Law on Marine Resources, Environment, and Islands 2015, and relevant laws; develop documents guiding Law on Environmental Protection 2020. Conduct research, experiment new policies; continue to develop regulations and law on protecting air, water, soil environment, manage solid waste, effectively using resources and responding to climate change.

- Develop policies on development of goods market, environment services, emission, carbon trading market, etc. Review and develop taxes, environment service fees; develop policies regarding environmental deposits, ecosystem service fee payment, and biodiversity offsets, etc.

- Review, revise, and develop policies incentivizing and assisting environmentally friendly production activities, businesses, services, ecological productions; assist environment pollution treatment and remediation. Develop and implement regulations on green purchase.

- Develop and implement the National planning for environment protection, National planning for diversity preservation, environment protection affairs in national, regional, and provincial planning.

- Develop environment standards and technical regulations by approaching developed countries. Encourage provinces and cities, especially Hanoi City and Ho Chi Minh City, to apply technical regulations stricter than national environmental technical regulations.

3. Develop organizational structures and promote administrative procedure reform in environmental protection

- Develop organizational structures of central to local environment authorities in a consistent, professional, and effective manner. Review and rectify and repetitions, issues, and conflicts in functions and tasks, clarify state management responsibilities regarding the environment between ministries and authorities from central to local level.

- Promote responsibilities of local governments regarding environmental protection, improve capacity of provincial, district, commune governments, and strengthen connection between regional and local governments in environmental protection.

- Promote reform and simplification of administrative procedures regarding the environment in order to improve effectiveness of state management while reducing legal risks and costs for the general public and enterprises. Gradually change management direction by reducing “pre-inspection”, increasing “post-inspection”, increasing initiative and the ability to assume responsibility for environmental protection of enterprises.

4. Enhance compliance with policies and regulations and law on environmental protection.

- Review, amend, and add penalties for administrative violations by raising the fine; amend, revise, develop regulations and impose criminal actions on offenders of environment-related crimes.

- Enhance inspection and supervision of manufacturing and business facilities that potentially cause severe environmental pollution, conduct irregular inspection for any sign of violation. Promote effective cooperation between inspection authorities and environment police.

- Enhance provision, disclosure, and information transparency in environment management on the community while highlighting accountability of environment officials.

- Enhance supervision of community, the Vietnamese Fatherland Front, organizations, individuals, and media authorities regarding environmental protection; develop and apply digital platforms, social media, hotline, et c. to promote environmental supervision.

- Develop and implement mechanisms for handling complaints, accusations, and disputes regarding the environment, mechanisms for identifying liabilities for environmental damages.

- Enhance environment administration capacity in enterprises and industrial parks, industrial clusters.

5. Mobilize investment from society, gradually increase budget spending, and improve the effectiveness in using resources for environmental protection

- Review, revise, and develop mechanisms, policies on mobilizing investment from non-budget sources for environmental protection, and regulations on bidding for environmental public services. Extensively implement Public-Private Partnerships (PPP), promote the participation of private enterprises, and implement equitization of state enterprises in environmental protection.

- Increase spending from state budget on environmental protection, maintain steady increase together with the nation's economic growth; review, amend, and complete budget spending details, prioritize enhancement of management capacity and resolution for key, pressing environmental issues.

- Gradually establish and develop capital market for environmental protection; develop and complete regulations and standard systems regarding green credits, green bonds. Utilize the role of the Vietnam environmental protection fund, encourage the establishment of private funds sponsoring environmental protection initiatives of the community.

- Issue regulations and policies promoting the sufficient development of environmental industry and service in order to deal with environmental issues. Prioritize the development of provision capacity of environmental services, especially waste recycling and treatment and environmental pollution treatment.

- Actively and initiatively propose environmental protection projects to attract investment from financial funds, international organizations, and other countries.

- Establish mechanisms, develop criteria and procedures for selecting environmental protection projects, green growth, and climate change adaptation in order to ensure consistent, uniform, and effective characteristics.

6. Extensively apply science and technology, promote renovation and digital transformation; develop technical infrastructures, monitoring network, and environmental database

- Promote renovation and digital transformation; renovate, change technology, apply the best available techniques (BAT) and high technology in various sectors.

- Effectively utilize achievements of science and technology, the fourth industrial revolution, information technology, remote sensing, and modern technology in management, monitoring, examination, supervision, monitoring, and environmental warning; promote the provision of online public services for environmental administrative procedures.

