

SOCIALIST REPUBLIC OF VIETNAM

**NATIONAL STRATEGY
FOR
ENVIRONMENTAL PROTECTION
UNTIL 2010
AND VISION TOWARD 2020**

HANOI, MAY 2003

FOREWORD

In the past period, initially important results have been made in environmental protection work. This can be attributed to due attention increasingly paid to the implementation of the Law on Environmental Protection and the Politburo of Vietnam Communist Party Directive 36-CT/TW on *Strengthening of Environmental Protection in the Period of Industrialization and Modernization of the Country*.

Nevertheless, for various reasons, the environment of the country continues experiencing degradation at a rapid rate, and in some-where some time at alarming level. Land is being under erosion and deterioration; the quality of water resources strongly declines, the quality of air is already polluted heavily in multiple urban centers and residential areas; biological diversity is being seriously threatened; and the supply of clean drinking water and environmental sanitation is not sustained in many places, causing adverse impacts on the local people's health and living conditions, and sustainable development of the country.

Following the National Plan of Environment and Sustainable Development, 1991-2000, the Prime Minister of the Government approved this National Strategy for Environmental Protection (NSEP) until the Year 2010 and Vision toward 2020 according to the Government Decision 256/2003/QD-TTg of December 2nd, 2003. This Strategy will guide the country's environmental protection work in the period of promoting industrialization and modernization of the country.

The Strategy is an extremely important guiding instrument for the country's environmental protection work until 2020. In addition to a general assessment of the environment of the country in the past and the prediction of challenges that our environmental protection work will face with, the Strategy presents the guiding views on, objectives and activities of, and solutions to environmental protection, and an Annex comprising of 36 priority programs on environmental protection.

It is my great honor to present the Strategy to all levels of the authority, sectors and national and international organizations.

Hanoi, December 2003

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PART ONE

CURRENT STATE OF THE ENVIRONMENT AND CHALLENGES

Thanks to the renovation (or *Doi moi*) policy Vietnam has made significant achievements in socio-economic development, culture, foreign affairs and national security in the past several years. At the same time, as due attention has also been paid by the Party and the Government to environmental protection, Vietnam has produced results, initially restraining increase in pollution, partly remedying environmental deterioration and gradually improving the quality of the environment in certain places, which lay essential preconditions for sustainable development in the future.

1. THE ENVIRONMENT OF THE COUNTRY IN RECENT YEARS

In general, the quality of our environment continues to deteriorate, even to an alarming level, in certain places.

Land Environment: Land degradation tends to become prevalent in our whole territory, from lowlands to midlands and mountains, and is typically seen in the forms of erosion, washing, loss of organic materials, drought and desertification, inundation and flood, landslide, salinization and acidification. Land degradation has resulted in a large number of barren and uncultivable areas and increasingly desertified areas.

The overuse of agrochemical and pesticides and technically improper farming practices are causing pollution and degradation to numerous land zones nationwide. In addition, there is the problem of some land areas contaminated with Agent Orange/dioxin as war consequences.

Water Environment: Generally, upstream water quality of most rivers remains relatively good, while downstream it is largely, if not seriously, polluted. The main cause of this is untreated effluents from industrial enterprises and sewage from households that are being discharged directly to rivers. The quality of water resources is strongly degraded, and many parameters such as BOD, COD, NH₄, total N and total P typically exceed the national standards by multiple folds.

Coastal waters have revealed signs of contamination. Concentrations of organic materials, heavy metals and pesticides in some places are beyond the permissible range. The oil content in marine waters also tends to rise rapidly due to the increased occurrence of oil spills.

Groundwater resources in several regions, especially industrial and urban areas, are inclined to be depleted in the dry season, and contaminated as observed in certain places. Technically improper and indiscriminate extraction is identified as a major contributor to this problem.

Air Environment: While air quality remains relatively good, particularly in rural and mountain areas, dust pollution in urban and industrial centers is becoming a pressing concern. The rapid growth of vehicles has contributed to air pollution in many places. The CO content at certain major road intersections is rather high, causing direct harm to transport users. The policy on unleaded gasoline use adopted by the Government has basically halted increase in lead particle pollution in urban and industrial air environments.

In addition, forest fires that happened recently have declined air quality and resulted in other abnormal natural phenomena.

Forests and Vegetation Cover: According to statistics, the country has a forest area of approximately 11,575,400 hectares, of which 9,700,000 hectares is natural and 1,600,000 hectares planted.

Thanks to the adoption of appropriate and timely lines, the forest cover significantly increased from 27.2% in 1990 to 33.2% and 34, 4% in 2001 and 2003 respectively. However, the quality of forests is yet to improve. In fact, it continues declining. Natural upstream and mangrove forests continue to be severely destroyed. Rich, close and virgin forests only make up 13% while poor and regenerative forests make up 55% of the total forest area.

Recent forest fires in U Minh Thuong, U Minh Ha and other places have contributed to declines in both the total area and quality of forests.

Biodiversity: Vietnam is one among ten countries with the highest biodiversity in the world. It is endowed with multiple typical ecosystems, numerous highly scientific and economic valued and endemic species of fauna and flora, and rare gene pools. There are some species of large mammals such as Sao La ox (*Pseudoryx nghetinhensis*) and large-antlered muntjac (*Megamunticus vuquangensis*) firstly discovered in Vietnam.

To conserve biodiversity resources, the Government has adopted policies on the localization of the typical ecosystems for protection purpose and development of special use forests. There are presently 17 national parks, 60 natural conservation areas, 47 nature reserves, 13 protected species and habitat areas and 28 protected landscapes.

However, in recent years our biodiversity resource has been facing rapid shrinkage. This can be attributable to forest fires, conversion of land uses making habitats for species narrower; over-extraction of natural resources; illegal trade in wildlife species of fauna and flora; and environmental pollution. Over the last five decades, the area of mangrove forests has been decreased by 80%. There are 96% of coral reefs in grave danger. Many wildlife species have everlastingly disappeared.

Urban and Industrial Environments: The environment in many of our urban centers is polluted due to obsolete and rapidly degraded sewer and drainage systems; poor solid waste collection capacity that only accounts for between 60-70%; and especially hazardous waste that has not been properly collected and treated as regulated. Additionally dust, emissions and noise generated from urban transport activities and the operation of a network of small and medium enterprises doubled with poor urban infrastructure are contributors to making environmental problems alarming.

The development of urban infrastructure does not keep pace with urban population growth, which has led to the inadequacies of other urban social and sanitary aspects.

Rural and Mountainous Environments: Rural and mountain areas are home to 75% of the population. Secured drinking water supply and environmental sanitation remains a great challenge. Of all rural households only 28-30% use sanitary latrines and 40% have access to safe water supply. Backward customs and unsanitary practices that are still found popular across the country also contribute to environmental pollution and deterioration.

Pollution is particularly rife in craft villages and considered a most pressing environmental problem. The overuse of agrochemical and pesticides has resulted in cultivated land deterioration, water pollution and biodiversity loss.

The slash and burn practice is still rather prevalent. Poverty continues and acts causing environmental damages become more frequent in remote rural areas.

Coastal and Marine Environment: Vietnam has a 3200-km coastline endowed with typical mangrove forest ecosystems with high biodiversity. Over the years, excessive extraction and destructive fishing practices have caused severe degradation to fisheries resulting in a fall in near shore catch.

Massively unplanned coastal aquaculture along with the destruction of mangrove forests has contributed to strongly deteriorated coastal ecosystems. In the last 20 years only, the total area of mangrove forests has been halved, leaving consequences such as flash floods, tide-floods, strong waves, which have caused coastal erosion leading to loss of coastal habitats and a sharp decline in both populations and species.

