

I. BASIS FOR THE PROGRAM FORMULATION

1.1. Orientations, policies of the Party, the State and legislations on pollution remediation and environmental improvement.

a. The policy of the Party and State on pollution remediation and environmental improvements

The Party and State have determined protection and improvement of the environment as one of the important contents of the industrialization and modernization of the country. The Resolution No.41/NQ-TW November 15, 2004 of the Politburo, the IXth Party Central Committee, on Environmental Protection in the period of accelerated industrialization and modernization stated the Party's standpoint: "Environmental protection must take the prevention and reduction of adverse impacts on the environment as the key approach, combined with pollution treatment and remedy, environmental improvement and nature conservation". The Resolution set out the target "to prevent and restrict the degree of increased pollution, environmental degradation and problems caused by human activities and natural impacts," and "to remedy environmental pollution, primarily, in severely contaminated areas, and recover the degraded ecosystems, and gradually improve the environmental quality. " The Resolution of the Politburo has also given the tasks of "implementing the environmental improvement and recovery plan in the contaminated and severely degraded areas", and "developing and implementing the national target program on pollution remediation and environmental improvement.

Directive No. 29-CT/TW dated on January 21, 2009 of the Secretariat to continue promoting the implementation of Resolution No. 41-NQ/TW has emphasized the "Implementation the environmental improvement and recovery plan in the seriously contaminated and degraded areas; formulation and rolling-out of the national target program on pollution remediation and environmental improvement".

The XI National Congress of the Party adopted the Strategy of Social and Economic development for the period of 2011 to 2020. The strategy outlined the lesson as *"Giving particular attention to the quality, efficiency and sustainability of the development... harmonizing the relationship between speed and quality of growth"* and further defined *"rapid growth associated with sustainable development is a requirement throughout the Strategy"*. The Strategy has one of the main contents as *"Economic growth must be combined in harmony with social progress and justice; continuously improve the living quality of people; socio - economic development must always go along with environmental protection and improvement "*.

Thus, it can be seen that socio – economic development in association with environmental protection and improvement is a consistent and throughout point of the Party from the Xth Party Congress to date.

b. Legal basis.

To institutionalize the points above, the Government, the Prime Minister have issued a number of programs and action plans on pollution treatment and environmental improvement, such as: in May 23, 2001 Vietnam has signed Stockholm Convention on persistent organic pollutants and ratify the Convention on 22 July 2002, became the 14th member amongst 182 countries to ratify the Convention and the National Implementation Plan for Stockholm Convention (Decision No. 184/2006/QD-TTg dated August 10, 2006); Plan for thoroughly handling the establishments which cause serious environmental pollution (Decision No. 64 / 2003/QD-TTg); a National action plan on biodiversity up to 2010 and orientations towards 2020 for implementation of the Convention of Biodiversity and Cartargena Protocol on Biosafety (Decision No. 79/2007/QD-TTg); master projects on environmental protection for Cau, Nhue – Day river basin and Dong Nai river system (Decision No. 174/2006/QD-TTg, Decision No. 57/2008 / QD-TTg, Decision No. 187/2007/QD-TTg); Plan for treatment and prevention of environmental pollution due to pesticide across the whole country (Decision No. 1946/QD-TTg), etc.

In particular, Resolution No. 22/NQ-CP dated 28 May, 2009 of the Government regarding the issuance of the action program of the government to carry out the decision of the 9th conference of the 10th Party Central Committee on major tasks and measures to further the successful implementation of the Resolution adopted at the 10th National Party Congress, in which directed the formulation and implementation of national target program on environmental protection in order to solve thoroughly the "black point", "hot spots" on the environment. At the tasks No. 220 and No. 226 of the Appendix on the Action Plan of the Government attached to the Resolution No. 22/NQ-CP, the Ministry of Natural Resources and Environment and the Government has been assigned to prepare and submit the Draft of national target program on pollution remediation and environmental improvements

- Decision of the Prime Minister 1946/QD-TTg, October 21, 2010, approving the plan to treat and prevent the pollution from residual of pesticide chemicals across the country. In particular, the Prime Minister directed the Ministry of Natural Resources and Environment to develop the national target program on pollution remediation and environmental improvement, and submit to the Government and the National Assembly for approval in 2011.
- Official Document No. 802/TTg-KGVX dated May 23, 2011 by Deputy Prime Minister Hoang Trung Hai on the formulation of the National Target

Program (NTP) for pollution remediation and environmental improvement, in which to assign the Ministry of Natural Resources and Environment in coordinate with the Ministry of Planning and Investment, Ministry of Finance to urgently formulate and submit to the national target program on pollution remediation and environmental improvement in accordance with regulations.

- Official Document No. 3115/VPCP-KGVX May 17, 2011 of the Government Office on the integration of the master project on environmental protection at 03 key economic areas into the content of the national target program on pollution remediation and environmental improvement that is scheduled to be submitted the Prime Minister for approval in 2011.
- Official Document No. 7280/VPCP-KGVX October 17, 2011 of the Government Office for the preparation of reporting on the national target program phased 2011-2015.
- Resolution No. 13/2011/QH13 dated November 9, 2011 of the XII National Assembly Chapter on the plan for NTP phased 2011 to 2015.

II. CONTEXT AND NECESSITY OF THE PROGRAM

2.1. Actual state of environmental pollution and degradation

Along with the industrialization - modernization and international economic integration, high GDP growth rate in recent years, Vietnam is facing many problems of environmental pollution and degradation. Those issues have caused non-small damages to socio- economic development. According to research results, the total damage due to environmental degradation to the economy over the recent time was, at least, from 1.5% - 3% of GDP. However, the World Bank (WB) pointed that Vietnam has suffered economic losses caused by environmental pollution up to 5.5% of GDP annually. Highly concerned issues of environmental pollution are specified as follows:

2.1.1. Environmental pollution from unhygienic solid waste landfills:
Most targets of environmental protection on solid waste by 2010 that have been identified in the National Strategy on Environmental Protection till 2010 and towards to 2020, and the targets set in the Decree No. 59/2007 / ND-CP of the Government on solid waste management have not satisfied the requirement. According to 2008 statistics of the Ministry of Natural Resources and Environment (MONRE), the total amount of solid waste across the country about 27.9 million tons. According to the Ministry of Construction and Ministry of Natural Resources and Environment, until 2015, the volume of generated solid waste will be of about 44 million tons/year, till 2020 is 68 million tons/year, and till 2025 is 91 million tons/year (2-3 times higher than today). Solid waste generated is growing, but the collection, transportation and treatment of solid waste have not met the requirements. Solid waste collected in urbans of Vietnam is only about 70% compared with the actual demand, and

mainly in large cities. This is an important cause of environmental pollution (surface water, air, soil and urban landscape), and adverse impacts on public health, land-consuming, and not making use of waste solid that can be recycled and reused. The current measure of solid waste treatment is mainly landfill. Each urban has averagely from 1 to 2 landfill (Hanoi and Hochiminh cities have 2 – 3 landfills/treatment areas each). Of these, 85% urban (from the town over) use the unhygienic disposal method.

According to national statistics, there are 98 central landfills in operation, but only 16 of those are considered as hygienic sites (mainly at large cities). At the remaining landfills, solid waste is treated in a sketchy way. Thus, each urban has from 01 to 02 landfill sites that need to be treated, improved and recovered the environment. In accordance with the Plan for thoroughly handling the establishments, which cause serious environmental pollution, approved at the Decision No. 64/2003/QĐ-TTg April 22, 2003 of the Prime Minister (hereinafter referred to as Decision No. 64/2003/QĐ-TTg), until in 2003, there have been 52 landfill sites that were in serious environmental pollution and must be dealt with. To date, only 17 landfills have completed thorough treatment, 9 landfills have been under treatment process, and other 26 landfills still remain untreated and are generating serious environmental pollution, leading great concerns to the people's lives.

A major cause of this pollution is: socialization, privatization in the collection and processing of solid wastes are still limited; fund for management of solid wastes is constrained; the principle of "polluters pay" has not yet carried out thoroughly; research and application of recycling, reuse and treatment technology of solid waste are weak.

Lessons of developed countries show that environmental pollution is so long as the remedy and treatment more difficult, expensive and consequently, their impacts on the environment and people are growing; thus, to solve the problem of environmental pollution caused by solid waste and unhygienic landfills, the State should focus its resources and finance to promptly handle the pollution, rehabilitate and recover the environment in areas contaminated by the unhygienic landfill.

2.1.2. Pollution in industrial zones/clusters

According to local reports, the total number of industrial zones/clusters established by the People's Committees of centrally-run provinces/cities was established 1685 industrial zones/clusters, with total area of 76,100 ha. Additionally, up to 2009, there were 249 industrial zones decided by the Prime Minister with the total land area of 63,173. The occupancy rate of active industrial zones (IZs) has reached 48%. However, only about 50% of the active IZs have the central wastewater treatment facility (including the ineffective

systems). As a result, approximately 70% of more than 1 million m³ wastewater per day from the IZs discharged directly to receiving sources without any treatment has caused serious impacts to the aquatic environment on a large scale. The areas most affected are Cau, Nhue – Day river basins and Sai Gon – Dong Nai river system.

According to statistics in 2008, the volume of industrial solid wastes generated nationwide was approximately 4,786,000 tonnes/year, in 2015, it is forecasted to increase nearly 10 million tonnes/year. Solid wastes generated by industrial parks/clusters have become bigger in quantity, more diverse in toxic feature, while the collection, operation and proper treatment, especially with hazardous waste, have still shortcomings.

The main cause of environmental pollution in industrial zones/clusters is the management and the investors of industrial zones have not strictly complied with the mandatory requirements for environmental protection before operation; the owners of manufacturing establishments and business in industrial parks/clusters have not fully obeyed legal provisions on environmental protection as well as not seriously carried out its environmental protection commitments and approved EIA; checking and handling of violations on environmental protection in the industrial areas/clusters have not yet strictly implemented and remained the formality because those areas were established by the State; laws, policies and mechanisms to protect the environment in local economic areas/industrial clusters are not consistent and overlapping.

