

**The National Strategy on Environment Protection to 2020, with Visions to 2030 was approved by the Prime Minister in his Decision 1216/QĐ-TTg on September 05, 2012. The following is the full content (for reference) of the Strategy.**

## **NATIONAL STRATEGY ON ENVIRONMENT PROTECTION TO 2020 WITH VISIONS TO 2030**

### **I. VIEWPOINTS AND OBJECTIVES**

#### **1. General viewpoints**

- Environment protection is vital to human beings; The Strategy on Environment Protection is an indispensable component of the Socio-economic Development Strategy and the Sustainable Development Strategy; environment protection must facilitate sustainable development to meet demands of current generations while preserving potentials and opportunities for future generations; investment in environment protection is the investment in sustainable development.
- Development must observe laws of the nature, harmonize with the nature and befriend with the environment; economic development should be suitable to ecological features of a certain region, produce a minimum of waste, especially carbon, and strive for a green economy.
- Pollution prevention and control should be prioritized; efficiency and sustainability highlighted in exploiting and using natural resources; attention paid to preserving biodiversity; quality of environment recovered and improved; and capability increased in response to climate change.
- Environment protection is a responsibility of the whole society and an obligation of every citizen; it must be conducted consistently on the basis of clear accountability of ministries and agencies as well as decentralization between central and local levels; the role of communities and mass organizations should be brought into play and the cooperation with other countries in the region and the world enhanced.
- The application of administrative measures will be promoted, criminal sanctions should be applied gradually while market economic mechanisms applied flexibly in order to increase validity and efficiency of State management and enforce legal stipulations, requirements, regulations and standards on environment.
- Organizations and individuals must pay for benefits from resources and values of the environment; if they cause pollute environment, deteriorate resources and degrade biodiversity, they must compensate for improvement, recovery and damages.

#### **2. Objectives to 2020**

##### **a) General objectives**

To generally control and minimize the increase of environment pollution, resource deterioration and biodiversity degradation; to further improve quality of the habitat; to raise the capability of responding climate change, striving for sustainable national development.

##### **b) Specific targets**

- To reduce sources of environment pollution;
- To improve the environment in polluted and deteriorated areas; to better living conditions of people;
- To mitigate deterioration and exhaustion of natural resources; to restrain the degradation of biodiversity;
- To improve the capability of actively responding climate change and reduce the increase of greenhouse gas emissions.

(Indicators for monitoring and evaluating environment protection in the period to 2020 are listed in the Appendix attached to this Decision).

#### **3. Visions to 2030**

To prevent and push back environment pollution, resource deterioration and biodiversity degradation; to improve quality of the habitat; to actively respond to climate change; to create fundamental conditions for a green economy, with low waste and low carbon, for the sake of the country's prosperity and sustainable development.

## II. ORIENTATIONS AND SOLUTIONS FOR ENVIRONMENT PROTECTION

### 1. Preventing and controlling sources of environment pollution

#### *a) Solutions to prevent new sources of environment pollution*

- To speed up economic transformation in favor of environmentally-friendly economies and minimize the development of highly risky industries which can lead to environment pollution and degradation; to gradually build up infrastructure and legal foundation for a green economy; to compile and apply criteria for defining green economic branches and sectors; to put forth policies which boost up and facilitate the development of green economic sectors;
- To compile environment criteria which can be applied to planning schemes for socio-economic development, sectors, fields, and regions; to pilot the functional zoning on the basis of different ecologies in order to serve development planning, so as to clearly identify prioritized areas, restricted areas or banned areas for industrial and mining development to reduce conflicts between environment protection and socio-economic development;
- To improve the strategic environment evaluation, ensuring that environment requirements are combined in strategies, planning schemes, plans, programs and projects on socio-economic development;
- To better the evaluation of impacts on environment in selecting and preventing out-of-date and polluting technologies in development investment projects;
- To take preventive measures and prevent the entry of wastes and out-of-date technologies, machinery, and equipment into the country.

#### *b) Solutions to reduce sources of environment pollution*

- To classify production and business facilities, services, warehouses, and dumping grounds in line with their environment pollution levels for inspection, supervision and management;
- To apply uniformly administrative penalties, progressive tax and fees for environment protection in line with impacts on the environment;
- To promptly promulgate and speed up the implementation of the Plan on strictly dealing with serious environment polluting facilities in 2012-2020;
- To encourage the application of environment management model ISO 14000, clearer production, waste audit, evaluation of the life cycle of products, and advanced models of environment management in production and business;
- To boost the development of environmentally-friendly industrial parks and complexes, export processing zones, production and processing facilities, farmsteads, warehouses, and markets.