Industrial development along riverbanks and within major river basins has also contributed to polluted coastal environment, in some cases at serious level. Numerous coral reefs are dead and the phenomenon of red tide appears in many places. And the occurrence of oil spill incidents has tended to be increased causing contamination and degradation to marine environment and coastal biodiversity resources.

Workplace Environment: The general workplace environment, in recent years, has been improved considerably, positively influencing on the improvement of workers' health, and enabling production and business activities.

Nonetheless, in many workplaces, hygiene and safety requirements are not properly ensured. Dust, toxic chemicals, noise and in-door temperature are causing increasingly high incidence of occupational diseases, most typically in such industries as chemistry, metallurgy, building materials and mining.

Population and Environment: Vietnam is one of the world's most populated countries. As of 2001, the registered population is nearly 70 million ranking 13th in the world and 2nd in the South East Asia region. The high population density has imposed serious pressures on the environment.

Young people under working age take up 39.55% while those of working age are 52.83%. This means every 100-working people have to feed another 83.

The rate of poor households remains high. The rich-poor gap tends to expand. Achievements in poverty reduction are yet to be sustainable. The risk of falling back into poverty is felt significant. Unemployment is high while the number of workers with trained skills remains small.

Of much concern are also the side effects of development, such as housing pressure, poor environmental hygiene, drug addicts, violence and other social problems on the rise.

2. THE PAST ENVIRONMENTAL PROTECTION

In the implementation of the National Plan on Environment and Sustainable Development, 1991-2000, significant results were achieved. The sense shared by experts and international organizations is that over the past 10 years, Vietnam has been able to do what would have taken other countries with the same conditions 20-30 years in the field of environmental protection. Such an assessment, sounding somewhat subjective though, has indicated success in realizing the first strategic plan on environment ever done in the country.

Over the period, an institutional system of environmental protection along with a rather compatible legal framework has been established in a rather well matched manner. These major results are the key determinants and prerequisites for the periods to come. Achievements in environmental management have, on one hand, helped reduce pollution, deterioration and other incidents and on the other hand, improved noticeably the quality of the environment. A number of pressing environmental problems has been successfully resolved. The forest cover has been increased; ecosystems localized for conservation and rare and specious species strictly protected. More businesses and enterprises are now investing in the

adoption of environmentally friendly technologies, the construction of waste treatment facilities, and the improvement of the environment. A participatory approach to environmental protection has been promoted and the “socialization” policy on environmental protection introduced to various communities. Advanced community-based and self-governed models for environmental protection have been developed and actively brought into full play.

Despite of this initial success, there remain a lot of unresolved issues and weaknesses in environmental management. The legal framework is incomplete. Important laws such as those on clean air, chemical safety and biodiversity do not exist while guidance on the implementation of others is yet to be provided. The system of environmental management agencies remains inadequate. The environmental management staff is insufficient in number and weak in professional capacity. The division of tasks and responsibilities is not clear, leaving both duplications and gaps in the State management of the environment. Other concerns include low public self-imposed consciousness of environmental protection; insufficient, inefficient and thinly allocated investments in environmental protection; and the adoption of economic instruments not being strongly promoted into environmental protection. These weaknesses along with the rapidly deteriorating quality of the environment present major challenges to the work of environmental protection for the time to come.

3. FUTURE CHALLENGES TO OUR ENVIRONMENT

Between now and 2010, our environment faces a good number of challenges, both subjective and objective. The key challenges are described hereafter.

3.1. Pollution on the Rise versus Pressing Environmental Problems Unresolved

War remnants, adverse impacts by a long period of economic development without due attention to the environment and scarce resources for environmental protection altogether explain why urgent environmental problems remain unresolved.

Water sources, particularly ponds, lakes and rivers traversing major urban centers and industrial areas are severely contaminated. Urban and industrial solid wastes containing a high hazardous proportion are daily generated in large volumes while the collection and treatment capacity is still limited. Medical wastes dumped without treatment into the environment are likely to spread plagues. There is not yet a solution to the problem of hazardous waste retained in great quantity within the territory of the industries.

Obsolete industries located in between residential areas and craft villages are typically big polluters. The booming of motor vehicles contributes to the frequent occurrence of urban traffic congestion, accidents and air pollution. Massively unplanned aquaculture is ruining coastal ecosystems and environments. The

overuse of agrochemical and pesticides is causing pollution to water resources and degrading soil and agro-biodiversity.

The importation of obsolete equipment, machinery and wastes in various forms of trade is also likely to make our country become a dump-site of the industrialized countries if no preventive measures timely and effectively undertaken.

The indiscriminate mining and deforestation for the expansion of cultivated land have also made environmental issues more exacerbated and contributed to decline in biodiversity.

The IX Plenum Party Resolution set a target annual GDP growth of 7.5% for the immediate years and gradually higher for the next ones. Hence, by 2010 it would have been double the 2000 rate.

It has been estimated by international experts and tested in various countries that when GDP is doubled three to four folds will increase the intensity of environmental pollution. This indicates the fact that unless effective measures are taken to prevent and control pollution, our environment would be seriously ruined in the coming years.

3.2. Short-term Economic Gains versus Long-term Environmental Benefits and Sustainable Development

Our goal is to complete the cause of industrialization and modernization to basically develop the country into a modern industrialized nation by 2020. Given existing poor infrastructure, shortage of investments and human resources and limited science and technology capacities, there would have been trade-off between environmental values and benefits and visibly and merely economic profits if no preventive interventions are taken now. This appears to be the greatest challenge facing the country for the time being. If this trend continues its recovery will be most costly, if not unaffordable.

3.3. Obsolete Technical Infrastructure for Environmental Protection while Limited Resources for Environmental Protection provided by the Government and Enterprises

The existing technical infrastructure for environmental protection in urban and rural areas, and pollution treatment facilities of production units, especially small and medium sized industries, remain poor and obsolete. To handle the current environmental problems and control accelerating pollution require large investments in the environment. This is another significant challenge, given financial constraints of both the public and private sectors.

3.4. Population Growth, Spontaneous Migration and Poverty

The population continues to grow at a rather high level (1.7% per annum) and is projected to reach 100 million by 2020. Spontaneous migration and the practice of cutting down forests for rice and cash cropping remain rife. Poverty in remote rural areas has not yet been up-rooted. There are still 2300 poor communes nationwide. This challenge is putting heavy pressure on both the environment and natural resources, which requires an appropriate strategy on the environment and natural resources in line with those on poverty reduction, population and economic growth.

3.5. Low Public Consciousness of Environmental Protection

Environmental protection awareness among different levels of senior decision-makers, managers, businesses and communities remains inadequate. Self-imposed consciousness of environmental protection among communities so low that this has given way for increased acts of causing environmental pollution and degradation, and other adverse impacts on the environment. Their consequences in many cases are enormous. In recent years, forest fires, contamination by wastes dumped in public locations and other environmental disasters are alarming indicators of the adverse impacts of both environmentally unfriendly intended and unintended acts.

A situation as such could continue to exist and make it complicated and time-consuming to get responses from various levels of the central and local governments. Thus the likelihood of the environment being destroyed in terms of both scope and degree presents an additional challenge to our country for the time to come.

3.6. Inadequate Environmental Institution and Management Capacities

The system of environmental management authorities has not been completed vertically from central to local, neither across ministries/sectors. There remain inadequacies in environmental management capacities in terms of human, physical and technical resources as well as management mechanism.

Both overlap and gaps are found in the division of responsibilities for environmental and natural resources management between the central and local agencies. The coordination across line ministries at the central level and/within line departments at the provincial/city level is yet to work in effect while complex environmental issues of extensive impact require inter-sectoral approaches. This is also seen as a great environmental challenge for our country to deal with in the next coming years.