2.1.3. Environmental pollution in craft villages:

According to latest statistics of the Vietnam Environment Administration, as of May 01 in 2011, there are about 2,500 villages throughout the country, in which the number of traditional villages that have been recognized is more than 1,200 villages. The villages are not evenly distributed between regions, and characteristics of the village are also not the same. Villages are mostly concentrated in the Northern plains, accounting for 67.3%, (mainly the provinces of Bac Ninh, Hung Yen, Ha Noi, Thai Binh, Nam Dinh ...), the remaining is in the central region, 20.5% (Quang Nam, Thua Thien Hue, ...) and in the South with 12.2% (Dong Nai, Binh Duong, Can Tho, ...).

Operation of the village has been creating a tremendous pressure to environmental quality in the village area. Most villages have small production scale, manufacturing grounds are narrow, interspersed with living areas; production processes are primitive, backward, labor intensive, no application of technical and scientific advances in production, leading waste of resources and increasing contaminated wastes, giving direct impacts to the environment, living conditions and health of people. In addition, rural infrastructure such as roads, drainage systems ... do not meet the massive development of production, waste is not collected and treated, resulting in many villages significantly

polluted, landscape broken to make room for production premises and area for storing waste.

According to the national report on environmental state 2008 - Environment of Vietnam craft villages (Ministry of Natural Resources and Environment), environmental quality in most production areas at the villages did not meet the standard. The risk that workers exposed to the pollution is relatively high: 95% of workers exposed to dust, 86.9% exposed to heat, and 59.6% to chemicals.

Considering the typical features of pollutants in wastewater of each production type, it can be classified water environment pollution of the village as follows: (i) organic waste pollution in the villages on food processing, animal husbandry and slaughter. This type of production has great demand for water and its wastewater has very high concentrations of organic pollution. As calculations, at Duong Lieu starch village, to produce 52,000 tons of products per year, it will emit 3,050 tons COD, 934.4 tons BOD₅, 2133 tons SS,... (ii) Inorganic pollution mainly takes place in the textile villages, handicraft and rattan and bamboo, recycling paper also generates wastewater with great levels of residues and containing many contaminants such as solvents, chemical residues generated in the process of dyeing, polishing, and at recycling villages, in wastewater emitted by plating and metal recycling process, the content of toxic heavy metals is over the standard a dozen times.

Currently, environmental pollution caused by smoke, dust, is mainly happening in the villages of pottery, porcelain, construction materials, quarrying, wood furniture and handicrafts. For the recycling villages, sources of air pollution are dust containing heavy metals and dust from toxic materials. Da Hoi – Bac Ninh recycling village discharged 2457 tons of dust per year, 81 tons CO a year, 2894.4 and 2359.8 tons SO₂/year NO₂/year respectively. In some villages processing food, animal breeding and slaughter, odor pollution is generated. Decomposition of organic matter in wastewater and organic substances in waste products generate emissions such as SO₂, NO₂, H₂S, NH₃... gas creates bad and unpleasant odor, like leather drum village in Lam Yen (Dai Loc, Quang Nam).

A major reason of environmental degradation in craft villages is the backward technology; production scale of these villages is just individual households, lack of finance and technology to invest in the environmental protection works, pollution treatment facilities; the role of local governments in environmental protection in villages has not been paid adequate attention, not consistent and effective; legal documents on environmental management in craft villages have not been concrete and conformity with production characteristics.

2.1.4. Environmental pollution caused by pesticide residues

According to survey results and statistics of the Ministry of Natural Resources and Environment and reports of the People's Committees of provinces and centrally-run cities on the areas contaminated by pesticide chemical residues remained since the period of centrally-planned economy subsidy, war time, unknown sources or smuggled (hereinafter referred to as the polluted points caused by chemical pesticides residues), as of December 31, 2009 there have been 1,153 points polluted by pesticide residues, including 289 stores and 864 polluted sites caused by pesticide residues in 38 provinces and centrally-run cities, namely Cao Bang, Hai Duong, Ha Nam, Nam Dinh, Thai Binh, Ha Giang, Lai Chau and Lang Son and Tuyen Quang and Thai Nguyen, Phu Tho, Bac Ninh, Bac Giang, Quang Ninh and Dien Bien, Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Da Nang, Quang Ngai, Binh Dinh, Can Tho, Khanh Hoa, Dong Thap, Ho Chi Minh City, Phu Yen, An Giang, Kien Giang, Long An, Ba Ria - Vung Tau, Bac Lieu, Tien Giang, Yen Bai, Ben Tre, Binh Thuan, and Dak Lak. Specifically, the environmental pollution caused by pesticide residues is as follows:

a) For the storage of pesticide residues

289 storage facilities of pesticide residue are primarily for temporary storage, and were built from 1980 and earlier. Construction of those stores did not pay attention to structure and foundation. Currently, they're containing about 217 tons of chemical pesticides in powder form; 37,000 liters of chemical pesticides and 29 tons of packaging (including many types of packaging, bottles, drums containing chemicals and pesticides unlabeled, non-origination). Chemicals are mainly: DDT, basal, Lindan, rat, cockroach, mosquito of China, Vinizeb-Echo, Xibuta, Kayazinno, Hinossan, ... so, the soil contamination at the store is inevitable. Moreover, to date those warehouses have not been repaired and reinforced, so all have been in serious degradation, floor and wall were cracks, roofs have been damaged, dilapidated, many of them have no windows, doors were temporarily fixed; no drainage systems so rainfalls brings all pesticide residue to ambient water environment, affecting water supplies for the people living in the region. The average distance between the stocks and residential areas are from 10 - 50m, 700m as the farthest.

Most of pesticide chemicals in the stores are toxic, prohibited for use, poor quality, packaging with holes and unlabelled, so pesticide residues is easy to leak and disperse into the environment, polluting soil, water and affecting livings of local community.

Through analysis of the samples of 59/289 pesticide residue stocks and surrounding areas of those warehouses, levels of Lindan ranged over from 3 to 1025.9 times, levels of DDT exceed from 5 to 20,500 times compared with QCVN 15:2008 /MONRE. In addition, in accordance with the Circular

07/2007/TT-BTNMT dated July 3, 2007 of MONRE on guiding the classification and determination on the list of environmental polluted establishments that need to be treated; Decision No. 16/2008/QĐ-BTNMT dated December 31, 2008 of the MONRE on promulgation of national technical standards on environment, and analysis results showed that 51/59 pesticide storage facilities caused severe pollution, including the provinces of Ha Giang, Tuyen Quang, Thai Nguyen, Lang Son, Hai Duong, Bac Giang, Nam Dinh, Quang Ninh, Nghe An, Ha Tinh, Quang Binh and Quang Tri; 08/59 stocks caused pollution on environment in the provinces: Ha Giang, Thai Nguyen, Nam Dinh, Nghe An, Quang Binh, Da Nang. The remaining 230 facilities have not been investigated, assessed and determined on pollution levels.

b) For the area environmentally contaminated due to pesticide residues

At 864 site of pesticide chemical residue, about 23.27 tons of pesticides are buried, mainly including: DDT, basal, Lindan, mosquitoes, cockroach, and rat-killing chemicals of China, 666, Volphatoc, Vinizeb, Echo, Xibuta, Kayazinno, Hinossan, Viben-C, Ridostar ... and various types of chemical packaging no labels, unknown sources. The buried chemical pesticides existed in many different forms, but mostly in the form of powder, tubes, and even drums containing pesticide liquid. The areas polluted by pesticide residues are located very close to residential areas. The determination of the exact amount of pesticides that were previously buried, and the land area contaminated by chemicals and pesticides is difficult because those areas were previously also the former pesticide storage, long used in the war and subsidy time, then warehouse were destructed and pesticides has been buried unsafely. The more concern is many areas of pesticide residues storage have been converted to other purposes, namely: 251/864 areas have been converted to housing; 14/864 areas have been rebuilt to kindergardens and schools; 26/864 have been converted to headquarters of People's Committees of communes, cultural houses, roads, fish ponds, cemeteries, garages, sporting grounds ... However, the environment in these areas is still contaminated, especially when the weather changes, people living around the area suffer the smell of pesticides. According to soil analysis in 276 sites, the level of DDT exceeded QCVN 15:2008/BTNMT from 1 to 14,438.7 times. Pursuant to Article 92 of the Law on Environmental Protection and Decision 16/2008/QĐ-BTNMT December 31, 2008 of the Minister of Natural Resources and Environment on promulgation of the national technical regulations on environment, and analysis results showed that: 189/276 areas of pesticide residue caused serious and particularly serious pollution in the provinces of Yen Bai, Tuyen Quang, Thai Nguyen, Bac Ninh, Bac Giang, Nam Dinh, Quang Ninh, Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri; 87/276 pesticide-polluted areas are located in the provinces of Thai Nguyen, Thanh Hoa, Nghe An, Ha Tinh, Quang Binh. The remaining 588

areas were positioned but not yet evaluated the extent of environmental pollution.

To address environmental pollution caused by pesticide chemical residues, in October 21, 2010 The Prime Minister issued Decision No. 1946/QĐ-TTg approving the plan for pollution prevention and treatment induced by pesticide residues on a national scale. Accordingly, from 2010 to 2015, it will focus on treatment, improvement and recovery of the environment at 240 points causing serious and particularly serious pollution in 15 provinces and cities. From 2016-2025, it will further investigation, treatment, improvement and rehabilitation of the environment at the remaining 95 sites of the nine provinces, cities. It can be foreseen that treatment and restoration of the environment of all areas contaminated by pesticides on a national scale until 2025 will be a great effort of the Government. The difficulties encountered include treatment technology and fund mobilization, central direction of the entire Party, Party, people and armed forces to deal definitely with pesticide-polluted areas that are directly affecting social safeguard, public health and to the future generations.