#### *c) Solutions to handle environment issues in industrial parks, river basins, handicraft villages and rural hygiene*

- To check and compel industrial parks and complexes which fail to meet environment protection requirements to repair, improve and upgrade their environment protection works; to close industrial parks which cannot be repaired; to prevent new industrial parks which cannot meet environment protection requirements from hosting investment projects;
- To review, list and strictly punish serious environment polluting facilities in the basins of the Nhuệ-Đáy Rivers, Cầu River, Đồng Nai River and other rivers which appear to be polluted; to prioritize the construction of concentrated sewage treatment systems for urban areas letting sewage directly into rivers; to restrain the opening of new industrial parks, production and business facilities which can cause serious environment pollution in river basins;
- To plan and implement the roadmap of converting handicraft villages into handicraft industrial parks and complexes with proper technical infrastructure meeting all environment protection requirements. To introduce new and advanced technologies, especially environmentally-friendly ones, into handicraft villages; to establish organizations and facilities providing environment services within handicraft villages;
- To establish self-governing organizations in charge of environment protection within handicraft villages and issue regulations on responsibility and obligation of environment protection as well as on paying tax and fee for dealing with pollution and improving environment;
- To promptly plan and mitigate waste-related issues in rural areas; to encourage the campaign of keeping households, villages and hamlet clean; to mitigate environment pollution resulted from husbandry activities in rural areas;

- To build environment protection works in rural areas, such as waste collection and treatment facilities, sewage drainages, cemeteries, ponds and lakes; to boost the planting of trees; to build public entertainment areas; to include environment criteria into the national goal program on new rural development.

*d) Solutions to secure chemical, radiation and nuclear safety*

- To foster the capability of actively preventing radiation and nuclear accidents through introducing optimally safe technologies to nuclear power plants;
- To strictly apply the registration of chemicals, especially toxics; to manage the use of machinery and equipment relating to radioactive substances;
- To foster the capability of actively preventing and responding to chemical and nuclear radiation accidents in facilities researching, producing, and storing chemicals and radioactive substances;
- To supplement, finalize and apply technical standards and requirements on chemical, radiation and nuclear safety while checking, inspecting and punishing violations in line with legal stipulations.

*đ) Solutions to increase the percentage of urban areas, industrial complexes, and export processing zones having standard concentrated sewage treatment systems*

- To accelerate the realization of goals and solutions in the Orientations for urban and industrial park drainage development of Viet Nam to 2025 and visions to 2050;
- To include indicators of the area for building concentrated sewage treatment systems in land use plans and programs at all levels, plans on embellishing and developing urban areas, concentrated residence areas, industrial parks, and export processing zones;
- To plan, build and operate concentrated sewage collection and treatment systems in urban areas of grade IV and higher;
- To inspect and monitor treated sewage from industrial parks, complexes, export processing zones, and hospitals;
- To amend and raise environment protection fees imposed on domestic and industrial sewage progressively in line with environment pollution levels to gradually compensate for costs of treating domestic sewage and boost social investments in sewage treatment.

*e) Solutions to reduce impacts on environment from mining activities*

- To strictly observe requirements mentioned in decisions approving the reports on environment impacts, especially specific requirements on preventing and treating sewage, wastes, and negative impacts on environment in exploiting minerals;
- To enhance the environment inspections over mining projects which can pollute or cause various impacts on environment;
- To fully evaluate and predict requirements on environmental recovery of mining projects; to strictly observe regulations on security for environment recovery in mining activities;
- To require investors in mineral exploitation to pour money in infrastructure development, poverty reduction, job generation, health services in favor of residents in the localities where minerals are exploited.

*g) Solutions to increase the percentage of collected, recycled and reused solid wastes; and reduce the production and use of difficultly-disintegrated bags and packing*

- To vigorously implement the National Strategy on managing solid wastes to 2025 and visions to 2050;
- To pilot and gradually popularize the fee collection on the basis of volume and category of solid wastes; to gradually raise fees so as to compensate for costs of collecting, transporting and burying solid wastes; to form the market of recyclable and reusable wastes;
- To encourage and introduce economic instruments to foster the habit of classifying solid wastes and rubbish right in each and every family, enterprises, offices and public places; to establish hubs for collecting and receiving categorized solid wastes in urban areas, rural residential areas and public places;