3.7. International Economic Integration Posing More Strictly Environmental Requirements

In the course of international economic integration and globalization, more strictly environmental requirements are increasingly applied by international trading

partners and potential markets in the world. This really challenges domestic enterprises that are keen on expanding their markets and participating in the international economic integration. In response, Vietnam needs to research and develop policies aimed at continuous reforms to support domestic enterprises in their environmental protection and international economic integration.

3.8. Greater and More Complex Impacts of Global and Regional Environment Concerns

Global and regional/trans-boundary environmental concerns have direct adverse impacts on our environment. These include greenhouse effect, space waste, ozone layer depletion, acid rain, climate change, El-Nino and La-Nina phenomena, haze by forest fires, pollution of seas and oceans, transfer of pollution, forest loss and biodiversity degradation, etc. In addition, trans-boundary environmental issues and those of the Red River and Mekong River basins have negatively affected the environment and altogether are practical challenges.

Wasteful consumption patterns and the inflows of unhealthy cultural trends, drug abuse, and prostitution along with globalization will also have strong behavioral impacts as well as strongly challenge our environment.

PART TWO

VIEWPOINTS, OBJECTIVES AND CONTENTS

1. VIEWPOINTS

To tackle the above challenges and successfully implement the cause of environmental protection and sustainable development, the following guiding viewpoints must be grasped.

1.1. The National Strategy for Environmental Protection is an inseparable part of the National Socio-economic Development Strategy, and serves as grounds for sustainable development of the country. Environmental protection investment means the investment for sustainable development

To achieve sustainable development, it is necessary to combine and harmonize, in a scientific manner, socio-economic and environmental factors at each development stage and in individual sector. Environmental protection must be viewed as a fundamental goal and an important content inseparable from the development process. Environmental protection investment means the investment for sustainable development.

The integration of environmental considerations into development policies, lines and plans, has not really received due attention paid by all levels of the authority and sectors. The environmental factor is still neglected. Investments in environmental protection remain lower, not measuring up to the requirements. It is necessary to make visible changes in the conception of investment in, and to increase investment level and efficiency of, environmental protection.

1.2 Environmental protection must be the task of the whole society, all levels of the authority, sectors, organizations, communities and all citizens; as environmental protection is national, regional and global in its nature, it requires to bring into full play the country's internal strength combined with the extension of international cooperation.

Environmental protection benefits all the people but every one must be required to participate in environmental protection. Environmental protection will be effective and successful unless all levels of the authority, sectors, and all the people actively participate in it under the leadership of all levels of Party and the management of the State. At other aspect, environmental protection has unprecedentedly become a global task for the welfare of the entire humanity and all nations. It is necessary to proactively strengthen international cooperation in the field of environmental protection, and at the same time, to actively implement our international obligations to protect the global environment within the framework of international treaties to which our country has acceded; on the other hand, external assistance for

environmental protection, especially the exchange of information and the transfer of scientific advances and new technologies, must be maximized.

1.3 Environmental protection must base on the strengthening of the State management, institutional and legislation capacities of, along with the raising of awareness and consciousness of environmental protection stewardship among the people and the whole society.

From the period from now to 2010 and vision toward 2020, the strengthening of legislation capacity must become the focal solution to environmental protection when the self-imposed consciousness of environmental protection in the whole society may be unevenly raised. Roles that the State can play in the orientation, organization and monitoring of environmental protection by the whole society must be brought into full play to ensure its effective implementation. A system of environmental protection statutory instruments must be completed. A qualitatively and quantitatively strong network of environmental management, especially environmental inspection, must be established at both the central and local levels. Administrative penalization must be strongly imposed on any environmental offense, and provisions of criminal liability investigation stipulated in Chapter XVII on environmental crimes of the Criminal Code must be gradually translated into practical applications in order to ensure the enforcement of the Law on Environmental Protection and other relevant statutory instruments.

Since the Law on Environmental Protection came into effect, certain progress has been achieved in our cause of environmental protection. However dramatic changes in public environmental awareness are yet to be made. Environmental protection has not been ingrained in all the people's consciousness and regular conduct. Therefore, the whole society's conscious motives for environmental protection must be viewed as the most important factor.

Every success in environmental protection is associated with the continuous process of improving public awareness. On one hand, individual citizens have to be able to well conceive and accept that they are obligated to protect the environment in the interest of society as well as themselves. On the other hand, they need to be equipped with the knowledge necessary to help fulfill their obligations to environmental protection actively and effectively. Due awareness of environmental protection obligations and adequate capacities to fulfill them are the key prerequisites for building up self-conscious environmental protection in the whole society.

1.4. Environmental protection is a constant and long lasting work. Pollution prevention must be viewed as the key solution in combination with pollution control and treatment, remedy of degradation and improvement of the environmental quality; The implementation of these activities must aim at the focal points and locations; and science and technology must be viewed as effective tools for environmental protection.

Addressing environmental pollution, degradation and incidents is very difficult, costly and even unaffordable in many cases. The effective prevention of environmental pollution and degradation is thus should be considered to be the most effective and suitable measure for the country for the period from now to 2010, and longer until 2020. This includes: minimizing the number of licenses granted to projects that potentially cause significant impacts on the environment or are at high risk of causing pollution and degradation; control and eventually resolve or removal of production and business units that seriously pollute the environment; promoting the adoption of clean technology and cleaner production lines and the use of environmentally friendly and less pollution raw materials and fuels; and actively encouraging changes to existing wasteful consumption patterns.

Break-through achievements have been made in science and technology at the turn to the 21st century. Nowadays science and technology have become the key driving force for all development processes. In the field of environmental protection, scientific and technology advances offers enormous prospects. Science and technology help human beings enable to improve the effective use of natural resources and make production processes cleaner. In addition, they may provide human beings with advanced solutions to societal management and help minimize risks.

Advanced science and technology are making the sustainability of developmental processes increasingly higher. It is necessary to attach importance to the rapid and effective application of scientific and technological achievements to environmental protection in our country.

2. OBJECTIVES

2.1. Major Orientations Toward 2020

2.1.1 To basically halt pollution acceleration, remedy degraded areas and improve the environment quality and ensure sustainable development of the country be achieved; guarantee that all the people are entitled to live in the environment, landscapes and other environmental components with the good quality of air, land, and water measuring up to standards stipulated by the State.

2.1.2. To strive for the achievement of some primary targets including:

- a. 80% of production and business units to be granted the Certificate for Meeting Environmental Standards or the ISO 14001 Certificate
- b. 100% urban centers, industrial parks and export-processing zones to be provided with centered waste treatment systems that measure up to environmental standards;

- c. To establish and develop a recycling industry with a view to promoting waste recycle and reuse, and strive for achieving a recycling rate of 30% of total collected waste volumes.
- d. 100% of the urban population and 95% of the rural population have access to clean drinking water supplies;
- e. To increase the forest cover to 48% of the natural area; and
- f. 100% of export products and commodities, and 50% of domestically consumer goods to be environmentally labeled according to the ISO 14021 standard.

2.2 Objectives until 2010

2.2.1 General Objectives

- a. To restrict increases in pollution, remedy environmental degradation and improve the quality of the environment; to fundamentally address environmental degradation in industrial and densely populated areas within major cities and several rural regions; rehabilitate and treat contaminated rivers, canals, ponds and lakes.
- b. To improve capacities in the prevention and control of adverse impacts of natural disasters, particularly those of climate change; effectively respond and rescue, and remedy environmental incidents caused by natural disasters.
- c. To rationally extract and use natural resources, ensure the preservation of ecological balance at a high level, and conserve natural and biodiversity resources.
- d. To proactively implement, and respond to, environmental requirements in the process of international economic integration and to control negative effects caused by the globalization on the environment.