2.1.5. Environmental pollution in the residue of agent orange/dioxin:

During the war in Vietnam, U.S. forces have used 77 million liters of herbicides and defoliants. Among those substances, agent orange accounted for nearly half of total use, contained dioxin, an extremely toxic substance ecological and human health. According to calculations, about 366 kg of dioxin was dispersed into the environment along with the spraying of herbicides. Concentration of dioxin in soil in southern Vietnam is relatively large and is divided into two contaminated areas: the sprayed area (about 2.63 million ha, throughout the South) and the military airport. Dioxin contaminated area is not large, but levels of dioxin in soil is very high, elsewhere up to 365,000 ppt TEQ. Currently, there are 03 areas where soil environment is seriously and widespreadly contaminated by dioxin, directly affecting the local community and soldiers, namely airport area, Bien Hoa - Dong Nai Airport, Phu Cat - Binh Dinh airport and Da Nang airport. In addition, many areas are contaminated by dioxin chemical such as A Sau - A Luoi of Thua Thien Hue, ...

Given this situation, the Government established an Office of Dioxin Steering Committee at the Ministry of Natural Resources and Environment (Office 33) to address the consequences of toxic chemicals used by the U.S. during the war in Vietnam. In recent years, the Office 33 has implemented efforts to mobilize financial resources and search for technical solutions from both domestic and abroad to radically treat environmentally contaminated areas. The State had provided funding to initially prevent the dioxin pollution from affecting to other areas, while some foreign-funded projects have been developed and initially deployed to apply the advance technology in environmental treatment and restoration. Notably, the U.S. government has committed to supporting Vietnam

in finance and technique, equivalent a budget of \$ 30 million for thorough treatment of the environment at Da Nang airport. However, in order to thoroughly tackle with the areas contaminated by toxic chemicals during the Vietnam War until 2020 (according to the objectives of the National Strategy for Environmental Protection until 2010 and towards 2020), Vietnam should endeavor to mobilize domestic and international financial resources, and immediately, it should focus on treatment of dioxin pollution at Bien Hoa (Dong Nai) airport and Phu Cat (Binh Dinh) airport.

2.1.6. Environmental pollution in river basins:

According to statistics, the total reserve of surface water of Vietnam is around 830 to 840 billion m³, of which over 60% is originated from abroad. Hence, Vietnam is a country dependent on water sources from abroad. However, the inefficient use and waste from socio- economic development activities are now polluting all inland rivers, led to the security of water resource becomes a top threat in the current period. Most of the downstream areas, water was polluted, somewhere became serious. The reason is that the waste water of production facilities, businesses and untreated domestic wastewater or unmet standard wastewater have been and being discharged directly into rivers. Many indicators such as BOD, COD, NH₄, total N, total P and bacteria have concentration higher than permitted standards many times, affecting the people's health and lives, especially in places that are using the water for living activities. The MONRE's statistics in 2009 in 03 river basins (Dong Nai river system, Nhue and Cau River) shows:

- In the basin of the Dong Nai river there are up to 103 industrial zones (IZs) (established by the Government, not including industrial parks/clusters established by local authorities) with a planned area of 33,600 hecta, usable area of 18,200 ha, but only 8,700 ha in lease. . Of these, about 1/3 of industrial zones/export processing zones have and have been being built central wastewater treatment systems. Amount of industrial wastewater discharged into Dong Nai river basin is about 1,832,854 m³/day; domestic wastewater discharged into the river is about 2,732,436 m³/day. N-NH₄ + concentration measured in Dong Nai River exceeded QCVN type A1, approximation to B1 threshold, the value of BOD₅, COD approximated to the standards. At the Saigon River, the concentration of N-NH₄ + exceeded QCVN type A1, even exceeded B1 many times, the values of BOD₅, COD at various positions were exceeded QCVN type B1.

- Nhue – Day river basin receives averagely: 2,554,000 m³/day of wastewater from cultivation, husbandry and handicraft villages; 610,000 m³/day of domestic wastewater; 232,000 m³/day of industrial wastewater. Water quality in many river basins were polluted to an alarming level, especially in the dry

season, the value of the parameters BOD5, COD, Coliform ... at measurement points are all exceeded several times QCVN 08:2008 type A1 .

- The Cau River basin: local pollution happened due to activities of industrial development, domestic wastewater, craft village and health activities. At the measurement points on the river that flows through Thai Nguyen city, the value of monitored parameters are over QCVN many times, the river clearly smell oil. Cau River flows through the Bac Giang, Bac Ninh, river water quality in the downstream (flowing through Bac Giang and Bac Ninh) of the Cau River is affected by the receipt of the water Ca Lo river in Bac Giang and Ngu Huyen Khe river in Bac Ninh, pollution degree tends to decline over the years, but only meet the water quality standards QCVN 08:2008 type B2. Ngu Huyen Khe river is one of typically serious pollution in Cau river basin due to activities of production facilities and especially, the craft village spanning from Dong Anh, Ha Noi, to Van An culvert of Bac Ninh. Organic pollution in the river water, the content of nutrients at all positions is higher than QCVN 08:2008 type A1.

Coastal water showed signs of contamination. Content of organic matters, heavy metals, pesticides in some areas exceed the permitted standards. Oil content in sea water tends to increase due to rapid rise in oil spills.

The protection of water and aquatic resources and natural resources in river basins, the sea and islands is very important and urgent for the country's economics and politics. Therefore, in recent years, the Party and the Government have taken various measures to prevent and minimise pollution as well as develop resources in river basins, the sea and islands ... However, the implementation process has faced many difficulties and obstacles, and proved ineffective. The pollution remedies and environmental improvement in river basins and coastal areas need huge investment and synchronous solutions between the central and local levels as well as among localities but investment sources for this work are still insufficient and the management system of pollution causing objects between ministries, branches and units in each locality is overlapping. Therefore, the water pollution remedy and the improvement of water quality in river basins and coastal areas remain major challenges in the coming time.

2.1.7 Air pollution

The quality of air environment in recent years in our country is showing signs of declining. The most noteworthy is that the dust pollution, especially in urban areas, is becoming more and more serious. However, most pollution parameters measured are still under the permitted levels, except some cases of partial pollution in concentrated areas in many old production facilities and industrial zones.

Sources of air pollution are diverse. For the air environment in urban areas, pollution pressure is mainly from energy generation and industrial activities, transport vehicles, construction, and waste treatment activities. In rural areas, air pollution derives from agricultural production activities, craft villages' operations and daily activities...At present, the largest and strongly developing waste source threatening the environment is transport activities, which are estimated to account for about a third of the country's total emissions. Industrial production sectors in our country are very diverse and the compositions of gas emissions into the environment are also different. The main source of air pollution from industrial activities is the manufacturing of products from non-metallic minerals (mainly construction materials production), production of food and beverages, and metal products, timber production and processing of forest products, and furniture and paper production. Agricultural production activities such as the use of chemical fertilizers and pesticides are spreading harmful acidic and alkali gas emissions to the environment.

An overall assessment on air pollution developments in the near future shows that dust pollution will continue increasing and is the most worrying problem in urban areas today. The levels of dust pollution in the air around areas are significantly different and the highest levels are seen in areas with dense traffic density and at intersections. In addition, for infrastructure construction sites, the concentration of dust suspended in air is higher than the allowed level. However, this type of pollution only occurs in certain stages and certain places. When infrastructure construction activities come into stabilisation, the air pollution concentration will decrease significantly.

2.1.8. Degraded eco-systems:

Most ecosystems in Vietnam are subject to heavy pressure from unplanned, small-sized and asynchronous socio-economic development activities, which are making all of them degraded.

Quality natural forest area is narrowed: Currently, the area of rich forests with high biodiversity has sharply decreased. Areas with the largest reserves and the highest quality in Vietnam, such as the Central Highlands, north central and southeast regions, continue to decline in the structure, making the forest structure broken.

Coral reef coverage decreases: The results of surveys conducted in 142 coastal areas in Vietnam from 1994 to 1997 showed that only 1 percent of coral reef areas was rated as in very good development condition, 26 percent in good condition, 41 percent in average condition and 31 percent in poor condition. Live coral coverage on reefs in some areas distributed mainly in coastal Vietnam sharply declined.

The area of mangroves declines rapidly: The total area of mangroves in the country is only about 155,290 ha, reducing 100,000 ha compared to 1990 and continuing to decrease rapidly. Natural and primeval mangrove forests are almost bare. Statistics show that previously the mangrove area in the Mekong Delta was about 250,000 ha. Then, partially due to the war (about 120,000 ha of mangroves were destroyed by the US's toxic chemicals), a large area of mangrove forests was exploited for fuelwood and destroyed to build shrimp farms and grow rice. Until 1998, the Mekong Delta only had about 77,000 ha of mangrove forests with poor quality, mainly in Ca Mau province.

Wetland ecosystems are disappearing: Estuarine ecosystems affected by pollution due to industrial production and daily activities, dredging, dam construction, destructive fishing methods and loss of coastal habitats. Many wetlands and interspersed forests spanning millions of hectares in the deltas have become rice fields and shrimp ponds, and served other uses of humans. The remaining wetlands are small-sized, isolated and not suitable for agricultural production, and mainly affected by acidity ... The wetlands are also under pressure by human activities, and face the risk of further degradation, even total loss.

The major causes of the above situation are the unreasonable and unscientific conversion of purposes of using land in ecosystems, the overexploitation and unsustainable use of organism resources; the impacts of environmental pollution and the invasion and destruction of some invasive alien species and negative impacts of climate change.

Recognising the importance of biodiversity and ecosystems, the State, ministries and branches have actively promoted a number of activities to conserve biodiversity. The biodiversity conservation has been included in the State's plans and strategies, such as Agenda 21, the national environmental protection strategy till 2010 and orientations by 2020, and the national conservation area protection strategy by 2010 ... Particularly, the document with the highest legality is the Biodiversity Law, which was passed at the 12th National Assembly session in 2008 and took effect on July 1, 2009. However, as mentioned above, shortcomings in management, economic development pressure, environmental pollution and climate change have led to more serious biodiversity degradation.

2.2. Assessment of shortcomings in pollution remedies and environment improvement

The above situation proved that environmental pollution has become more serious and more hot points and polluted areas appeared. According to assessments by the World Bank (WB), Vietnam may suffer economic losses caused by environmental pollution estimated at about 5.5 percent of annual GDP. Economic losses occurred due to the increase in disease burden and the decline in health of the labour force. Besides, environmental pollution is causing

serious impacts on aquaculture, agricultural productivity and other activities such as tourism ...