- To promote social engagement and establish networks of enterprises, social organizations, and collectives in collecting and transporting solid wastes, creating links to recycling facilities and dumping sites; to boost the collection of solid domestic wastes in rural residential areas and public places;
- To craft and perfect policies and laws on recycling wastes in order to specialize activities of recycling and reusing wastes, develop environmentally-friendly recycling industry;
- To set up and realize programs on developing the capacity of recycling wastes; to support the formation of large-scale recycling enterprises through enhancing linkages among households and small production units; to establish concentrated recycling industrial parks; to develop, take over and transfer advanced recycling technologies which are suitable to Viet Nam;
- To apply mechanisms and policies on credit and price supports for recycled products; to found and develop the market of recycled, green, clean and environmentally-friendly products;
- To produce environmentally decomposable bags and packings which can replace hardly decomposable ones;
- To increase accountability of producers and importers in collecting and treating used packages, machinery, equipment and instruments, especially machines and electronic devices; to encourage and campaign people for reducing the use of hardly decomposable bags and packings;
- To review, upgrade, renew and build up regional networks of solid waste dumping sites, at the same time establishing recycling facilities through evaluating situations and predicting the possible amount of solid wastes and local demands in specific regions. To include indicators for areas of solid waste dumping sites, collection sites and entrepôts in the land use plans at all echelons and in the plans on embellishment of urban and concentrated residential area.

*h) Solutions to increase the percentage of hazardous and medical wastes treated properly and buried safely after treatment*

- To complete and strictly enforce regulations on registering, categorizing, storing, transporting, treating, incinerating and burying hazardous and medical wastes;
- To invest and speed up the construction of networks of hazardous and medical waste treating and incinerating facilities; to establish hazardous waste treatment centers in three key economic areas in North, Central and South Viet Nam; to develop and transfer hazardous and medical waste treating and incinerating technologies suitable to Viet Nam;
- To review, supplement and perfect investment plans for building dumping sites for treated hazardous and medical wastes in order to secure safety for environment and people.

**2. To improve and recover environment in polluted and degraded regions; to enhance the supplies of clean water and environment hygiene services**

*a) Solutions to improve and recover polluted and degraded lakes, ponds, canals and sections of river in urban and residential areas*

- To protect, maintain and upgrade lakes, ponds, canals, channels and river sections in urban and residential areas; to minimize projects which can narrow water areas; to speed up the pace of embanking and defining borders and areas ponds, lakes, canals, channels, and river sections in urban and residential areas to stop illegal occupation and fillings;
- To take both State budgets and ODA capitals to realize programs and projects on improving and recovering lakes, ponds, canals, channels and river sections in urban and residential areas, especially projects under the National Goal Program on Pollution Mitigation and Environment Improvement;
- To combine plans on urban embellishment, upgrading and completing sewage and rainwater drainage systems, building concentrated sewage treatment systems and plans, programs and projects on improving and recovering lakes, ponds, canals, channels, and river sections in urban and residential areas.

*b) Solutions to clean land areas intoxicated by toxics, dioxin, chemicals, herbicides and other pollutants*

- To inspect, evaluate, locate, map and localize land areas being or appear to be intoxicated, or having residues of chemicals, herbicides, pollutants, and dioxin;
- To plan and gradually conduct environment improvement and recovery, prioritizing land areas within or near residential areas and water sources, or those which can directly influence people's health;

- To prioritize cooperation with other countries, international organizations, foreign groups and companies in seeking for resources, technologies, machinery, equipment and chemicals to improve land areas being intoxicated or having residues of chemicals and pollutants;

- To combine the mobilization of resources for improving and recovering intoxicated land areas with projects on assigning or leasing improved and recovered land areas.

*c) Solutions to recover and regenerate deteriorated natural ecosystems, especially mangroves*

- To survey and evaluate deterioration and degradation of specific or representative natural ecosystems, especially mangroves, then design the planning schemes for their recovery;

- The State will conduct programs on investing and mobilizing ODA sources and other resources from economic sectors and organizations at home and abroad for recovering natural ecosystems, increasing their resistance against climate change, founding mechanisms for payments of ecosystem services towards boosting recovery, regeneration and protection of natural ecosystems.

*d) Solutions to improve quality of air in urban and residential areas*

- To tighten regulations, requirements and solutions of preventing pollutions caused by construction sites as well as transportation of wastes and building materials in urban and residential areas; to strictly halt or ban projects which fail to meet environment protection requirements;

- To realize the roadmap of applying advanced standards on exhaust fumes over vehicles and means of transport; to realize emission registration and control and strictly punish all violations; to minimize and gradually reject all means of transport which can cause air and noise pollution; to renew traffic structure towards developing environmentally sustainable transport and reducing local traffic congestions and pollutions; to take measures to minimize noise pollution in urban areas;

- To realize the roadmap of readjusting fuel standards in favor of environment and in line with the country's international integration and development levels;

- To complete air quality surveying stations in urban areas, so as to timely provide sufficient and accurate data of air pollution in streets and traffic hotspots for proper intervention;

- To strictly observe requirements on allocating land for parks, green areas, and open spaces in realizing urban development and embellishment plans; to further inspect and monitor the implementation of these indicators in projects on building and embellishing urban and residential areas; to strictly punish all violations.