2.2.2. Specific Objectives

a. To Restrict Increases in Pollution

- 1) 100% of the newly constructed production units must adopt clean technologies or be equipped with pollution mitigation and waste treatment facilities meeting environmental standards;
- 2) 50% of production and business units to be granted the Certificate for Meeting Environmental Standards or the ISO 14001 Certificate;
- 3) 50% of households and 70% of enterprises have at-source waste segregating facilities; 80% of residential quarters have centered garbage containers; 80% of public places to be provided with litter bins;
- 4) 40% of urban centers, 70% of industrial parks and export-processing zones to be provided with centered waste treatment systems that measure up to environmental standards; 90% of domestic, industrial and service solid wastes to be collected, and 60% of collected hazardous wastes and 100% of collected medical wastes to be treated;

- 5) Chemical safety must be strictly controlled, particularly highly toxic ones. The production and use of chemical fertilizers and pesticides that cause environmental pollution must be strictly restricted, and the use of integrated pest management measures must be strengthened;
- 6) To resolve industries that seriously pollute the environment across the country in accordance with the prime Minister of the Government Decision 64/2003/QD-TTg dated 22 April 2003;

b. To Better Improve the Quality of the Environment

- 1) Basically complete the rehabilitation and upgrading of rain and sewage drainage systems in urban centers and industrial areas. At least 40% of municipalities have separate drainage and sewage treatment systems according to the standards;
- 2) Rehabilitate 50% of heavily degraded canals, lakes, ponds and river corridors traversing cities nationwide
- 3) Basically resolve Agent Orange/dioxin contaminated hotspots
- 4) At least 95% of the urban population and 85% of the rural population have access to safe water supply
- 5) 90% of the streets are tree planted; the rate of park land in urban centers is doubled as compared to 2000
- 6) At least 90% of production and business units meet workplace safety and hygiene standards, and have trees grown around their production areas;
- 7) Improve the quality of water in major river basins to measure up to the water quality standards for agricultural and aquacultural uses.

c. Ensure ecological balance at high level

- 1) Restore over 50% of the decommissioned mineral mines and 40% of the destroyed eco-systems;
- 2) Increase the total forest cover to 43% of the total natural land area; restore 50% of degraded watershed forests and improve the quality of forests; and encourage the people in planting trees scatteringly;
- 3) Increase the rate of clean energy use to 5% of the total annual energy consumption;
- 4) Increase the total protected area by 1.5 fold, especially marine and wetlands protected areas.

5) Rehabilitate and increase the total mangrove forest area to 80% of that as of 1990

d. To Respond to Environmental Requirements for International Economic Integration, and Minimize Negative Impacts of Globalization

1) 100% export-oriented enterprises successfully apply the environmental management system.

2) Ensure 100% of imported varieties, species and genetic sources be quarantined

3) 100% of imported genetic modified organisms are controlled;

3. MAJOR ACTIVITIES AND FUNDAMENTAL TASKS FOR ENVIRONMENTAL PROTECTION

3.1. Pollution Prevention and Control

3.1.1. To implement environmental pollution prevention measures in a well-matched manner

Regulations on the setting up and review of environmental impact assessment (EIA) reports should be strictly observed. Through the EIA review process, investment projects should be classified into:

- Category 1: those of potential great impacts or high environmental risks;
- Category 2: those of environmental impacts that are reversible by human interventions; and
- Category 3: those of less environmental impacts.

Those new production, business and service projects which fall under Category 1 must be subject to restrictive licensing and eventually ban; those project which fall under Category 2 must be subject to strict requirements for the investment in pollution control and mitigation and waste treatment facilities and impact reduction measures.

3.1.2. Formulate, and organize the implementation of, national, sectoral and local pollution control plans to prevent and control pollution sources and remedy environmental degradation

Relevant measures should be undertaken to restrict the importation and use of used and low fuel efficiency vehicles, machinery and equipment that are likely to cause environment pollution; urban construction and road upgrading/ rehabilitation projects that are of highly potential dust emissions should be strictly inspected; and the transport of raw materials within cities, especially across densely populated quarters, must be properly managed and controlled.

To minimize chemical spillage and incidents, relevant measures should be adopted to monitor and inspect, and deal with, enterprises, storage, transport facilities and retail shops engaged in the production of, and trade in, chemical substances, particularly toxic chemicals; the investigation and inventory of persistent organic pollutants or substances should be carried out in order to develop plans to reduce and treat these sources.

The production, importation and use of chemical fertilizers and pesticides must be strictly controlled; and measures should be undertaken to remedy the over-use of agrochemical including inorganic fertilizers that cause the depletion and degradation to the fertility of soil, water pollution and biodiversity loss in rural areas.

Surveys and inventories of land based waste sources that potentially pollute marine environment should be carried out, and solutions to the treatment and restriction of them must be worked out; the monitoring and inspection of coastal urban and industrial areas must be strengthened; the quality of water in major rivers and highly contaminated inland waters that directly flow into the sea must be controlled; preventive and responsive measures should be developed to timely deal with marine incidents; investment should be made in the strengthening of capacity for the national rescue agency to enable to respond to marine environment incidents.

3.1.3. Complete the improvement of the national and sectoral sets of environmental standards, and the adoption of clean technologies and cleaner production

The national and sectoral sets of environmental standards should be improved to be appropriate to levels of the development and environmental protection at specific stages in order to ensure the harmony between economic development and environmental protection.

Incentives should, in combination with enforcement, be provided to encourage production and business units to make investment in the technological renovation and adoption of environmentally friendly and/or low waste production technologies. Encourage the consumption of energy in an economical manner and the use of clean energy and less pollution fuel substitutes. Encourage, and develop mechanisms supportive of, the adoption of internationally standardized and advanced environmental management systems by the local enterprises.

3.1.4 Improve waste management capacity and efficiency

Domestic, industrial and service solid waste collection systems should be better organized; incentive mechanisms should be established and adopted to encourage the at source waste separation by production and business units and households. Relevant mechanisms should be created to support the establishment and development of enterprises engaged in the provision of solid waste collection and treatment services. The State shall proactively joint, under the joint-stock form,

with other interested investors in the formation of a system of solid waste recycling, treatment, incineration and landfilling operators. Investments must be made in the construction of central hazardous waste facilities and enforceable measures should be adopted to enforce the treatment of hazardous wastes by the enterprises or through contracts made with the licensed treatment service providers.

The collection of environmental protection fees must be implemented according to the Government Decree 67/2003/ND-CP dated 13 June 2003 relating to wastewater fees, and other relevant guidelines concerning the reuse of collected fees as an additional fund to the State budget allocated for the construction of central wastewater treatment facilities in urban centers and residential areas.

Other relevant mechanisms should be developed to support the detection and punishment of those organizations and individuals that discharge all types of environmental pollutants into streets and public places in particularly in urban centers and densely populated areas. A watchword “don’t throw away or litter rubbish into streets” must be seriously translated into practical action through the launch of the entire people’s advocacy campaign.

Land based sources that are likely to cause pollution and degradation to marine environment must be controlled, and preventive and restrictive measures must be effectively adopted to control marine environmental incidents, especially oil spills.

3.1.5 Resolve industries that seriously pollute the environment

Industries that seriously pollute the environment must be strictly resolved according to the Prime Minister of the Government Decision 64/2003/QD-TTG dated 22 April 2003. Investigation and inventory of seriously polluting industries must continue, and plans should be developed to resolve these industries, especially those located within residential areas. Relevant measures and policy mechanisms should be adopted to timely support those industries that must be relocated or closed down. Those who violate environmental standards must be strictly penalized.