In recent years, pollution treatment and improve environmental improvement have attracted concerns and some related works have been conducted. However, works are still insufficient and hereafter are details:

2.2.1. Works on pollution treatment and environmental improvement did not meet the requirements:

a) On the plan to thoroughly handle establishments which caused serious environmental pollution under the Prime Minister's Decision No. 64/2003/QD-TTg on April 22, 2003: the plan has two phases with the first phase completed in 2007, handling 439 establishments caused serious pollution. Those establishments were entitled in Appendix 1 and 2. The plan's first phase also helped build and perfect relating mechanisms and policies in order to build a legal framework for strict treatment of heavy polluters. Basing on that result, in the second phase (2008 - 2012), ministries, sectors and localities treated 3,856 remaining listed heavy polluted establishments and newly-arisen ones. On the treatment process, 338 out of 439 heavy polluted establishments or 77 percent completed their remedial measures and 101 establishments (23 percent) are under treatment process. Hereafter are details:

- Sixty-four of 84 hospitals and medical establishments, making 76.2 percent under Decision No. 64/2003/QD-TTg stopped causing serious environmental pollution, while 20 hospitals and medical establishments (23.8 percent) are in pollution treatment processing.

- Twenty-five of the total 52 landfills under Decision No. 64/2003/QD-TTg stopped causing serious environmental pollution, accounting for 48.1 percent and 27 landfills or 51.9 percent are in treatment processing.

- Twelve of 15 backlog pesticide warehouses (80 percent) under the Decision 64/2003/QD-TTg basically stopped causing serious environmental pollution and 03 warehouses are implementing thorough treatment of pollution, accounting for 20 percent.

- Of the 04 areas with residues of toxic chemicals during the war (01 bomb depot, 01 area with CS residues, 02 areas with residues of dioxin), 02 areas (01 bomb depot, 01 area with CS residues) or 50 percent were granted certificates of completion of strict treatment measures and 02 areas with residues of dioxin (50 percent) are under process of pollution treatment.

- Three of the total 15 craft villages under Decision No. 64/2003/QD-TTg basically not cause serious environmental pollution, accounting for 20 percent, 12 craft villages are implementing treatment of pollution, accounting for 80 percent.

- All 04 concentrated urban waste water treatment establishments in northern Hai Duong and Dien Bien province and central Thanh Hoa and Quang

Ngai province are implementing strict measures of environmental pollution treatment. No establishment has completed the treatment yet.

Strict treatment on 439 establishments listed in Appendix 1 and 2 of Decision No. 64/2003/QĐ-TTg has not completed as scheduled. The major reasons are: funding from State budget for public establishments was limited and did not meet the actual requirements. From 2006 to now, the central budget only reached 75 projects valued at 236.118 billion VND to strictly treat pollution, meeting only 10% of the demands. Mechanisms and policies to support the treatment of environmental pollution were promulgated, but taking effect slowly. Moreover, documents on land policies revealing limitations and shortcomings; some localities were not active in seeking for funding, still waiting for assistance from the central budget; the country's technology for treatment of environmental pollution is still poor.

b) On environmental protection in 03 three river basins (Cau River, Nhue-Day Rivers and the Dong Nai River system): as water pollution is increasing, affecting water source's security of the country, the Prime Minister has directed to build and promulgate a master plan to protect the environment in the basins of the Cau River, the Dong Nai River system, and the Nhue - Day Rivers according to Decision No. 174/2006/QĐ-TTg on July 28, 2006 on approval of the master plan for sustainable protection and development of the eco-environment of the Cau River basin, Decision No. 187/2007/QĐ-TTg by the Prime Minister on December 03, 2007 on approval of the project to protect environment in the basin of the Dong Nai river system by 2020, Decision No. 57/2008/QĐ-TTg dated April 29, 2008 by the Prime Minister on the approval of the Overall Scheme of environmental protection in the basin of the Nhue-Day rivers' system by 2020. Under the approved scheme, by 2012, increasing pollution in the basin of the Cau River will be absolutely prevented; by 2010, effectively improving the quality of environment and water of the Dong Nai River system; preventing and fighting the degradation of water resources of the Nhue - Day River by 2015, implementing measures to improve water at some heavy polluted areas and river section. The scheme is aimed at recover the natural environment of the Nhue-Day River and its basin.

In implementing the above-said task, the Ministry of Natural Resources and Environment in collaboration with ministries, ministerial-level agencies and People's Committees of provinces/cities in the rivers' basins to carry out activities to treat pollution and improve the environment, build plans to protect the environment in river basins by 2015 and orientation until 2020, speed up the implementation of projects to collect and treat waste water from urban areas, craft villages, industrial/export processing zones. However, the implementation were slower than the government's requirement. Even, many areas in the river basins are seen increasing pollution, especially in the Nhue-Day River and Dong Nai river system. Main reasons include: investment for environmental management and protection, pollution treatment and improvement from the central budget and localities of the basins was limited. Investment for

environment protection in localities was taken from 1 percent of the State budget. Allocating funds from 1 percent of budget for environment works of provinces and cities has no participation and guidelines of professional bodies (Departments of Natural Resources and Environment); staff working on the environment in cities and provinces was lack and saw weakness in management capacity, not meeting the practical requirements of increasing pollution; the implementation of building practical projects in localities did not receive adequate attention; inspection, examination and treatment of violations of the law on protection the environment did not strictly and drastically.

c) Pollution remedies and environment improvement in areas contaminated by pesticide residues and dioxin toxic chemicals: environmental pollution caused by pesticide residues and dioxin toxic chemical have been affecting the environment and threatening people's health. Over the past years, Party and State paid much attention in environmental protection, surmounted environmental depression and improved the environment, especially at areas affected by chemical residues, particularly pesticides. In detail: on March 1, 1999, the Prime Minister issued Decision No. 33/1999/QĐ-TTg on the establishment of the National Steering Committee for overcoming consequences of toxic chemicals used by the U.S. in the war in Vietnam; on July 22, 2002, the President approved the participation in the Stockholm Convention on elimination of persistent organic pollutants, pesticides; in 2007, the National Assembly promulgated the the Law on Chemicals, assigned the Ministry of Natural Resources and Environment to coordinate with ministries, sectors and People's Committees of cities and provinces to treat and discharge chemical residues, waste and chemical containers in accordance with the Law on Environmental Protection and build plan to treat areas/warehouses of pesticides, which polluted the environment, and areas with chemical residues during the war to submit to the Prime Minister; in 2009, the Party Central Committee's Secretariat issued Instruction No. 29-CT/TW on speeding up the implementation of Resolution 41-NQ/TW of the Politburo (the 9th tenure) "On environmental protection in the period of speeding up national industrialization and modernization", which directed the ministries, sectors and localities to implement plan to recovery and improve the environment in heavy polluted and degraded areas; Prime Minister's Decision 1946/QĐ-TTg dated October 21, 2010 on approval of the Plan to treat and prevent environmental pollution by pesticide residues across the country.

In implementing the above-mentioned decisions, in recent years, the Ministry of Natural Resources and Environment, in coordination with ministries, sectors to assess the areas and level of pollution and handled environmental pollution caused by pesticide residues and dioxin. In detail: 15 areas of pollution by pesticide residues under Decision 64/2003/QĐ-TTg was treated; scale and level of pollution in 335 areas under the Decision 1946/QĐ-TTg with pesticide residues across the country were assessed; zoning off,

isolating and handling dioxin polluted points in Da Nang; assessing scale and level of dioxin pollution at Bien Hoa and Phu Cat airports to build a plant to thoroughly treat pollution at these areas; preventing dioxin pollution at Dong Son commune, A Luoi district (Thua Thien-Hue province); the Part and State always pay interest and hold many large-scale activities for victims of toxic chemicals, the main object of the task to overcome the consequences of toxic chemicals. The Vietnamese Government provides monthly allowances of about 300,000 VND per person or 60 billion VND (equal to 4 million USD) a month to over 200,000 victims of toxic chemicals.

The above results were initially helped reduce the impacts of pesticide and dioxin residues on people's health and the environment. However, the actual works on treatment, improvement and and restoration of the environment in areas with pesticide, dioxin residues still met difficulties and challenges. Details are:

Firstly, the current legal mechanisms and policies for pollution treatment and environment improvement have not been completed. In details: the Law on Environmental Protection in 2005 includes only two articles stipulated pollution treatment and environment improvement (Article 92 and Article 93). Moreover, there are no regulations concerning treatment process, economic and technical norms and financial allocation for the pollution treatment and environment improvement. Therefore, localities faced many difficulties and challenges in implementation of their works.

Secondly, financial resources for pollution treatment and environment improvement in areas with pesticide residues in localities are mainly from annual allocation of State budget for environmental works, which can not afford those works. In addition, pollution treatment and environment improvement at "hot point" of dioxin toxic chemicals demands huge funds.

Thirdly, the country's technology for pollution treatment and environment improvement is still poor. The construction of waste treatment systems required to master and apply appropriate technologies to ensure low cost, efficiency and technical standards for environment of Vietnam. Some sectors and specialised fields are having difficulties in selecting and applying appropriate models for pollution treatment like decontamination technology for pesticide warehouses and pollution treatment in craft villages...

2.2.2. Funding for pollution treatment and environment improvement did not meet practical requirement:

In comparison with other countries in the region and the world, Vietnam's investment in environmental protection in Vietnam is very small.

Since 2006, the National Assembly approved the allocation for environmental works and give not less than 1 percent of the the total budget

spending for this funding. In 2010, allocation for environmental works was 6,230 billion VND, of which 5,250 billion VND was injected in localities and 980 billion VND in ministries and central agencies.

As a regular spending, funding for environmental works mainly focussed on State management on environmental protection, such as building legal mechanisms, policies and database on environment protection, monitoring, raising people's awareness on environmental protection, etc.; The funding did not help pollution treatment and environment improvement.

In fact, the use of this funding eyed many shortcomings, especially in localities, which receives up to 85 percent from the total funding for environmental works. The localities use the funding without focus. Except the two major cities of Hanoi and Ho Chi Minh City, most of the localities spent up to 80 percent-90 percent of the total funding on collection and transport of daily life waste, leading to no more funding for other activities of environmental management. Investment in pollution treatment and environment improvement was almost not interested. Some localities just use the funding to make surveys and plans for treatment, improvement and recover the environment. Many other localities have not allocated enough 1 percent of budget for environmental works; spendings not following the guidance by the Environmental Protection Law and Circular No. 114/2006/TTLT-BTC -BTNMT (now Circular No. 45/2010/TTLT-BTC-BTNMT).