*đ) Solutions to improve sanitation in urban and rural areas*

- To accelerate the realization of the Orientations for Water Supply Development in Urban and Industrial Parks in Viet Nam to 2025 and Visions to 2050;

- To survey and evaluate the total demand for clean water as well as the supply, including infrastructure, volume and quality, and plan the supply so that everyone can get clean water for their daily activities;

- To continue the implementation of the National Goal Program on Clean Water and Rural Environment Hygiene, focusing on regions with low percentage of residents accessing to clean water or regions lacking water resources which can replace clean water; to invest and take ODA capital for upgrading, renewing and building clean water supply works in rural areas, especially remote regions;

- To speed up research and adoption of clean water supply technologies in order to secure sufficient supplies for people, especially in cases of floods, storms, and other urgent situations;

- To gradually narrow the water quality gap between urban and rural areas, to apply uniform technical standards of domestic water quality both in urban and rural areas.

### **3. To exploit and use natural resources effectively and sustainably; to preserve nature and biodiversity**

*a) Solutions to use land resources effectively and sustainably and reduce the losses of agricultural lands due to use purpose conversion, degradation, impoverishment, and desertization*

- To balance and harmonize the demand for land use and land potentials; to boost the exchange and combination of land plots for larger areas (dồn điền, đổi thửa), especially in agricultural production and urban embellishment;

- To insert environment criteria in planning schemes for land use and use purpose conversion in order minimize negative impacts on environment;
- To minimize the conversion of forests for special use, protective forests, watershed forests, and rice growing land to meet other purposes; to check and properly permit investments in developing golf courses, hydroelectric plants, and mining activities;
- To encourage measures of sustainable land use and cultivation in agriculture, to minimize the use of chemicals and mineral fertilizers in agricultural production, to prevent land erosion and deterioration;
- To promote the development of ecological economic villages in exhausted and desertized areas in order to improve soil quality and reduce the scale and level of exhaustion and deterioration.

*b) Solutions to raise the efficiency of using water resources and reduce the seasonal and regional lack of water*

- To enhance general management of water resource in river basins; to combine planning schemes for the development of industries and sectors, especially those intensely consuming water, and plans on seeking and exploiting water resource. To tighten control over water pollution and pay attention to monitoring pollution in river basins and trans-border water sources;
- To strictly manage the exploitation of surface and underground water, especially in dry season; to apply quotas for underground water exploitation in specific regions; to review and readjust planning schemes for socio-economic development and industrial crop development in conformity with specific regions' surface and underground water potential;
- To renovate the regime of water irrigation for agricultural activities in order to improve efficiency of water exploitation and use in these activities; to popularize the payment for forest environment and ecosystem services in order to protect water sources.

*c) Solutions to minimize the degradation of aquaproduct resources*

- To survey and assess situations and realization of measures to eradicate exterminative fishing methods;
- To survey and pilot joint management over aquaproduct resources, using ecological certificates and other market mechanisms in exploiting aquaproduct resources;
- To design and realize programs and projects to protect and recover marine ecosystems' bio-productivity and ability of providing nutrients and breeding grounds for aquaproduct resources for their recovery, especially in sea waters near the coast.

*d) Solutions to increase forest coverage and improve forest quality*

- To continue afforestation and forest protection while securing a sustainable forestry; to closely manage the renting of forest land, especially protective and watershed forests;
- To survey and evaluate primitive forests, take effective measures to protect and prevent illegal exploitation, encroachment or deteriorate primitive forests; to improve natural forests' resistance to impacts of climate change;
- To localize and protect natural forests, especially mangroves, forests for special use, protective forests, and watershed forests, and at the same time preventing deforestation and illegal exploitation; to promote activities which help to prevent forest fires and improve capability of responding to forest fires.