3.2 Remedy seriously environmental pollution and degradation

3.2.1 Implement projects on the remedy and rehabilitation of heavily polluted and degraded pits, areas and regions

The implementation of pollution mitigation measures must be promoted in the mining of minerals, especially in open pits. Mining operators must be responsible for the recovery of decommissioned pits and rehabilitation of the quality of the environment at sites upon the closure. Illegal extraction of gold and jewels and the adoption of mining technologies that potentially pose risks on humans and the environment must be completely eliminated.

The coastal zone development master planning should be implemented to aim at achieving two objectives simultaneously: reduction in environmental pollution and increase in economic efficiency. In short run, coastal mangrove forests of highly ecological values should be localized and protected. Ecologically secured fishing and aquacultural practices should be encouraged.

To control urban pollution below or within the permissible levels, urban infrastructure should be better planned and developed, and the modus operandi of a number of cities such as Hanoi, Ho Chi Minh City, Da Nang, Hue and Hai Phong should be re-arranged.

The adoption of the established procedures for appropriate use of agrochemical, chemical fertilizers, pesticides and feed for animal raising and aquaculture, must be implemented in order to mitigate land and water pollution; To improve rural environmental sanitation, village paths and alleys should be solidified, irrigation canal and drainage systems should be concrete; and the development of residential quarter-based safe water supply systems and use of biogas as fuel should be encouraged.

3.2.2. Remedy environmental degradation consequences of Agent Orange/dioxin used by Americans in the Vietnam War

Storage of Agent Orange/dioxin left after the war in the South must be identified and isolated; appropriate treatment methods should be adopted to eliminate them; Agent Orange/dioxin contaminated areas must be isolated and assessed in order to clean up the residues in the environment and gradually restore natural ecosystems in these places; Agent Orange/dioxin victims must be inventoried, examined and listed, and medical solutions should be adopted to help improve their health status and minimize the post-effects of Agent Orange/dioxin on future generations.

3.2.3 Responses to environmental incidents and rapidly remedy environmental pollution consequences caused by natural disasters

The responsive and rescue capacity for environmental incidents, especially oil spills should be built. The prevention and control of environmental incidents must be strongly promoted in all production and business activities, particularly in those with highly latent risks of environmental incidents.

Remedial actions must be timely taken to cope with environmental incidents and damages caused by natural disasters in order to avoid the spread of diseases and implications on humans and the environment

3.3. Protection and Sustainable Extraction of Natural Resources

3.3.1 Rational extraction, and sustainable, effective and economical use of land and mineral resources

The system of legislation, strategies, policies, and planning relating to sustainable use of land and underground mineral resources must be completed.

Appropriate management tools should be introduced to harmonize cross-sectoral issues regarding land use, mineral resource extraction and environmental protection and other development areas.

Projects related to the planning, extraction and use of land and mineral resources must be subject to EIA requirements in order to ensure once commenced these projects will strictly observe technology, technical and environmental protection requirements in accordance with their approved EIA reports.

Research of alternative farming practices that help to endure eco-balance and sustainability, improve soil quality and reduce infertility should be needed; it is necessary to adopt the SALT to avoid soil washing and erosion; relevant measures should be developed to reduce deteriorated and barren sloping land nationwide.

In coastal wetlands areas, the planning of coastal wetlands conservation and sustainable use must be implemented in combination with the localization and strict protection of the typical ecosystems and sustainable agro-forestry-fishery.

3.3.2. Rational water resources extraction, protection and development

The legal framework of water resources must be completed on the direction toward sustainable extraction of both surface and groundwater resources; water quality standards should be issued and applied according to specific regions and river basins.

The planning and management of such major river basins as Red River, Mekong River, Cau River, Sai Gon-Dong Nai River, Perfume River and Nhue-Day River must be implemented.

Rivers, particularly those passing densely populated areas, urban and industrial centers should be rehabilitated; the control of river bank erosions, particularly those under high pressure of flows must be carried out through the embankment and/or other measures.

The groundwater quality and reserves should be evaluated; investment plans for the development of water resources must be developed; and specific regulations on ground water extraction must be enacted.

3.3.3. Protection of air resources

The basic activities of air quality improvement in urban and industrial centers include: the relocation of obsolete industries that seriously pollute the air from

central cities; the adoption of dust filtration and gaseous treatment technologies to all production units; the re-organization of public transport networks to cope with traffic congestion and discourage use of private vehicles in major cities; and the development of satellite cities with modern infrastructure in order to reduce the pressure of over-urbanization and population density of big cities.

The greening of urban and industrial areas should be strengthened and the total area of parks and gardens and street-tree planting should be expanded.

Reforestation must be actively implemented to increase the vegetation cover; relevant measures for forest fire prevention and control should be effectively implemented.

3.4. Environmental Protection and Improvement of Focal Areas

3.4.1. Urban and Industrial Areas

Environmental impact assessments should be implemented for urban center and industrial development planning; urban and industrial centers newly constructed must be provided with compatible sanitary facilities and environmental infrastructure; urban rearrangement and rehabilitation must be combined with the improvement of urban environmental conditions.

Solid waste collection capacity must be strengthened; efficient and standardized landfills should be adequately planned and solid waste treatment/recycling facilities or incinerators should be constructed in urban and industrial centers nationwide.

Rainwater and drainage systems in urban and industrial centers should be rehabilitated and upgraded to allow for segregation of rain and sewage, domestic and industrial wastewater and for measures to treat them before discharging into the environment; central waste water treatment systems should be constructed in urban and industrial areas to ensure treated wastewater meets environmental standards prior to its discharge into the environment.

Systems of medical hazardous waste incinerators and treatment facilities should be installed according to the established technical standards.

The dredging and rehabilitation of ponds, lakes, canals and river corridors traversing urban and industrial areas should be carried out; traffic systems should be improved and gradually provided with facilities to mitigate vehicle emissions and adsorb vehicle exhaust, particularly toxic gases.

3.4.2. Marine, Coastal and Island Areas

Any strategy on marine economic development has to be based on the conception of integrating the extraction and conservation of marine and coastal resources.

Environmental protection requirements must be adhered to internally within such sectors as oil and gas, maritime transport, aquaculture, forestry and tourism, as well as in connection to protection of marine, coastal and island environments.

Good governance of marine and coastal environments includes the zoning of marine and coastal functional areas, integrated management of coastal aquatic farming and fishing, the establishment of a system of marine and coastal protected areas, the development and improvement of livelihoods for coastal human communities, and the prevention and mitigation of coastal disasters.

The destruction of mangrove forests for aquaculture purposes must be strictly prohibited; and the protection, wave-break forests and other types of mangrove forests should be actively planted.

3.4.3. River Basins and Wetlands

While river basins are crucial for the supply of water for drinking and socio-economic development, they are already experiencing contamination caused by urban and industrial waste sources. It is necessary to develop an institutional framework and specific protection regimes for specific river basins, especially the major river basins such as the Cau River, the Saigon-Dong Nai River or heavily contaminated rivers like the Nhue-Day River where relevant measures to prevent and restrict increases in pollution must be adopted.

Wetlands are an especially essential component of the environment. To conserve wetlands is to ensure the effective use of them and their biodiversity and, at the same time, sustain the ecological and socio-economic functions of these areas.

Immediate actions to be taken to conserve wetlands environment include: the elimination of unsustainable wetlands use and irrational land use conversion; the conservation of the existing biodiversity values of wetlands; the rehabilitation of wetland ecosystems in environmentally sensitive regions; and the adoption of a combined system of agro-forestry and fishery to ensure the balance of ecological and socio-economic functions of wetlands.