Investment in environmental protection has not attracted adequate attention. Currently, the funding is mainly poured in raising capacity building infrastructure and facilities for a number of laboratories, observatories, to serve the State management on environmental protection. Investment in building waste treatment plants, pollution treatment and environment improvement mostly not implemented yet. Only some localities across the country used ODA loans to build hygienic solid waste landfills (Quang Binh and Hanoi). However, the funding was still modest.

In comparison with other countries in the region, 1 percent allocation from the State budget for environmental works was very small while the average rate in developing countries reach 3 percent-4 percent.

2.2.3. State management in environmental protection still has shortcomings, leading to the risk of arising newly polluted points and environmental degradation:

2.2.3.1 Legal document system on pollution treatment and environment improvement is deficient and not synchronous. Section 2 of Chapter 9 of the Law on Environmental Protection 2005 includes two Articles on pollution treatment and environment improvement defining “basis for environmental polluted areas” and “pollution treatment and environment recovery”. This is an important legal basis for pollution treatment and environment improvement.

However, some points are not appropriate in the implementation process. Particularly, after a period of implementation, the Law on Environmental Protection reveals some inadequate points namely the criteria to define polluted areas are not suitable with the target for pollution treatment and environmental restoration. Furthermore, the law stipulates detailed regulations for protection of water and air environment but no regulations on protection of land environment. Therefore, the amendment and supplement the Law on Environmental Protection must adhere to the Party and State's guidelines on environmental protection work. Details are: ensuring the sustainable development in harmonious combination between the use and protection of natural resources with environmental protection; the polluters must pay; treatment of pollution at source, and encourage environmental protection for all the community; boosting the use of economic instruments in environmental protection, including the application of fees, environmental taxes and emissions rights; the legal documents on environmental protection must ensure comprehensive, unity, synchronous, table and compatible with international laws and ensure the viability of the law. The amendment and supplement the Law on Environmental Protection must be in line with the completion of legal documents in related areas.

In addition, pollution treatment and environmental improvement has been incorporated into programmes, plans and strategies like the Solid Waste Management Strategy by 2025 and vision till 2050, which includes the program on restoration of the environment in the unhygienic landfills; projects on environmental protection in 03 major river basins (Cau River, Nhue-Day River and Dong Nai river system) also refers to river sections of heavy pollution. However, pollution treatment and environmental improvement have not yet gained significant results. One of the fundamental reasons is there is no regulations and specific technical guidelines for operations of pollution treatment and environmental improvement.

2.2.3.2 The state management system for environmental protection did not meet the requirements of environmental protection in the period of speeding up the national industrialization and modernization. Especially, content of pollution treatment and environmental improvement from the central to local levels were not interested and managed properly. The organizational structure of most Environmental Protection Sub-Department under the Department of Natural Resources and Environment just cover include pollution control, evaluation and assessment of environmental impacts. Meanwhile, pollution control focused on examination and inspection, not including pollution treatment and environmental improvement. The staff involving environmental protection management of ministries, ministerial-level, government and local agencies was lack, the capacity of local staff do not meet professional requirements, many of them work concurrently, the proportion of staff with basic training in environment was low, especially at the district, ward, commune and town levels.

The function of State management on environmental protection of the Ministry of Natural Resources and Environment and a number of ministries, sectors overlapped, seeing in management of solid waste and landfill by the Ministry of Construction, waste management from craft villages by the Ministry of Agriculture and Rural Development Manager, ... Consequently, people to no investment poured in environmental protection to effectively handle, leading to new pollution sites arisen.

2.2.3.3. The incomplete knowledge of levels, sectors and people on the responsibility for environmental protection led to actions of only seeing local and initial benefits without paying attention to long-term benefits. Therefore, environmental pollution and degradation is inevitable and see growing trend.

Due to increasing environmental degradation and pollution, the Party and State promulgated and carried out numerous programmes and plans for environmental protection. However, the implementation of those programmes and projects has not met the scheduled duration and targets (eg, the Plan to thoroughly handling heavy polluted establishments according to Decision No. 64/2003/QĐ-TTg approved on April 22, 2003; the National Strategy on Environmental Protection by 2010 and orientation by 2020; the National Plan on Environmental Pollution Control by 2010 ...).

The above-said situation about pollution, limitations and shortcomings are big challenges for environmental protection in general and pollution treatment and environmental improvement in particular. Therefore, building and implementing the National Target Program on pollution remedies and environmental improvement is necessary and urgent in order to settle environmental protection at "hot spots" and areas with heavy pollution, seriously affecting public health and socio-economic development.

2.3. International experience on pollution treatment, environmental improvement

From 1960s, numerous signs of environmental degradation and pollution have been seen more clearly, people began to be aware of their harmful effects on the environment. Many countries in the world gave out strategies and policies on environmental protection with specific actions. Environmental protection in countries around the world has obtained remarkable achievements. Following are some experiences in pollution treatment and environment improvement from Japan - a country exerting great efforts and attained big successes in remedying the pollution and improve the environment.

Within 20 years since the first government environment agency under was established in 1971, Japan obtained important achievements in the fight against environmental degradation and pollution in the stage when the country's economic growth rate was very high. Large population and small area made industrial parks and residential areas in adjacency, thus caused heavy environmental pollution. It was proven that reasons for respiratory diseases like asthma in the city of Yokkaichi, Mie province, was due to smoke from the local oil industrial park. Both Minamata disease in Kumamoto province by mercury infection, and Itai-Itai disease in the province of Toyama by cadmium infection were from waste water from nearby factories.

It could be said that water pollution was one of the most serious pollution problems in Japan and four major reasons are: rapid industrialization, rapid urbanization, the lag in building social infrastructure like drainage system, as well as a policy to respect economic development rather than people's health and clean environment. Lessons were drawn out from Japan and some other developed countries have made achievements in pollution and improve the environment as follows:

Firstly, promulgating strict regulations on waste emission standards, tightening controlling and examining waste emission, which is expected to contribute to reducing parts of pollution. Regulations on pollution liability and many projects were carried out to improve the environment. From 1967, the Basic Law on Environmental Pollution Prevention and Fight took effect with general policies and principles on pollution control and encouragement of efforts to clean up the environment. The law stipulated the responsibility of central government, local authority, companies, factories, as well as environmental quality and standards, outlined programmes to control pollution and help victims of diseases caused by pollution.

Secondly, Japan attached importance to policies to educate people and the role of the community in environmental problems. Thanks to community and mass media, activities causing environmental pollution were prevented and reduced, thus helped prevent the formation of polluted areas. In the 1960s, people's knowledge was high compared with international standards when

pollution problems arose. Therefore, people could understand the importance of pollution in science way and expressed their concern about pollution problems through mass media. So, the government could not continue to ignore such concerns. Cases of condemning pollution as reported in the press and television, became popular, helping raise people's awareness and contribute to the formation of public opinion to claim the right to participate in movements on pollution control pollution treatment and environment improvement.

Thirdly, with active participation of organizations and private enterprises in remedying pollution and improve the environment. Businesses in Japan to strictly abided by regulations on discharge and participated in commitment on environment (including the commitment to comply with strict standards, the responsibility of handling, improvement and remediation the environment...) and increased investment in pollution treatment projects. According to statistics from 1967 to 1975, the proportion of investment in environment works increased from 3.1 percent to 18.6 percent of the country's total investment.

Fourthly, in terms of finance, Japan gave out harmonious solutions in mobilising various financial sources: the government, localities and economic organizations, thus helped Japan achieved high efficiency in both expenditure and pollution treatment. According to Japanese environmental experts, developing economy without regarding to environment will bring low economic efficiency. Cost for pollution treatment will be higher than investment in pollution control measures. Early restoration of the environment will help reduce expenses and minimize impacts on the community health. To demonstrate to conclusion, Japan reviewed and compared costs of environmental remediation and costs of investment in pollution control in some cases of environmental pollution as follows:

| Pollution case | Costs for treatment (billion JPY/year) | Costs for investment in environmental control (billion JPY/year) |
|-------------------|---|--|
| Minamata disease | 12.6 | 0.1 |
| Itai-Itai disease | 2.5 | 0.6 |
| Yokkaichi Asthma | 21 | 14.7 |

The above table shows that applying pollution control at the first stage of production would be an appropriate selection in terms of benefit cost.

In short, Japan had expensive lessons that if focusing on economic development without mentioning environmental problems caused great consequences on health and environment, which will be difficult to overcome.

In terms of economic aspects, time and cost to settle those losses were great, and if calculating the cost to be paid to remedy the damage and cost for investment in pollution prevention measures, the occurrence of pollution is certainly not an economic choice. The lessons from Japan show us that if environmental issues are properly concerned, pollution would be prevented, help avoiding similar losses from environmental degradation and pollution.

III. OBJECTIVES, SCALES AND PROGRAMME SITES

2.1. Objectives of the programme

2.1.1. General objectives:

The strategic objectives of the Programme are the remedy of pollution, improvement and restoration of environment at polluted, degraded areas; prevention of the arising of newly polluted, degraded areas to ensure the community's health and contribute to the country's sustainable development.

2.1.2. Specific objectives:

The objectives of the Programme have to suit to targets of the country's socio-economic development for five years and 10 years as well as set goals on national environmental protection till 2015 and orientations to 2020. The objectives also suit to Vietnam's international commitments on pollution remedy and environmental improvement. Therefore, the Programme's specific objectives will be defined in two stages, at first focusing on the period to 2015 and orientations to 2020.