*đ) Solutions to protect natural submerged lands, seagrass beds, coral reefs and other specific natural ecosystems*

- To survey and collect area statistics, assess real situations, found data banks, and map out natural submerge lands, seagrass beds, coral reefs and other specific natural ecosystem;
- To include indicators relating to areas of land, water surface, and natural ecosystems into yearly and periodical plans of surveying, appraising and inventorying land and land-related changes in order to gradually establish database of this category of lands;
- To survey, appraise, consider and compare criteria for establishing natural reserves in line with the Law on Biodiversity and other relevant laws, to craft planning schemes for preservation and to gradually found natural reserves in submerged lands and in the open sea;

- To survey and appraise encroachment, to discover causes of deterioration of submerged lands, seagrass beds, and coral reefs, then designing protection plans in order to mitigate the deterioration of these important ecosystems;

- To closely work with international organizations, ask them to recognize submerged lands of international significance; to promptly recognize submerged lands of national and provincial significance; to mobilize all domestic and foreign resources for protecting and preserving submerged lands of international, national and local significance.

*e) Solutions to increase quantity, total area and quality of natural reserves*

- To include indicators relating to areas of natural reserves into planning schemes and plans on land uses at all echelons, so as to serve the development of natural reserves;

- To check, appraise and arrange natural reserves in line with their purposes, criteria, conditions and resources under stipulations of the Law on Biodiversity and relevant laws;

- To craft investment programs and projects for recovering and developing ecosystems and species within natural reserves; to allocate money in environment funds for managing natural reserves in line with their types and levels of meeting requirements of biodiversity conservation in the reserves;

- To make use of the reserves' values, to combine conservation and eco-tourism development, to realize the policy on environment service payment in order to raise investment funds for recovering and developing biodiversity in natural reserves.

*g) Solutions to control the decline of wild species and their individuals as well as the deterioration of rare and precious gene sources*

- To survey and list species prioritized for protection and species which are banned or restricted from exploitation; to stipulate mechanisms to control the exploitation of banned or restricted species;

- To map out and realize programs and projects on preserving wild species, plants and animals named in the prioritized list; to develop biodiversity preservation facilities which can meet the conservation demands of the localities, regions and the whole country;

- To strictly control and discover all cases of illegal transport and consumption of prioritized and banned species; to strictly punish all violations;

- To set up databases of genes and develop gene banks; to preserve and protect for a long term all rare and precious genes and those of prioritized species; to boost the registration of intellectual property of indigenous genes;

- To strengthen the control over infiltration of harmful exotic species; to manage risks resulted from genetically modified organisms and their byproducts on environment and people's health.

#### **4. To nurture capability of responding to climate change and mitigating greenhouse gas emission**

*a) Solutions to improve people's awareness, understanding and knowledge of climate change and their adaptability to climate change*

- To survey and add up good models and experience of preventing, coping with and responding to natural disasters, supplementing and finalizing them in line with climate change context, then popularizing them;

- To regularly launch film and photo contests and competitions on climate change, to introduce the topic of climate change to performance programs of organizations and communities;

- To organize periodical rehearsals for responding to natural disasters in the climate change context by regions and by groups of calamities.

*b) Solutions to insert climate change responding tasks into development strategies, plans, programs and projects; to improve resistance and adaptability of ecosystems and environment protection works against impacts of climate change and sea level rising*

- To further update scientific and technological researches, achievements, discoveries and new conceptions of climate change in order to update scenarios on climate change and sea level rising;

- To design methods and procedures to insert climate change into development strategies, plans, schemes, programs and projects; to review and adjust socio-economic, industrial and sector development strategies, plans and schemes in accordance with climate change scenarios;
- To calculate impacts of climate change and sea level rising when building concentrated sewage drainage and treatment works and dumping sites, especially in coastal areas and in planning and establishing natural reserves;
- To pilot and popularize models of adaptability to climate change.

#### *c) Solutions to reduce greenhouse gas emissions*

- To boost the effective use of energies in construction, transport, illumination, electric devices, production and services; to encourage investment in recovering energy and heat in production and consumption for re-use;
- To promulgate mechanisms and policies on encouraging and supporting economic sectors to invest in researching and exploiting wind, solar, geothermic, biological and biomass energies; to generate electricity from biogas, wastes and agricultural byproducts; to develop small-scale hydroelectric models to meet the demands of energy consumption on the spot;
- To pilot and popularize low-carbon models of socio-economic, field, regional and community development;
- To research new tendencies, changes and models of development, especially in regional and global economic structures, in order to make full use of opportunities and minimize negative impacts of climate change on environment.