3.4.4. Rural and Mountainous Areas

Environmental protection in rural and mountain areas is closely linked to poverty reduction, increased knowledge of the locals and implementation of family planning.

Importance should be attached to environmental protection of craft villages with innovative technologies and by establishing waste treatment systems or planning clusters of craft villages on the basis of infrastructure measuring up to environmental standards.

3.4.5. Natural and Cultural Heritage

Our country is endowed with a good number of internationally and nationally recognized natural and cultural heritage including World Heritage such as the Ancient Capital of Hue, Ha Long Bay, Ancient Town of Hoi An, My Son and Phong Nha-Ke Bang Grotto. The rehabilitation and preservation of the environment of these heritages must be considered an important part of the National Strategy for Environmental Protection. Hence, measures to preserve and develop them are to be identified.

3.5. Nature and Biodiversity Conservation

3.5.1. Conservation and Development of Nature Conservation Areas and National Parks

Nature conservation must be viewed as equally important to the prevention and control of environmental pollution, deterioration and incidents. Nature conservation contributes to the security of eco-balance and natural stability. Well preserved eco-systems, especially those upstream, will help reduce natural calamities such as floods and stabilize surface and ground water levels. The government needs to localize, by special regulations, typical eco-systems with high biodiversity for conservation, and further studies on the localization of other areas so as to increase nationally the quantity and total area of protected areas. The planning of protected area must be closely integrated with socio-economic development planning.

3.5.2. Forest Development and Increase in Vegetation Cover

Forest development activities include the afforestation aiming at a forest cover of 43% of total natural land by 2010, the recovery of watershed primary forests experiencing degradation, and the improvement of forest quality for combined purposes of ensuring highly economic efficiency, bringing into full play their environmental protection and ecological balance and biodiversity conservation.

3.5.3. Biodiversity Conservation

The illegal trade in rare and specious wildlife animals at high risk of extinction must be strictly controlled; the destructive extraction methods, particularly in fishing, must be eliminated; combined *in situ* and *ex situ* conservation measures should be strongly promoted.

The destruction of mangrove forests and sensitive eco-systems for the expansion of agriculture and aquaculture must be strictly prohibited; the control of forest fires and the rehabilitation of eco-systems and mangrove forests should be simultaneously carried out.

PART THREE

SOLUTIONS TO THE IMPLEMENTATION OF THE STRATEGY

1. PROMOTE PROPAGANDA, EDUCATION, AND PUBLIC AWARENESS OF ENVIRONMENTAL PROTECTION RESPONSIBILITY

It is necessary to launch a national movement on participatory environmental protection and promote the building up of communes and villages meeting environmental standards. This solution consists of mobilizing of public participation in environmental protection, maintaining and expanding the movement, and its annual performance progress monitoring, evaluation and experience consolidation.

Standards on “green and clean communes/villages” should be promulgated and integrated into activities within framework of the participatory environmental protection movement; annual rewards should be annually presented to qualified communes/villages/towns/households having good records in environmental protection and this can be used as one of the criteria for the Cultural Communes/Wards/Towns/Households awards.

The effect of mass media on public awareness of environmental protection should be maximized. Mass media play a significant role in disseminating information and directing public conception. In order to increase public awareness of environmental protection, the advantage of mass media has to be taken along those lines: develop the production of radio and television programs to convey complete information about citizens’ responsibility for environmental protection; universalize and improve knowledge about the environment; provide information regarding environmental protection; and regularly encourage participatory environmental protection movements and feature best examples of environmental protection activities.

Environmental education must be promoted in schools. The development of knowledge and self-motivation about environmental protection has to start at as early as school age. The promotion of environmental education in schools includes integrating environmental knowledge in a justified manner into the mainstream curricula at different academic levels; encouraging educational institutions to organize activities aimed at building love for nature and for the country among students, especially children in kindergartens, primary and lower secondary schools.

2. STRENGTHEN THE STATE MANAGEMENT, INSTITUTION AND LEGISLATION OF ENVIRONMENTAL PROTECTION

Environmental management capacity should be strengthened for the central level management system including the provision of facilities to ensure its operations, especially environmental inspection and monitoring.

A local environmental management system should be established and developed in the direction of a combined management of natural resources and the environment. Immediately, the provincial Departments of Natural Resources and Environment must be strengthened, and in which environmental management units must be well developed in provinces and cities directly under the Central Government; natural resources and environmental management units should be established at district level, and full time managers in charge of natural resources and environmental management should be staffed at subdistrict level.

Strengthening environmental legislation consists of: completing the system of statutory instruments on environmental protection that clearly define the rights and responsibilities of environmental protection of organizations and individuals, specific sanctions for violation cases, building the contingent of managers, inspectors and supervisors to conduct random and periodical checks and investigations to deal with violations and to ensure the strict enforcement of the Law on Environmental Protection.

The enforcement of laws, including the Law on Environmental Protection, in our country remains weak. For the time to come, it is necessary to improve the enforcement of the Law on Environmental Protection. On one hand, citizens' awareness and self-consciousness about the law are to be built. On the other hand, the monitoring and management of the implementation of the law by the State management agencies need to be further enhanced. Apart from promoting administrative punishment measures, a study should be done soon to look at the application of provisions on environmental criminal investigation as stipulated in Chapter XVII of the Criminal Code.

3. PROMOTE THE INTRODUCTION OF ECONOMIC INSTRUMENTS TO ENVIRONMENTAL MANAGEMENT

Economic instruments are solutions to macro level-environmental management in a market economy, typically used along with administrative and educational and propaganda measures for the same purpose of improving legislative enforcement in the environment sector. These instruments address environmental objectives in a flexible, effective and economical way and offer industries the opportunity to make their optimal choice to fulfill environmental requirements. Research must be promoted in order to gradually apply environmental protection instruments such as taxes and fees; deposit - refund, emission quota and transfer; environmental credits from environmental funds/banks, environmental franchising and other financial incentives or disincentives.

4. HARMONIZE LINKS BETWEEN ECONOMIC DEVELOPMENT, SOCIAL EQUALITY AND ADVANCEMENT, AND ENVIRONMENTAL PROTECTION

To ensure sustainable economic development it is necessary to set the balance between socio-economic and environmental factors, harmonize the environmental protection strategy with the socio-economic development strategy at all levels. This includes integrating of environmental protection into national, sectoral and local socio-economic development strategies in the direction of the introduction of strategic environmental assessment; making necessary adjustments to achieve sustainability, developing environmental management plans and implementing them in parallel to socio-economic strategies; building mechanisms for providing long-term and annual finance for environmental protection on basis of the conception that investment in environmental protection is investment for sustainable development; establishing a coordination agency to ensure the integration of environmental protection into socio-economic development strategies.

5. CREATE SIGNIFICANT INCREASE IN INVESTMENT IN, AND DIVERSIFY FUNDING SOURCES FOR, ENVIRONMENTAL PROTECTION

This solution aims at strengthening and diversifying investments for environmental protection and increasing returns on investment.

Expenditures allocated from the State budget for environmental protection activities must be increased. In order to achieve the Strategy's objectives, between now and 2010, it is necessary to immediately increase the proportion of investment allocated from the State budget and ODA funds in environmental protection. By 2010, environmental investment will increase to 2% of the total State budget expenditures.

All the society's investment sources should be made full use of for environmental protection. By 2010, the rate of investment from social sources will be equal to that from State budget. The seed capital should be increased for the Vietnam Environmental Protection Fund.