Accordingly, the Programme will have specific objectives as follows:

a) To 2015:

- To treat and restore the environment in 8 types of craft villages causing serious environmental pollution: paper recycling and production; cattle slaughters; metal recycling; plastic recycling; textile, dying; food processing, agro-products and food processing combined with animal husbandry; handicraft processed from cattle skin, bones.
- To treat and improve the environment at 100 specially serious polluted among 1,153 areas polluted by pesticide residues nationwide.
- To collect and treat all domestic wastewater from urban centres grade II and above on basins of the Nhue-Day rivers and the Cau river and the Dong Nai river system;

b) Orientation objectives to 2020:

- All unsanitary landfill sites according the Prime Minister's decision will be treated to remedy pollution and improve environment;
- All areas with environmental contamination by pesticide residues according to the Prime Minister's Decision No. 1946/QĐ-TTg on 21 October 2010 will be handled to remedy pollution and improve the environment;
- All establishments causing serious environmental pollution of the public areas under a plan for thoroughly handling establishments which cause serious environmental pollution till 2020 will be treated and provided with certificates of completion;

- Half of manufacturing and business establishments which cause serious environmental pollution will be moved to industrial parks, export processing zones;
- Continue to expand the model of treating craft villages which cause environmental pollution on a national scale;
- Remedy pollution and improve water environment in basins of the Cau river, the Nhue-Day rivers and the Dong Nai river system to meet national technical standards and specification on environment.

3.2. Duration, scope of the Program

3.2.1. Implementation duration: 2011-2015.

3.2.2. Scope and subject of the Program:

The Programme will be carried out on a national scale. At first, the Programme focuses on pollution treatment and environmental improvement for serious environmental pollution areas directly affecting human health and socio-economic development, which are the State's responsibility to address. Accordingly, the Programme will focus on pollution treatment and improvement of environment for polluted and degraded subjects as follows:

- Environmental areas contaminated by pesticide residues;
- Craft village areas with serious environmental pollution and extremely serious environment pollution;
- Basins of the Cau river, the Nhue–Day rivers and the Dong Nai river system; tributaries and branches of the three river basins (rivers, lakes, ponds, canals ... are places to receiving wastewater from urban areas, craft villages, industrial zones, export processing zones, unsanitary landfills).

IV. ANALYSIS OF SOCIO-ECONOMIC EFFICIENCY OF THE PROGRAM

The implementation of the programme will actively contribute to not only successfully implementing the target of the socio-economic development strategy for the 2011-2020 period and documents of the 11th National Party Congress but also ensuring the implementation of the target of the Vietnamese Government's international commitment to ensure sustainable environmental development.

In addition, together with central and local budget assistance, organisations, individuals and all walks of life will be mobilised to contribute human and material resources during the implementation of the programme to form a stable concentrated source for remedying pollution and improving the environment in areas suffering from serious environmental pollution, thus contributing to national sustainable development and creating positive impacts in attracting domestic and foreign investment capital, establishing industrial zones and craft villages with safe and clean production models and ensured workers' health and hygiene so that labour productivity will increase and residents' living conditions will be improved.

The implementation of the programme will likely face difficulties as follows:

- The lack of coordination between ministries, sectors and localities during the implementation process will affect the target and the pace of the programme. To minimise this risk, it is necessary to clearly decentralize responsibility of each agency and unit during the implementation of the programme.

- During the process of building projects to treat pollution and improve the environment in centrally-run cities and provinces' polluting areas, the slow implementation of localities' pledges such as compensation, site clearance and land allocations for these projects and localities' slow and insufficient capital allocations will greatly affect the effectiveness and the pace of the programme.

- If residents' role and participation in the implementation of the programme are limited, the efficiency and the pace of the programme will be greatly influenced. Therefore, it is necessary to define people's responsibilities, obligations and benefits during the implementation of the programme.

- A number of other risks, including slow Government allocation of the programme estimates and prolonged borrowing of ODA and from credits institutions (the Vietnam Environment Protection Fund,...) will also influence the pace of implementing set targets and tasks as well as the pace of the programme.

To minimise these risks, after the National Assembly approves the programme, the Government will devise a detailed plan to clearly define responsibilities of each ministry and ministerial-level agency and agencies under the direct management of the Government and provincial and city People's Committees to effectively implement the programme under the set target and pace and regularly summarise, evaluate and review results to promptly adjust the contents of the programme. The Chairman of the People's Committees of the locality where projects to remedy pollution and improve the environment are being carried out must pledge the pace and the allocation of enough resources to perform each item and project of the programme

V. MAIN CONTENTS, TASKS OF THE PROGRAMME

To reach the above-said objectives, at first it is a focus on building contents to successfully implement the Programme's objectives to 2015. Main contents and tasks of the programme will consist:

a) Pollution treatment and environmental improvement in areas of extremely serious pollution by pesticide residues:

- Build projects on pollution treatment and remedy and environmental improvement for 100 polluted areas; (*details in Annex 1 of the Report*).
- Implement activities to remedy pollution and improve environment for 100 areas of especially serious contamination by pesticide residues as contents set in the approved projects;
- Conduct inspections and confirm the completion of contents on pollution treatment, remedy and environmental recovery;
- Build a center for treatment of hazardous wastes, pesticide residues in the central region under the Prime Minister's direction in Decision No. 1946/QĐ-TTg on October 21, 2010.

b) Remedy pollution and improvement environment in extremely polluted craft villages:

- Develop pilot projects to handle pollution and improve environment for six types of craft villages including 12 craft villages under Decision 64/2003/QĐ-TTg, specific paper production and recycling; cattle slaughter, metal recycling; plastic recycling, textile and dyeing and food processing; (*details in Annex 2 of the report*);
- Develop pilot projects on pollution treatment, remedy and environmental improvement for two other types of craft villages polluting environment, including villages on agricultural product processing combined livestock, villages on handicrafts processing from the cattle skin and bones;
- Implement activities to remedy pollution and improve environment for 14 craft village in line with contents in approved projects;
- Implement examination and confirmation of the accomplishment of contents relating to pollution treatment, remedy and environmental recovery and hand over them to provincial and municipal people's committees to management and expand.

c) Collect and treat wastewater from urban areas grade II and above located in three river basins, Nhue – Day, Cau and Dong Nai. :

- Review and assess efficiency of works on wastewater treatment, pollution remedy and environmental improvement carried out on river basins by the province/city and the ministries and sectors; devise detailed plans on contents relating to pollution treatment, remedy and improvement of water environment on basins of the Nhue-Day rivers, the Cau river and the Dong Nai river system;

- Build the system of collecting and treating domestic wastewater from urban areas grade II and above which locate on three river basins, namely: Thai Nguyen, Hai Duong, Hanoi, Nam Dinh, Ho Chi Minh City, Bien Hoa, Da Lat and Vung Tau.

VI. COST ESTIMATION FOR THE IMPLEMENTATION, CAPITAL SOURCES AND FORMS OF CAPITAL SUPPLY

6.1. Capital sources for implementing the programme

To effectively implement the above-said programme, the draft programme has put forward the list of three priority projects and assigned ministries and ministerial-level agencies and agencies under the direct management of the Government and centrally-run provincial and city People's Committees (details stipulated in attached Annex 3).

The capital for the implementation of the programme during the 2012-2015 period is estimated at 10,100 billion Vietnam Dong (excluding the funding for the approved strategic programmes). Sources of capital are proposed to be allocated as follows:

- Central budget: 2,500 billion dong (making up 24.8 percent);
- Local budget: 1,500 billion dong (making up 14.9 percent);
- ODA capital and foreign aid: 5,500 billion VND (making up 54.46 percent);
- Capital from other socio-economic organisations: 600 billion VND (making up 5.9 percent).

6.2. Mechanism for capital mobilisation:

Diversifying capital sources mobilised for implementing the programme

a) Combining different sources of capital of national target programmes; programmes and projects supporting other targets, including:

- Capital from national target programmes and targeted assistance programmes and projects, that are being and will continue to be carried out in the following years, including a clean water and rural environment hygiene programme, a climate change adaptation programme, an education-training programme, the programme 135, a project to plant 5 million ha of forests, a targeted assistance programme using State budget capital to thoroughly treat and remedy pollution and reduce environmental degradation for a number of public sector's beneficiaries;

- Budget capital in direct support to this programme, including the Government bonds (if any);

b) Mobilising local resources at a maximum level (province, district, commune) to deploy the programme. The provincial People's Council defines to raise the proportion of capital from taxes, charges, fees, administrative fines in environmental protection, compensations for environmental damage caused by environmental pollution, making a deposit for environmental protection in mining activities for localities, to at least 70 percent to implement the contents of the programme;

c) Mobilising investment capital from businesses for projects that capital can be directly retrievable; businesses are provided with development investment credits by the State or centrally-run provinces and cities, receive post-investment support from the State budget and enjoy investment incentives as stipulated in Decree No. 04/2009/ND-CP dated January 14, 2009 on incentives and supports for environmental protection activities;

d) Contribution amounts under the principle of “polluters must pay” for each specific project, particularly for craft villages;

đ) Non-refundable aid sources of businesses, organisations, domestic and foreign individuals for investment projects;

e) Effectively using loans and credits:

- State investment credits are allocated to cities and provinces under programmes on canal concretization, rural traffic roads development, aquaculture facilities and rural craft village infrastructure and the list stipulated in the Prime Minister’s Decree No. 106/2008/ND-CP on September 19, 2008;

- Capital from the Vietnam Environment Protection Fund and other local environmental protection funds.

g) Mobilising other legitimate financial sources.

VII. ESTIMATED START AND END TIMES FOR THE PROGRAMME

- Estimated kick-off time for the programme: 2011;
- Estimated end time for the first phase: 2015;
- Estimated end time for the second phase: 2020.