### **III. GENERAL SOLUTIONS**

#### **1. To create strong changes in accountability of environment protection at all echelons, industries, businesses and people**

- To accelerate the dissemination of laws so that all people and enterprises fully and soundly understand legal stipulations, requirements, standards and criteria of environment protection; have full awareness of their responsibility and obligation for environment protection; and engage in environment protection activities;
- To further enhance environment and climate change education at all echelons in the education and training systems; to expand majors of environment education, prioritizing majors of high demands;
- To campaign for forming an environmentally-friendly lifestyle and sustainable consumption to nurture people's sense of environment protection as well as gradually build up a low-carbon, low-waste and environmental-friendly society;
- To identify clearly responsibilities of industries and echelons for not observing, improperly observing or breaking environment protection stipulations in approving and licensing investment projects which leads to serious environmental issues. To take into account responsibilities and results of environment protection when evaluating the performance of organizations and their leaders;
- To appraise and classify sectors and provinces in line with their environmental friendliness and publicize this classification yearly in order to have readjustments in development policies and plans suitable to sectoral and local situations.

#### **2. To perfect laws and management apparatus, to strengthen capability of enforcing laws on environment protection**

- To perfect mechanisms and policies, insert environment protection requirements in socio-economic strategies, schemes, plans and policies in line with sustainable development orientations. To promptly set up standards of monitoring and evaluating efficiency of State management over environment protection;
- To further perfect laws on environment protection, focusing on revising and supplementing the Law on Environment Protection 2005, so as to compile a Code of Environment. To promptly compose and submit to the Government for promulgating a resolution on urgent issues in environment protection in 2012-2020 and other documents guiding the enforcement of regulations on environment-related crimes mentioned in the Criminal Code, so as to bring environmental criminals to the court. To compile and improve laws on clean air, effective use of resources, recycling wastes, and low-carbon economic development;
- To speed up the application of economic mechanisms and tools in conformity with market economic regimes in order to realize macro manipulations of development activities toward environmental friendliness, especially through tax, fee, security, payment for environment services, and natural capital accounts. To establish mechanisms for settling disputes and



compensating for environmental damages. To better financial and credit mechanisms for environment protection; to enhance the implementation of preferential policies, price supports, land, financial and credit aids for environment protection;

- To further strengthen and consolidate State management agencies in charge of environment protection from central to local levels, placing focus on provincial, district and communal levels in order to improve their capability of enforcing environment protection laws. To check, clarify and deal with the overlap and dispersal in State management over environment protection. To propose models of State management agencies in charge of environment suitable to new situations, open-door and integration trends. To pay attention to developing human resource, promoting the training of professional knowledge, skills, knowledge of management, and foreign language to ensure that human resource can meet requirements of environment protection;

- To boost inspection, supervision and investigation against law infringements and environment crimes. To closely combine inspections of State management agencies in charge of environment at all echelons with environment police's activities to fight and prevent environment crimes;

- To promptly improve the overall planning scheme for national system of environment observation on the basis of the overall planning scheme for resource and environment observation network, gradually investing and modernizing facilities and equipment, strengthening capability of environment observation, survey, and analysis, building up a national database and those of different sectors and at different echelons; to timely provide accurate and full information of environment to serve socio-economic development as well as inspection and settlement environment-related law infringements.

### **3. To boost scientific and technological research, development and application for environment protection**

- To boost scientific research on environment, to develop and apply high technologies in environment protection, to make use of science and technology in increasing quality and efficiency of the economy, promoting the transformation into a green economy;

- To develop and adopt transfer of new and advanced technologies for preventing and controlling pollution, exploiting and using resources in an effective and sustainable manner, preserving nature and biodiversity, saving energies, producing and using clean and recycled energies. To accelerate the renovation of production and construction technologies in favor of the application of technologies which save materials, fuels, and energies while producing low wastes and carbon.

### **4. To develop environment economic industries to support other industries in dealing with environment-related issues, promote growth, generate more income and jobs**

- To develop key environment industries and sectors, to lay a favorable legal foundation, to implement preferential policies to support the development of some industries and sectors which can provide environmentally-friendly products and goods, recycled products, and waste-originated energies. At the same time, it is necessary to realize stimulus packages which can push up consumption of these products, so as to accelerate the formation and development of environment economic sectors;

- To promulgate regimes and policies for strong development of environment industry. To place importance on nurturing the provision of environment services, especially treating and recycling wastes, as well as environment treatment technologies and solutions, considering it a key green economic industry which can settle environment issues, generate more incomes and jobs for people;

- The State shall apply price support policies; encourage consumers to use environmentally-friendly products, clean energies, and recycled products to support the development of environment economies.