ODA funds should be mobilized and effectively used. By 2010, total ODA funds for environmental protection will increase by three folds over the 2000 level.

Funds for environmental protection must be cost-effectively and economically managed, and investments from the funds must aim at the focal point-activities and the ineffectiveness and thinly spread investment must be avoided.

6. ENHANCE SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT CAPACITIES FOR ENVIRONMENTAL PROTECTION

A network of environmental research and development institutions should be further developed. Centers and academic institutions involved in the environmental research and training should be enhanced and further developed to serve as a solid foundation for the improvement of environmental management.

The State and ministerial level programs on scientific research and technological development for environmental protection should be carried out to efficiently serve the State environmental management as well as needs in environmental protection by enterprise community and the whole society.

7. PROMOTE THE SOCIALIZATION OF ENVIRONMENTAL PROTECTION

To successfully achieve environmental objectives for the period between now and 2010 and beyond, it is required that, on one hand, active participation by the public be mobilized and, on the other hand, that direction, organization and strict supervision by the State be ensured during implementation. Socializing environmental protection means mobilizing the maximum participation of the society in environmental protection. Mechanisms of financial incentives and administrative/criminal sanctions must be developed for both Government and private sector participants in environmental protection to make sure they are dealt with equally and appropriately; the role of the Fatherland Front, mass organizations and social groups in environmental protection and monitoring environmental protection activities must be brought into full play; environmental protection should be integrated into routine activities of residential quarters and communities.

Through the socialization of environmental protection, groups or individuals with outstanding performance will be rewarded. The National Environment Award should be annually presented.

8. EXTEND INTERNATIONAL COOPERATION IN THE FIELD OF ENVIRONMENTAL PROTECTION

The national environment is part of the regional and global environment. Thus our national cause of environmental protection is closely attached to the regional and international cause of environmental protection.

International cooperation in the field of environmental protection should be extended in the spirit of respect for and compliance with international conventions to which our country has become a signatory or acceded; external assistance should be maximized for our environmental protection activities; the expansion of regional interactions should be prioritized in the form of bilateral and multi-lateral programs and projects; special attention should be paid to the expansion of mutually beneficial linkages with neighboring countries in the area of environmental protection; dialogues and eventually the establishment of a joint commission on Red River basin management and protection should be initiated.

Cooperation with international organizations such as United Nations Development Program (UNDP), United Nations Environment Program (UNEP), World Bank (WB), Global Environment Facility (GEF), bilateral donor agencies and non-governmental organizations should be strengthened to mobilize their support and use it effectively for environmental protection.

Annual donor forum should be organized to share information and ensure the coordination of funds for cooperative programs/projects in environmental protection and the effectiveness of the use of foreign financial assistance for environmental protection.

PART FOUR

IMPLEMENTATION ARRANGEMENTS

The National Strategy on Environmental Protection until 2010 and vision toward 2020 is an essential guiding document which is expected to have an extensive scope of impact and a rather long timeframe and requires very thorough arrangements for implementation.

1. DIVISION OF RESPONSIBILITIES FOR THE IMPLEMENTATION

1.1. Unified Implementation Arrangements

The Ministry of Natural Resources and Environment (MONRE) shall, as the national focal agency and in collaboration with line ministries and the People's Committees (PCs) of provinces and cities directly under the Central Government (hereafter referred to as PPCs), be primarily responsible for the unified implementation arrangements of the Strategy's activities and solutions.

Line ministries and PCs at all levels, within their respective jurisdictions, shall be responsible for organizing the implementation of those activities and solutions relevant to their own sectors/locations and closely collaborating with MONRE in realizing the Strategy.

MONRE shall organize, in cooperation with line ministries and PPCs, annual evaluations of the Strategy implementation and report to the Prime Minister of the Government. Environmental protection progress should be viewed as an important part of the Government Report to the National Assembly year-end meetings.

1.2. Primary Responsibilities for the Implementation of Strategy's Activities

1.2.1. *Pollution Prevention and Control*

The Ministry of Industry (MoI) shall, in collaboration with line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of activities 3.1.1. "To implement environmental pollution prevention measures in a well matched manner" and 3.1.2 "To formulate, and organize the implementation of, national, sectoral and local pollution control plans to prevent and control pollution sources and remedy environmental degradation."

MONRE shall, in collaboration with line ministries and PPCs, be primarily responsible for organizing the implementation of Activities 3.1.3 "Complete the improvement of the national and sectoral sets of environmental standards, and the adoption of clean technologies and cleaner production." and 3.1.5 "Resolve industries that seriously pollute the environment".

The Ministry of Construction (MoC) shall, in collaboration with the Ministry of Transport (MoT), other line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Activity 3.1.4 “Improve waste management capacity and efficiency”.

1.2.2. Remedy Severe Environmental Pollution and Degradation

MoC shall, in collaboration with MoT, other line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Activity 3.2.1 “Implement projects on the remedy and rehabilitation of heavily polluted and degraded pots, areas and regions.”

MONRE shall, in collaboration with line ministries and PPCs, be primarily responsible for organizing the implementation of Activities 3.2.2 “Remedy environmental degradation consequences of Agent Orange/dioxin used by Americans in the Vietnam War.”

The Ministry of National Defense (MOND) shall, in collaboration with line ministries and PPCs, be primarily responsible for organizing the implementation of Activity 3.2.3 “Responses to environmental incidents and rapidly remedy environmental pollution consequences caused by natural disasters.”

1.2.3. Protection and Sustainable Exploitation of Natural Resources

MONRE shall, in collaboration with line ministries and PPCs, be primarily responsible for organizing the implementation of Activities 3.3.1 “Rational extraction, and sustainable, effective and economical use of land and mineral resources.” and 3.3.2 “Rational water resources extraction, protection and development.”

MoT shall, in collaboration with line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Activity 3.3.3 “Protection of air resources”.

1.2.4. Environmental Protection and Improvement of Focal Areas

MoC shall, in collaboration with line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Activity 3.4.1 “Urban and industrial areas”.

The Ministry of Fisheries (MoF) shall, in collaboration with line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Activity 3.4.2. “Marine, coastal and island areas”.

MONRE shall, in collaboration with line ministries and PPCs, be primarily responsible for organizing the implementation of Activity 3.4.3 “River basins and wetlands”.

The Ministry of Agriculture and Rural Development (MARD) shall, in collaboration with line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Activity 3.4.4 “Rural and mountain areas.”

The Ministry of Culture and Information (MOCI) shall, in collaboration with line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Activity 3.4.5 “Natural and Cultural Heritage.”

1.2.5 Nature and Biodiversity Conservation

MARD shall, in collaboration with MoF and PPCs, be primarily responsible for organizing the implementation of Activities 3.5.1 “Conserve and develop nature conservation areas and national parks” and 3.5.2 “Forest development and increase in vegetation cover.”

MONRE shall, in collaboration with line ministries and PPCs, be primarily responsible for organizing the implementation of Activity 3.5.3 “Biodiversity conservation.”