- Develop technical infrastructures regarding wastewater collection and treatment; collect, store, transport, reuse, recycle, and treat solid wastes and hazardous wastes in a synchronous, effective, and environmentally friendly manner.

- Establish and implement the General national environmental monitoring planning for the period 2021 - 2030; develop the national, local, and enterprise environmental monitoring networks in a modernized and synchronized manner. Implement national, disciplinary, and local environment quality and biodiversity monitoring programs, focus on key economic zones, areas concentrated with pollution sources, and environmentally sensitive areas.

- Develop environmental database in a consistent, synchronous, updated, shared, and connected manner throughout authorities, and departments; ensure timely provision of environmental information. Gradually implement digital conversion and transformation of environmental database, information.

- Promote research and application of science, technology in environmental protection; invest facilities and human resources in research institutes, higher education institutions, and environmental consulting entities.

7. Promote international cooperation regarding environment during integration of the economy.

- Actively participate in negotiation and implementation of commitments in international agreements on the environment to which Vietnam is a signatory, especially in issues relating to climate change, biodiversity, and marine plastic pollution, etc.; implement the Scheme for Vietnam's active preparation and participation in the development of the Global agreement on marine plastic waste approved under Decision No. 1407/QĐ-TTg dated August 16, 2021 of the Prime Minister. Enhance bilateral and multilateral cooperation; promote implementation of cooperation agreements and international projects regarding environmental protection.

- Utilize opportunities offered by international integration, implement commitments in free trade agreements (FTA) in order to promote environmental protection. Adopt technical barriers in order to prevent negative environmental effects produced by the integration process.

- Prioritize cooperation with neighboring and regional countries in cross-border environmental issues such as protection of water environment, marine environment, air environment, marine plastic waste management, radiation and nuclear safety, control on illegal hunting and trading of wild fauna and flora and foreign invasive species.

IV. KEY PROGRAMS, PLANS, AND SCHEMES

1. Programs for communicating, raising awareness, and renovating mindsets regarding climate change adaptation, resource management, and environmental protection.

2. National science and technology programs regarding environmental protection, resource management, and climate change adaptation.

3. Environment monitoring capacity enhancement program until 2030.
4. National plan for air quality control.
5. Scheme for municipal solid waste management capacity enhancement in Vietnam.
6. Program for investment and renovation of drainage systems and domestic wastewater treatment structures in type V urban areas or higher.
7. Surface water quality control plans for interprovincial rivers, lakes which play a vital role in socio-economic development and environmental protection from time to time.
8. Craft village pollution remediation scheme until 2030.
9. Plan for treating, renovating, and remediating areas with very severe soil pollution.
10. Environmental protection program for agricultural production until 2030.
11. Environmental protection program for natural heritages.
12. Restoration program for degraded natural ecosystems until 2030.

Article 2. Plans, resources, and organization of the Strategy implementation

1. Plans for developing key programs, plans, and schemes of the Strategy shall be implemented in accordance with Appendix II.
2. Funding sources for the Strategy implementation shall include the state budget, investment sources of enterprises, private sectors, community, and overseas financing sources.
3. Responsibilities for Strategy implementation
 - a) Ministry of Natural Resources and Environment shall act as the contact authority regarding the environment and is responsible for taking charge and coordinating ministries, provincial departments, and local governments in implementing objectives, tasks, solutions, and key programs, plans, and schemes of the Strategy.
 - b) Ministry of Planning and Investment and Ministry of Finance shall cooperate with Ministry of Natural Resources and Environment in balancing and allocating capital from the state budget and other financial sources in order to effectively implement the Strategy.
 - c) Ministries, ministerial agencies, within their tasks and powers, are responsible for implementing objectives, tasks, and solutions; developing and requesting the Prime Minister to approve and organize effective implementation of key programs, plans, and schemes of the Strategy.

d) People's Committees of provinces and central-affiliated cities are responsible for organizing implementation of objectives, tasks, solutions; cooperating in implementing key programs, plans, and schemes of the Strategy within their provinces. The People's Councils of provinces shall allocate funding from local government's budget to implement the Strategy within their responsibilities.

dd) The Vietnamese Fatherland Front, the Vietnam Chamber of Commerce and Industry, socio-political organizations, socio-professional organizations, media authorities, enterprises, and the general public are responsible for protecting the environment, organizing review of policies, and supervising environmental protection.