### **5. To enhance and diversify investment in environment protection**

- To gradually increase regular spending in the State budget for environment protection up to 2% of the total budget expenditure; to promote the proper and effective use of non-productive spending for environment. To uphold the role and responsibility of the resource and environment sector in allocating and monitoring budget spending for environment protection, to ensure that non-productive expenditure for environment is used to protect environment. To guarantee the appropriate rate and structure of investments in environment protection in development, production and business activities;

- To pay attention to improving mechanisms and policies encouraging economic sectors to invest in environment protection; to realize the public-private partnership (PPP) models (PPP); to attract and fruitfully use preferential loans and ODA from international organizations and foreign governments for environment protection, especially in mitigating pollution, recovering and improving environment, preserving nature and biodiversity;

- To uphold the role of the Viet Nam Environment Protection Fund, to consolidate its capacity, to add more budget fund for it, and to grant it with a special mechanism of mobilizing domestic and foreign capital; to expand the scope of operation and

forms of support in order to meet demands of organizations and individuals in environment protection. To gradually form a capital market for environment protection, encourage the establishment of funds to finance environment protection initiatives, community-based models, campaigns, and activities for the sake of the whole society;

- To speed up social engagement in environment protection, to mobilize the participation of different economic sectors in environment protection, to adopt proper mechanisms and policies for mobilizing higher capital, especially non-budget sources, for environment protection;

- To form new sources of income; to gradually raise the rate of fee collection equivalent to the levels of enjoying environment benefits or polluting and deteriorating environment, so as to reduce State budget burdens and create sustainable financial sources for environment protection.

## 6. To speed up international integration and cooperation for environment protection

- To place importance on environment issues in negotiating and signing bilateral and multilateral trade agreements, especially in trans-Pacific cooperation; to speed up the realization of environment service-related commitments within the WTO framework; to attract foreign investment in environment protection while nurturing the provision of environment services to meet domestic demands and expand the scope into regional countries;

- To boost international cooperation for more resources for environment protection; to actively propose initiatives for international cooperation; to take part in and realize international treaties in which Viet Nam is a member;

- to work with other countries in the region and the world, and international organizations in preventing and controlling environment pollution, preserving nature and biodiversity, and coping with climate change.

## IV. IMPLEMENTING THE STRATEGY

### 1. Implementing the Strategy

- The Ministry of Resources and Environment shall be the main implementer who is responsible for assisting the Prime Minister to organize the implementation of this Strategy; craft and submit to the Prime Minister for approving the Plan on implementing the Strategy in two periods: 2012-2015 and 2016-2020;

- The Ministry of Planning and Investment and the Ministry of Finance shall allocate the State budget and other capital sources for implementing the Strategy;

- Ministries, ministerial-level agencies, and provincial-level People's Committees, within their competence, shall be responsible for organizing the implementation of the Strategy's goals, contents and solutions;

- Socio-political, socio-professional and other mass organizations and communities shall be responsible for joining environment protection, supervising environment protection activities conducted by the State, enterprises and people.

### 2. Monitoring and evaluating the implementation of the Strategy

- Ministries, ministerial-level agencies, and provincial-level People's Committees shall be responsible for supervising and checking the realization of environment protection goals and indicators within their competence. They shall also regularly review the realization and report to the Ministry of Resources and Environment;

- The Ministry of Resources and Environment shall be responsible for checking and monitoring the realization of the Strategy, periodically evaluate and sum up the realization, and make reports to the Prime Minister.

## APPENDIX

### INDICATORS FOR MONITORING AND ASSESSING RESULTS OF ENVIRONMENT PROTECTION TO 2020

*(Attached to Decision 1216/QĐ-TTg dated September 05, 2012 by the Prime Minister)*

No.	Indicators	Competent agencies	Roadmap		
			2010	2015	2020
<b>1</b>	<b><i>Reducing sources of environment pollution</i></b>				