VIII. LIST OF PROJECTS UNDER THE 2011-2015 PROGRAMME

8.1 Project 1: Improve and restore the environment at some areas extremely contaminated by pesticide residues

a. Objective:

- 100 spots suffering from special serious environmental pollution stipulated in Decision No. 1946/QĐ-TTg dated October 21, 2010 are treated;
- 01 centre for treatment of toxic chemical and pesticides residues in the central region is to be built under the Prime Minister's Decision. No 1946/QĐ-TTg.

b. Component sub-projects :

- Sub-project 1: Treating pollution, recovering and improving the environment of 100 areas contaminated by pesticides residues;
- Sub-project 2: Building a centre for treatment of toxic chemicals and pesticides residues in the central region.

c. Contents and activities of the project:

- Develop the project on pollution treatment, remedy and environment improvement of 100 contaminated spots ; (*Details in Annex 1 of the Report*).
- Implement activities to treat the pollution and improve the environment of 100 areas specially serious polluted by pesticide residues in accordance with the approved content of the project ;
- Conduct examination, confirmation of the completion of pollution remedy and treatment, and environment restoration;
- Build a center for central treatment of hazardous waste and residual pesticide at the central region directed by the Prime Minister at the Decision 1946/QĐ-TTg dated 21 October, 2010.

d. Capital for implementation: 2,000 billion dong, concretely:

- Central capital: 700 billion dong (investment capital 500 billion dong and performing capital 200 billion dong);
- ODA capital: 1,000 billion dong;
- City and provincial capital: 300 billion dong;

e. Duration and implementation areas:

- From 2011 to 2015.
- To be carried out in 11 centrally-run cities, provinces, including: Ha Giang, Tuyen Quang, Thai Nguyen, Lang Son, Nam Dinh, Thai Binh, Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri.

f. Implementation assignment:

- Responsible agency: the Ministry of Natural Resources and Environment.

- Project managing and implementing agency: the Ministry of Natural Resources and Environment carries out sub-project 1; the Ministry of Natural Resources and Environment coordinates with the Ministry of Construction to implement sub-project 2; beneficial city and provincial People's Committees carry out projects in their locality.

- Coordinating agency: the Ministry of Rural Development and Agriculture, the Ministry of Defence, and the Ministry of Science and Technology.

g. Socio-economic efficiency of the Project:

To significantly reduce the increased pollution, restore and improve the environmental quality of areas with pesticide residues causing specially serious pollution; basically address environmental pollution affecting people's health in densely populated areas in big cities and some rural areas due to pesticide residues; enhance the capacity on prevention and reduction of adverse impacts of natural disasters, and of climate variation unfavorable to the environment; rescue and efficiently remedy the pollution caused by natural disasters, ensure the high eco-balance; conserve the nature and bio-diversity. To actively undertake and meet the environmental requirements in international economic integration, reduce the negative impacts of globalization on the nation's environment, in order to promote the economic growth, enhance the living quality, ensure the nation's sustainable development.

8.2 Project 2: Remedy pollution and improve the environment at extremely polluted craft villages

a. Objectives:

- 08 types of craft villages causing environmental pollution are treated, remedied and improve the environment at pilot scale.

b. Component sub-projects:

- Sub-project 1: Treating pollution, upgrading and restoring the environment at 12 craft villages causing environmental pollution under the Prime Minister Decision No. 64/2003/QD-TTg;

- Sub-project 2: Treating pollution, upgrading and restoring the environment at two other craft villages specialised in processing agro-products, food combined with livestock farm, and making handicraft products from cattle bones and skin.

c. Contents and activities of the Project:

- Develop pilot project on treating, remedying pollution and improving environment of 6 types of craft villages, including 12 villages under the Decision 64/2003/QD-TTg, namely: paper production and recycling; cattle

slaughters; metal recycling; plastic recycling; textile and dyeing; food processing (details in Annex 2 of the Report);

- Develop pilot project on treating, remedying pollution and improving environment of 2 other types of craft villages, including: agro-products, food processing combined with livestock farm, and handicraft made from cattle skin and bone;

- Deploy activities of pollution treatment and environment improvement at 14 craft villages in accordance with the approved content;

- Conduct inspection, confirmation of accomplishment of pollution treatment, remedy and environment restoration and hand over to city, provincial People's Committees for management and duplication.

d. Capital for implementation: 1,400 billion dong, concretely:

- Central capital: 600 billion dong (investment capital 300 billion dong and performing capital 300 billion dong);

- ODA capital: 500 billion dong;

- City and provincial capital: 200 billion dong;

- Private capital: 100 billion dong;

e. Duration and implementation scope:

- From 2011 to 2015.

- The project will be carried out in 7 centrally-run cities, provinces, including: Bac Giang, Bac Ninh, Ha Nam, Hung Yen, Thai Binh, Thua Thien Hue, Ha Noi.

f. Implementation assignment:

- Responsible agency: the Ministry of Natural Resources and Environment.

- Project managing and implementing agency: the Ministry of Natural Resources and Environment coordinates with the Ministry of Rural Agriculture and Development to carry out sub-project 1; the Ministry of Natural Resources and Environment implements sub-project 2; beneficial city and provincial People's Committees carry out projects in their locality.

- Coordinating agency: the Ministry of Industry and Trade, the Ministry of Science and Technology and the Ministry of Construction.

g. Socio-economic efficiency of the Project:

To significantly reduce the increased pollution, restore and improve the environmental quality of craft villages causing specially serious pollution; basically address environmental degradation caused craft villages; enhance the capacity on prevention and reduction of adverse impacts of natural disasters, and of climate variation unfavorable to the environment; rescue and efficiently

remedy the pollution caused by natural disasters, ensure the high eco-balance; conserve the nature and bio-diversity. To actively undertake and meet the environmental requirements in international economic integration, reduce the negative impacts of globalization on the nation's environment, in order to promote the economic growth, enhance the living quality, ensure the nation's sustainable development.

In addition, the implementation of the project activities will importantly contribute to successfully implementing targets of 2011 – 2020 social economic strategy and the official documents of XI National Party Congress, as well as to ensuring the implementation of the goals on sustainable environment that were committed to the international community by the Government.

8.3. Project 3: Collect, treat wastewater from urban areas grade II and above in three river basins, namely: Nhue – Day, Cau and Dong Nai.

a. Objective:

- 100% of wastewater from urban areas grade II and above located in 3 river basins, Nhue – Day, Cau and Dong Nai is collected and treated;

b. Component sub-projects:

- Sub-Project 1: To build sewerage networks to collect domestic wastewater from urban areas grade II and above in 3 river basins;

- Sub-Project 2: To build a system to treat domestic wastewater.

c. Contents and activities of the Project:

- To review and assess efficiency of wastewater treatment, pollution remedy and environment improvement facilities of cities/provinces and ministries, sectors performing on the river basins;

- To prepare a detail work plan for collection, treatment, pollution remedy and environment improvement in Nhue – Day, Cau and Dong Nai river basins;

- To build sewerage networks to collect domestic wastewater from urban areas grade II and above in 3 river basins, namely: Nhue – Day, Cau and Dong Nai.

d. Capital for implementation: 6,700 billion dong, concretely:

- Central capital: 1,200 billion dong (investment capital 700 billion dong and performing capital 500 billion dong);

- ODA capital: 4,000 billion dong;

- City and provincial capital: 1,000 billion dong;

- Private capital: 500 billion dong;

e. Duration and implementation scope:

- From 2011 to 2015.
- The project will be carried out in 8 cities grade II and above, including: Thai Nguyen, Hai Duong, Ha Noi, Nam Dinh, Ho Chi Minh, Bien Hoa, Da Lat and Vung Tau.

f. Implementation assignment:

- Responsible agency: the Ministry of Natural Resources and Environment.
- Project managing and implementing agency: the Ministry of Construction implements sub-project 1; the Ministry of Natural Resources and Environment implements sub-project 2; beneficial city and provincial People's Committees implement projects on their locality.
- Coordinating agency: the Ministry of Science and Technology, the Ministry of Rural Agriculture and Development and the Ministry of Transport.

g. Socio-economic efficiency of the Project:

To significantly reduce the increased pollution, restore and improve the environmental quality of river basins; basically address environmental degradation caused by domestic wastewater from densely populated areas in big cities and rural areas based in river basins; enhance the capacity on prevention and reduction of adverse impacts of natural disasters, and of climate variation unfavorable to the environment; rescue and efficiently remedy the pollution caused by natural disasters, ensure the high eco-balance; conserve the nature and bio-diversity. To actively undertake and meet the environmental requirements in international economic integration, reduce the negative impacts of globalization on the nation's environment, in order to promote the economic growth, enhance the living quality, ensure the nation's sustainable development.

IX. SOLUTIONS TO IMPLEMENT THE PROGRAMME

The two biggest issues are raised during the implementation of the programme, firstly expenses to ensure environmental rehabilitation, remedy and recovery in investigated and confirmed areas of environmental pollution, serious environmental pollution and extremely serious environmental pollution; the ability of budget balance and mobilisation of resources from the society and international support. Secondly, it is the science and technology matter, particularly environmental treatment and recovery technology. In addition, there are views on the overlap between some contents of the Programme and other programmes and plans on socio-economic development and environmental protection that affect efficiency and effectiveness and feasibility of the Programme

9.1. Finance for implementation of the Programme

The way of approach is to promote internal resources, and simultaneously take international resources to implement the Programme in general principles:

- Use international resources (non-refundable grants, loans) along with the State budget allocation, State credits and thoroughly mobilise capital among the people;
- Use appropriate capital structure, in which the State budget allocation plays a role of assisting and stirring other capital sources;
- Encourage and create favourable conditions to attract investment from businesses and individuals in all forms;
- Making, allocating, deciding to assign the estimate, managing, using and settling expenses of the Programme is implemented in accordance with regulations of the State Budget Law and documents guiding the law;
- Solution to mobilise financial resources from the community with focus on all society's funding: mobilise and organise to create a legal basis to encourage the involvement of the people, various economic sectors and the entire society to invest in activities relating to pollution treatment and environmental improvement; promote the Programme's beneficiaries to contribute to part of construction costs and all costs for operation, maintenance and project management; mobilise donors to attract more ODA and other aids for the Programme.

Due to the Programme's characteristics, it is a need to build a financial management mechanism for projects and activities of the Programme similar to other national target programmes.

Modes of mobilising capital, expenses which may be studied to apply to the National Target programme, include:

- Mode of *targeted budget support* is a model of support and use of Official Development Assistance (ODA) directly supplemented to the budget without coming through the project's mechanism and a separate management apparatus.

Disbursement and supervision of financial management will comply to the Budget Law and a separate management mechanism of the National Target Programme and suit the objectives of the Government-approved National Target Programme. The disbursement of the Programme using the mode of targeted budget support is expected to take place quickly as the schedule agreed in the principle of that “ODA is mixed into the budget allocation and will be directed to the Programme.” The targeted budget support programme will create conditions for combining ODA support and the Government's efforts to achieve the objectives. This is a new step in harmonising procedures between the Government and donors. The targeted budget support programme will be carried out on the basis of the mechanism of the national target programme with changes in funding allocation; monitoring and evaluating will be based on the implementation of decentralising management. Mechanism of report will base on normal process/ procedure of the Government, needing only enhancement without creating a separate process while implementing the targeted budget support programme.