4. Supervision and assessment of Strategy implementation

a) Ministries, ministerial agencies, People's Committees of provinces and central-affiliated cities are responsible for supervising, examining, and consolidating implementation of environmental protection objectives, tasks, and solutions within the field and administrative divisions under their management, integrating in annual reports on environmental protection operation, and submitting to the Ministry of Natural Resources and Environment.

b) Ministry of Natural Resources and Environment are responsible for examining, supervising, expediting, and consolidating the Strategy implementation; on an annual basis, developing reports on nationwide environmental protection; organizing 5-year conclusion and 10-year conclusion of the Strategy implementation and reporting to the Prime Minister.

Article 3. This Decision comes into effect from the day of signing.

Minister of Natural Resources and Environment, ministers, heads of ministerial agencies, heads of Governmental agencies, Chairpersons of People's Committees of provinces and central-affiliated cities, and heads of relevant agencies are responsible for implementation of this Decision.

**PP. PRIME MINISTER
DEPUTY PRIME MINISTER**

Le Van Thanh

APPENDIX I

STRATEGY SUPERVISION AND ASSESSMENT CRITERIA UNTIL 2030
(Attached to Decision No. 450/QĐ-TTg dated April 13, 2022 of the Prime Minister)

No.	Criteria	Presiding authority	Condition as of 2020	Roadmap for implementation	
				2025	2030
I	Negative impacts which cause environmental pollution, degradation, and incidents and are prevented and controlled				
1	Percentage of agricultural land area for organic production over total agricultural land area (%)	Ministry of Agriculture and Rural Development	~0,9	1,5 - 2	2,5 - 3
2	Percentage of communes fulfilling new rural area standards (%)	Ministry of Agriculture and Rural Development	62	≥80	≥90
3	Percentage of fuel, energy, and material reduction compared to 2020 in textile, steel, plastic, chemical, beverage, and paper (%)	Ministry of Industry and Trade	-	5 - 8	7 - 10
4	Percentage of industrial parks, manufacturing facilities, business facilities, and service facilities installed with automatic and continuous wastewater and emission monitoring systems which transmit data directly to Departments of Natural Resources and Environment (%).	Ministry of Natural Resources and Environment	-	100	100
5	Percentage of facilities causing environmental pollution met with actions (%)	Ministry of Natural Resources and Environment	80,9	100	100
II	Primary and pressing environmental issues are essentially dealt with; environment quality is gradually improved and restored				
6	Percentage of seated capacity of public transport in special urban areas and type I urban areas (%)	People's Committees of cities	-	15 for special urban areas	20 for special urban areas; 1 for type I urban areas

7	Percentage of days in a year with good to average air quality index (AQI) in special urban areas (%)	People's Committees of cities	~70 - 75	Maintain within the range 70 - 75	75 - 80
8	Percentage of urban municipal solid waste collected and treated as per the law (%)	Ministry of Natural Resources and Environment	86-87	90	95
9	Percentage of rural municipal solid waste collected and treated as per the law (%)	Ministry of Natural Resources and Environment	66 (2019)	80	90
10	Percentage of urban municipal solid waste treated by direct burial over total collected waste (%)	Ministry of Natural Resources and Environment	70	30	10
11	Percentage of hazardous waste collected, transported, and treated as per the law (%)	Ministry of Natural Resources and Environment	85	95	98
12	Percentage of urban wastewater treated to standards and regulations (%)	Ministry of Construction	13	>30 for type II urban areas; 10 for other urban areas	>50 for type II urban areas; 20 for other urban areas
13	Percentage of monitoring points in Cau River basin with at least average water quality index (WQI) (%)	Ministry of Natural Resources and Environment	85 (2016 - 2020)	85 - 87 (2021 - 2025)	87 - 90 (2026 - 2030)
	Percentage of monitoring points in Nhue - Day River basin with at least average water quality index (WQI) (%)		56 (2016 - 2020)	56 - 60 (2021 - 2025)	60 - 65 (2026 - 2030)
	Percentage of monitoring points in Dong Nai River basin with at least average water quality index (WQI) (%)		82 (2016 - 2020)	82 - 85 (2021 - 2025)	85 - 90 (2026 - 2030)
14	Percentage of industrial clusters	Ministry of	17,2	60	100