1.3 Primary Responsibilities for Organizing the Implementation of the Strategy’s Solutions

MOCI shall, in collaboration with the Ministry of Education and Training (MOET), other line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Solution 1 “Promote *propaganda, education, and public awareness of environmental protection responsibility.*”

MONRE shall, in collaboration with line ministries and PPCs, be primarily responsible for organizing the implementation of Solution 2 “Strengthen *the State management, institution and legislation of environmental protection.*”

MONRE shall, in collaboration with the Ministry of Finance (MF), be primarily responsible for organizing the implementation of Solution 3 “Promote *the introduction of economic instruments to environmental management.*”

The Ministry of Planning and Investment (MPI) shall, in collaboration with line ministries and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Solution 4 “Harmonize *links between economic development, social equality and advancement, and environmental protection.*”

MF shall, in collaboration with MPI and PPCs and, in agreement with MONRE, be primarily responsible for organizing the implementation of Solution 5 “*Create significant increase in investment in, and diversify funding sources for, environmental protection.*”

MONRE shall, in collaboration with the Ministry of Science and Technology (MoST), the Ministry of Internal Affairs (MoIA), other line ministries and PPCs, be primarily responsible for organizing the implementation of Solution 6 “*Enhance scientific research and technological development capacities for environmental protection.*”

The Vietnam Fatherland Front as suggested, shall, in collaboration with mass organizations, and central and local associations, be primarily responsible for organizing the implementation of Solution 7 “*Promote the socialization of environmental protection.*”

MONRE shall, in collaboration with the Ministry of Foreign Affairs and other line ministries, be primarily responsible for organizing the implementation of Solution 8 “*Extend international cooperation in the field of environmental protection.*”

2. IMPLEMENTATION PHASES AND PROGRESS

The National Strategy on Environmental Protection to 2010 will be implemented in two phases: 2003-2007 and 2007-2010, and orientation toward 2020.

The implementation of activities of higher urgency, and solutions of more importance and relevance to others, should be prioritized and completed between now and 2007.

NATIONAL STRATEGY FOR ENVIRONMENTAL PROTECTION UNTIL 2010 AND VISION TO 2020
ANNEX: PRIORITY ENVIRONMENTAL PROGRAMS

Program Code	Program Title	Priority Ranking	Completion Date	Implementing & Coordinating Agencies
I. PROGRAMS TO BE IMPLEMENTED				
1. Pollution Control & Prevention				
MT.PK1	Resolving of industries that seriously pollute the environment	Highest	2012	MoNRE, Line Ministries & PPCs
MT.PK2	National hazardous waste treatment	Highest	2010 for 1 st phase	MoNRE, Line Ministries & PPCs
MT.PK3	Medical waste treatment	Highest	2010 for 1 st phase	MoH, Line Ministries & PPCs
MT.PK4	Solid waste management capacity and efficiency improvement in urban & industrial areas	Higher	2010 for 1 st phase	MoC, MoT, Line Ministries & PPCs
MT.PK5	Cleaner production & Environmentally friendly technology adoption in Vietnam	High	2010	MoNRE, MoI, Line Ministries & PPCs
MT.PK6	Incentives for enterprises in environmental protection and international economic integration	High	2010 for 1 st phase	MoTr, MoNRE, Line Ministries & PPCs
MT.PK7	Development & implementation of environmentally friendly technology innovation road-map	High	2010	MoST, Line Ministries and PPCs
2. Remedy of Seriously Polluted and Degraded Environments				
MT.KP1	Rehabilitation of seriously polluted & degraded urban canals, ponds, lakes & river sections.	High	2010 for 1 st phase	MoC, MoT, Line Ministries and PPCs
MT.KP2	Remedy of environmental consequences caused by the American chemical warfare	Highest	2010	MoNRE, Line Ministries and PPCs
3. Natural Resource Protection & Sustainable Exploitation				

MT.BK1	Restoration of seriously degraded watershed forests	High	2010	MARD, Line Ministries & PPCs
MT.BK2	Cau River Basin Environmental Protection	Highest	2010 for 1 st phase	MoNRE, MARD, Line Ministries & PPCs
MT.BK3	Nhue-Day River Basin Environmental Protection	Highest	2010 for 1 st phase	MoNRE, MARD, Line Ministries & PPCs
MT.BK4	Saigon-DongNai River Basin Environmental Protection	Highest	2010 for 1 st phase	MoNRE, MARD, Line Ministries & PPCs
MT.BK5	Urban air quality improvement	High	2010	MoT, Line Ministries & PPCs
MT.BK6	Rehabilitation of seriously degraded typical eco-systems	Higher	2008	MARD, Line Ministries & PPCs
MT.BK7	Environmental restoration of closed mineral mines	High	2010	MoI, MoNRE, Line Ministries & PPCs
4. Environmental Protection of Focal Areas				
MT.KV1	Implementation of National Oil Spill Preparedness and Response Plan	Higher	2010	NCS, Line Ministries & PPCs
MT.KV2	National Targets for Rural Clean Drinking Water Supply & Environmental Sanitation	Higher	2010 for 1 st phase	MARD, Line Ministries & PPCs
MT.KV3	Upgrading of urban drainage systems & construction of centered wastewater treatment systems	Higher	2010 for 1 st phase	MoC, MoT, Line Ministries & PPCs
MT.KV4	Construction of centered wastewater treatment systems meeting environmental standards in all industrial parks	Higher	2010 for 1 st phase	MoI, IPMB, Line Ministries & PPCs
MT.KV5	Protection of wetlands of national importance in Vietnam	Higher	2010	MoNRE, Line Ministries & PPCs
MT.KV6	Natural and cultural heritage conservation & development	High	2010	MoCI, Line Ministries & PPCs

5. Nature & Biodiversity Conservation				
MT.TN1	Improvement of protected area management, protection and development	Higher	2010	MARD, MoF, Line Ministries & PPCs
MT.TN2	Implementation of five million hectare reforestation	Highest	2010	MARD, Line Ministries & PPCs
MT.TN3	Ecological economic village model development & replication	High	2010	MARD, Line Ministries & PPCs
MT.TN4	Protection of highly endangered species of fauna	High	2010	MARD, Line Ministries & PPCs
2. PROGRAMS TO IMPLEMENT SOLUTIONS OF THE STRATEGY				
MT.GP1	Strengthening of the governance of environmental protection at central, local and sectoral levels	Highest	2010	MoNRE, Line Ministries & PPCs
MT.GP2	Improvement and enforcement of the environmental legal system	Highest	2010	MoNRE, MoJ, Line Ministries & PPCs
MT.GP3	Research & development and adoption of economic instruments to environmental protection	Higher	2010	MoNRE, MF, MPI,
MT.GP4	Integration of environmental protection contents into the national educational system	High	2010	MoET, MoNRE, National Universities
MT.GP5	Enhancement of mass media's role in public environmental awareness raising	Higher	2010	MoCI, Line Ministries & PPCs
MT.GP6	Socialization of Environmental Protection	High	2010	MoNRE, Line Ministries & PPCs
MT.GP7	Integration of environmental considerations into socio-economic planning	High	2010	MPI, Line Ministries & PPCs
MT.GP8	Strengthening of scientific research & technological development capacities in environmental protection	High	2010	MoST & Line Ministries
MT.GP9	Enhancement of environmental monitoring and	High	2010	MoNRE, Line Ministries & PPCs

	analytical capacities			
MT.GP10	Involvement of the entire people in environmental protection	High	2010	VNFF and People's Organizations

*Note: **IPMB** = Industrial Park Management Board; **MARD**= Ministry of Agriculture & Rural Development; **MOC**= Ministry of Construction; **MOCI**= Ministry of Culture & Information; **MoET**= Ministry of Education & Training; **MF**= Ministry of Finance; **MoF**= Ministry of Fisheries; **MoJ**= Ministry of Justice; **MoH**= Ministry of Health; **MoI**= Ministry of Industry; **MoND**= Ministry of National Defense; **MoNRE**= Ministry of Natural Resources & Environment; **MPI**= Ministry of Planning & Investment; **MoST**= Ministry of Science & Technology; **MoT**= Ministry of Transport; **MoTr** = Ministry of Trade; **NSC**= National Secure Committee; **PPCs**= Provincial People's Committees; **VNFF**= Vietnam Fatherland Front.*