a.	New production and business establishments meeting environment protection requirements	MoNRE	40%	75%	100%
b.	Environment polluting establishments	MoNRE	-	down 20%against 2010	down 50%against 2010
c.	Industrial parks meeting environment protection requirements	MoNRE	-	70%	95%
d.	Traditional handicraft villages meeting environment protection requirements	MoNRE	-	30%	60%
đ.	Communes meeting environment and hygiene standards	MARD		20%	50%
e.	Number of chemical, radiation, nuclear accidents	MoST		No	No
g.	Urban areas (grade IV or higher) having standard concentrated sewage treatment system	MoC		30%	70%
h.	IPs and complexes, EPZs having standard concentrated sewage treatment system	MoNRE	60%	75%	95%
i.	Urban solid wastes collected	MoC	80 - 82%	90%	95%
k.	Rural solid wastes collected	MARD	40 - 55%	60%	75%
l.	Solid wastes reused and recycled for recovering energies or producing fertilizers	MoNRE	20 - 30%	55%	85%
m.	Hazardous wastes treated, incinerated, or buried safely	MoNRE	65%	75%	85%
n.	Production and use of difficultly-disintegrated bags and packing	MIT		down 10%against 2010	down 30%against 2010
o.	Medical wastes treated, incinerated, or buried safely	MoH	75%	80%	100%
p.	Dumping sites meeting technical and hygiene requirements	MoNRE		50%	90%
<b>2</b>	<b><i>Improving environment in polluted or deteriorated areas; bettering people's living conditions</i></b>				
a.	Water surface area of recovered ponds, lakes, canals, channels, and rivers in urban and residential areas	MoC	-	up 30%against 2010	up 70%against 2010
b.	Reclaimed land area intoxicated or having residues of dioxin, chemicals, herbicides, and pollutants	MoNRE	- 255.000 ha of land intoxicated with dioxin - 335 spots with residues of herbicides	down 20%against 2010	down 50%against 2010
c.	Area of deteriorated ecosystems recovered or regenerated	MoNRE	-	up 30%against 2010	up 50%against 2010
d.		MoC	80%	95%	100%

	Urban population supplied with clean water				
d.	Rural population supplied with clean water	MARD	79%	85%	95%
e.	Rural households having standard sanitation	MARD	52%	65%	95%
g.	Public green area in urban and residential zones	MoC	1-4 m <sup>2</sup> /person	up 15%against 2010	up 30%against 2010
h.	Content of toxics in the air in urban and residential areas	MoNRE	-	Lower than2010	Meeting standards
<b>3</b>	<b><i>Mitigating deterioration and exhaustion of natural resources; curbing degradation of biodiversity</i></b>				
a.	Area of agricultural lands lost due to use purpose conversion, degradation, impoverishment, and desertization	MARD	-	down 20%against 2010	down 30%against 2010
b.	Area of cultivating lands	MARD	-	3.6 millionha	3.6 millionha
c.	Water surface area of ponds, lakes, canals, channels, and rivers in urban and residential areas	MoC	-	Not lower than 2010	Not lower than 2010
d.	Number of regions suffering water source exhausted by overexploitation	MoNRE		Not higher than 2010	Not higher than 2010
đ.	Use of water and land area per 1 GDP unit	MoNRE		down 10%against 2010	down 30%against 2010
e.	Aquaprodukt resources in sea waters near the coast	MARD		Not lower than 2010	Not lower than 2010
g.	Forest cover	MARD	40%	42 - 43%	45%
h.	Area of primitive forests	MARD	0,57 triệu ha	Not lower	Not lower
i.	Area of mangroves	MARD	-	Not lower than 2010	Not lower than 2010
k.	Area of seagrass beds	MoNRE	18.500 ha	Not lower than 2010	Not lower than 2010
l.	Area of coral reefs	MoNRE	110.000 ha	Not lower than 2010	Not lower than 2010
m.	Total area of natural reserves	MoNRE	2,5 triệu ha	up 10%against 2010	3.0 millionha
n.	Number of endangered rare and precious species	MoNRE	47	Not higher than 2010	Not higher than 2010
o.	Number of extinct rare and precious species	MoNRE	9 species(2001-2010)	No	No
p.	Number of precious and valuable genes lost	MoNRE	-	Not higher than 2010	Not higher than 2010
q.	Natural heritage sites, landscapes, and beauty spots	MoCST	-	Not deteriorated than 2010	Not deteriorated than 2010
r.	Cases of losing bio-safety due to genetically-modified organisms	MoH		No	No
s.	Number of exotic species and their harmfulness	MoNRE	-	Not higher than 2010	Not higher than 2010
<b>4</b>	<b><i>Increasing capability of responding to climate change and mitigating the increase of greenhouse gas emission</i></b>				
a.	Population understanding or having knowledge of coping with	MoNRE	-	30%	100%

	or adapting to climate change				
b.	Strategies, schemes, plans, programs and projects taking into account impacts of climate change and sea level rising	MPI	-	30%	90%
c.	Natural ecosystems of national and international significance improved for better resistance and adaptability to climate change	MoNRE	-	up 20%against 2010	up 60%against 2010
d.	Village and hamlet-level communities having capability of coping with climate change and natural disasters	MARD	-	up 30%against 2010	up 90%against 2010
đ.	Greenhouse gas emission per 1 GDPunit	MoNRE		down 3%against 2010	down 7-8%against 2010