	equipped with concentrated wastewater treatment system satisfactory to technical environment regulations (%)	Natural Resources and Environment			
15	Percentage of industrial parks and export-processing zones equipped with concentrated wastewater treatment system satisfactory to technical environment regulations (%)	Ministry of Natural Resources and Environment	90	92	100
16	Percentage of shopping malls, supermarkets, hotels, and tourist resorts not using single-use plastic products and non-biodegradable nylon bags (%)	People's Committees of provinces and central-affiliated cities	-	100	100
17	Percentage of areas with very severe soil pollution treated, improved, and restored (%)	Ministry of Natural Resources and Environment	-	30	100
18	Percentage of urban inhabitants provided with clean water via concentrated water supply system (%)	Ministry of Construction	90	95	100
19	Percentage of rural households supplied with clean water by sources satisfactory to regulations (%)	Ministry of Agriculture and Rural Development	51	65	80
20	Percentage of rural households with hygienic toilets (%)	Ministry of Health	75,2 (2019)	85	100
III	Increase protection of natural heritages, restore ecosystem; and prevent the trend of biodiversity loss				
21	Areas of sanctuary (million ha)	Ministry of Natural Resources and Environment	2,5	2,7	3,0
22	Number of Ramsar sites established and recognized	Ministry of Natural Resources and Environment	9	13	15
23	Percentage of marine sanctuaries and coastal sanctuaries over total natural area of national seawaters (%)	Ministry of Natural Resources and Environment	0,19	1,5 - 2	3 - 5

IV	Improve the capacity for adapting to climate change and promote green house gas emission reduction				
24	Percentage of forest cover (%)	Ministry of Agriculture and Rural Development	42	42	42-43
25	Percentage of renewable energy over total primary energy supply (%)	Ministry of Industry and Trade	11,4	13 - 15	15 - 20

APPENDIX II

KEY PROGRAMS, PLANS, AND SCHEMES OF THE STRATEGY (Attached to Decision No. 450/QĐ-TTg dated April 13, 2022 of the Prime Minister)

No.	Program/Plan/Scheme	Product	Time of presentation to the Prime Minister	Presiding entity	Cooperating entity
1	Programs for communicating, raising awareness, and renovating mindsets regarding climate change adaptation, resource management, and environmental protection	Program	2022 - 2023	Ministry of Natural Resources and Environment	Relevant ministries, departments, and local governments
2	National science and technology programs regarding environmental protection, resource management, and climate change adaptation	Program	2022	Ministry of Science and Technology	Relevant ministries, departments, and local governments
3	Environment monitoring capacity enhancement program until 2030	Program	2022 - 2023	Ministry of Natural Resources and Environment	Relevant ministries, departments, and local governments
4	National plan for air quality control.	Plan	2022 - 2023	Ministry of Natural Resources and Environment	Relevant ministries, departments, and local governments

				Environment	governments
5	Scheme for municipal solid waste management capacity enhancement in Vietnam	Scheme	2022	Ministry of Natural Resources and Environment	Relevant ministries, departments, and local governments
6	Program for investment and renovation of drainage systems and domestic wastewater treatment structures in type V urban areas or higher	Program	2022 - 2023	Ministry of Construction	Relevant ministries, departments, and local governments
7	Surface water quality control plans for interprovincial rivers, lakes which play a vital role in socio-economic development and environmental protection from time to time	Plan	2022 - 2025	Ministry of Natural Resources and Environment	Relevant ministries, departments, and local governments
8	Craft village pollution remediation scheme until 2030	Scheme	2022 - 2023	Ministry of Natural Resources and Environment	Ministry of Agriculture and Rural Development, relevant ministries, departments, and local governments
9	Plan for treating, renovating, and remediating areas with very severe soil pollution	Plan	2022 - 2023	Ministry of Natural Resources and Environment	Relevant ministries, departments, and local governments
10	Environmental protection program for agricultural production until 2030	Program	2022 - 2023	Ministry of Agriculture and Rural Development	Relevant ministries, departments, and local governments
11	Environmental protection program for natural heritages	Program	2022 - 2023	Ministry of Natural Resources and Environment	Relevant ministries, departments, and local governments

				Environment	governments
12	Restoration program for degraded natural ecosystems until 2030	Program	2022 - 2023	Ministry of Agriculture and Rural Development	Relevant ministries, departments, and local governments

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