- *Form of BOT* (build - operate - transfer) or *form BT* (build - transfer) is used to attract investment from organisations and individuals to perform activities relating to environment rehabilitation and recovery at contaminated areas. After the organisations or individuals completed environment rehabilitation and recovery at contaminated areas, they have the right to use the area of natural resources (land, water ...) in a termed period. They will transfer the recovered area to the State for the use of common purposes when their duration ends. Funding for monitoring and managing the programme using the BOT/BT will comply to the Government's regulations. Mechanism on report will base on the Government's normal process/procedure.

9.1.1. State budget capital

State budget funding for the Programme is adequately identified, corresponding to the location of the Programme in the country's socio-economic development strategy.

State budget funding for the Programme requires an integration and a coordination with projects of other national goal programmes as soon as the evaluation and approval.

For environment-related work, the implementation of the Politburo's Resolution No. 41-NQ/TW on environmental protection in the period of accelerating national industrialisation and modernisation, the Environmental Protection Law 2005, from 2006, the budget for environmental protection has been arranged in a separate source (business environment funding) with the scale not less than 1 percent of the total state budget spending. Spending for the environment work is a regular expense for environmental protection activities. The Government and the ministries/agencies have established legal normative acts to ensure the correct and proper spending for environment work. In

addition, the decentralisation of management and budget approval are clearly defined.

Similar to other national target programmes, the state budget funding will focus on perfecting the legal document system, improving state management capacity on pollution treatment and environmental improvement, raising awareness and promoting the society's involvement in remedying and improving environment and will be partly used for environmental improvement and restoration-related activities.

9.1.2. Preferential credits

Demand on credit for the programme is very huge. To achieve the set objectives, it is necessary to increase credit sources, while expanding the scope and subjects of the preferential credit fund for the Programme. Credits are mainly medium and long term with low or non interests.

In the Programme's framework, preferential credits may be used for environmental improvement and restoration at areas of environmental contamination. Using mode on capital attraction from this source will attract capital from credit institutions. This mode is increasingly used on a wide large scale as credit institutions are increasingly concerned about issues on environment and the society.

Preferential loans from the Vietnam Environment Protection Fund: apart from mobilising ODA preferential loans for the protection of environment, the Programme will mobilise and allocate capital from the Vietnam Environment Protection Fund to provide organisations and individuals, who build works to remedy pollution and improve environment, with preferential loans at low interest rate to speed up the implementation of the Programme. Even, the government will study to rebuild functions and tasks of the Vietnam Environment Protection Fund to be able to directly invest, construct works to remedy pollution, protect and improve environment, use directly its capital of the Vietnam Environment Protection Fund.

9.1.3. Capital of people and enterprises, other economic sectors

Promoting dissemination activities to mobilise households to partially contribute their incomes to invest in maintaining works on pollution remedy and environmental improvement at areas with polluted and degraded environment.

Investment capital of enterprises, other economic sectors, the private sector will be mobilised to implement the Programme through building and completing policies and creating favorable conditions to attract capital from investors, businesses, social organisations, call for capital from the economy; encourage the participation of the private sector and other economic sectors to invest in the implementation of projects on pollution treatment and environmental improvement through incentives such as land policy, tax reduction and exemption and priority of preferential credits...

9.1.4. International aid

With the mode of fully tapping international sources, the Programme will receive support from many international organisations and non-governmental organisations (NGOs), the United National Development Programme (UNDP), the Asian Development Bank (ADB), the World Bank (WB) và bilateral funds of developed countries.

This capital source consists of non-refundable grants and long-term loans with soft interest rate, mobilised through forms of multilateral and bilateral cooperation. International financial support through general contributions to subsidy funds and credit funds, helping projects or a region.

International aid to the Programme has to be planned from the appraisal, approval and shown in the Government's annual plan.

Within the Programme's framework, the international capital (including non-refundable grants and long-term loans) will concentrate in building legal normative acts, building models on environmental pollution treatment, remedy, and environmental restoration and recovery, projects/tasks on environmental restoration and recovery and dissemination to raise the people's awareness and involvement.

9.1.5. Mode on making capital plan for the Programme

Basing on the National Assembly-approved Programme, the Government will instruct the Ministry of Natural Resources and Environment, the Ministry of Planning and Investment, the Ministry of Finance to study, balance, arrange and allocate detailedly capital sources to implement each activity, each project of the Programme and submit to the National Assembly for approval before carrying out.

Regarding the annual implementation plan, the Ministry of Natural Resources and Environment (the Programme's management agency) has the responsibility to make plan on duties, objectives and demand on funding, propose solutions to implement the Programme in order to send to the Ministry of Planning and Investment, the Ministry of Finance to sum up for the general socio-economic plan to submit to the Government, the National Assembly's Standing Committee and the National Assembly for consideration and approval in accordance with regulations of the State Budget Law.

Basing on the total expense of the Programme informed by the authorised level, the Ministry of Natural Resources and Environment presides, coordinate with the Ministry of Planning and Investment, the Ministry of Finance to prepare a plan on the Programme's funding allocation to ministries, central agencies and provinces and central-managed cities in conformity with objectives, assigned tasks. The Ministry of Natural Resources and Environment collects outcomes on funding allocation to send to the Ministry of Finance, the Ministry of Planning and Investment to sum up in budget estimates of ministries, branches and localities to submit to the Prime Minister and report to the National Assembly in accordance with regulations of the State Budget Law.

Regarding ministries, central agencies: base on the Prime Minister-assigned funding of the Programme, ministries, central agencies allocate and assign tasks to their units in line with objectives, contents of the Programme that was sent to the Ministry of Finance according to regulations as a basis for funding allocation.

For the People's Committees of provinces and central-managed cities, basing on funding assigned by the Government, the people's committees of provinces and central-managed cities have the responsibility to coordinate and integrate (from other programmes and projects) and allocate sufficient funds to implement the Programme. Additionally, during implementing projects on pollution treatment and environmental improvement of the Programme, the People's Committees of provinces and central-managed cities are responsible for land clearance, arrangement for the construction of works on pollution treatment, remedy and environmental improvement; removal of people, public works from the environmental pollution areas, arrangement of land for relocation and support of resettlement for people and public works in the contaminated areas; organisation of handing over, operating, maintaining treatment works annually. Fundings for these activities are considered on corresponding capital of the People's Committees of provinces and central-managed cities to the national target programme.

9.1.6. Disbursement, payment, balance sheet

Disbursement of the Programme complies with regulations issued by the Government and ministries/branches and is conducted through three main channels:

- Disbursement of loans, aid from donors through banks serving and implementing under the Agreement on assistance signed between the Vietnamese Government and donors;
- State budget (the environment work) is disbursed through the system of the State treasury for spending control and management under guiding documents of the State Budget Law;
- Domestic soft credits loaned through the social policy bank.

Units directly using the Programme's budget have the responsibility to enter in the accounts and draw balancesheets of fundings for the implementation of projects according to correlative chapters, types and provisions of the State Budget Index; the Programme's code and regulations of the State Budget Law, the Accounting Law and documents guiding the execution of the Law.

Projects and activities of the Programme on purchase of equipment, commodities and materials, information technology services... will be conducted in accordance with legal regulations on bidding.

For the Programme's activities carried out by the agencies and organisations in the form of contracts with the agency taking charge of the project, vouchers as the basis for payment and settlement are filed at the agency taking charge of the project, including contracts to carry out tasks (enclosed with detailed cost estimates

approved by the agency taking charge of the project), records on the work test, minutes on the liquidation of the contract, payment or other form of information and other related materials. Detailed expenditure vouchers are kept by the agency directly implementing the project under current regulations.

9.1.7. Mechanism on report

Ministries and branches taking charge projects, the Chairman of the People's Committees of provinces and central-managed cities take the responsibility to report finance and results of implementing projects and send them to the Ministry of Natural Resources and Environment, the Ministry of Finance and the Ministry of Planning and Investment according to current regulations for the national target programme.

The Ministry of Natural Resources and Environment has the responsibility to sum up assessments and report the implementation of objectives, contents and efficiency of the use of expenses of the Programme according to current regulations for the national target programme.

9.1.8. Taxation

Exempting termed business tax, reducing land tax for all economic sectors to invest in projects under the Programme, concurrently increasing tax rates and charges to institutions and individuals causing environmental pollution in order to create funding to implement this Programme.

9.1.9. Supervision and evaluation mechanism

- The MONRE, in collaboration with concerned agencies, examines, supervise the implementation of the National Target Programme on pollution remediation and environment improvement between 2011 – 2015.

- Clearly define the roles of the steering committee and enhance the responsibility of local authorities.

9.2. Pollution treatment and environment improvement technology

At a meeting on environmental technology within the framework of the third national environment conference held in July 2010, scientists agreed that Vietnam mastered on pollution treatment technologies on wastewater, exhaust fumes, solid waste and hazardous waste in accordance with Vietnam's conditions. Knowledge-based technology products on environmental treatment, recovery of centers, research institutes, universities and agencies have been continuing to expand and apply in real life.

Statistics taken in 2006 and 2007 (in 20 provinces) showed that about 2,000 businesses operating in environmental treatment, including private enterprises along with urban environment companies of the provinces and cities. The operation fields are increasingly diverse and constantly expanded, not only

restricted within the urban environment, but also developed into the sectors of business, industry, pollution control, recycling and management of natural resources, production of equipment and technology. The number of the above-said businesses has been to date increasing. This shows that we are completely assured of technology and capacity, the meeting ability of the technical processing units treating environmental issues during implementing Programme.

X. PLAN FOR COMBINING WITH OTHER PROGRAMMES

The national target programme to remedy pollution and improve the environment is associated with many other national target programmes and socio-economic development and environmental protection programmes. Hence, it is necessary to evaluate and analyze in order to avoid possible overlap of national target programmes and raise the efficiency in implementing national target programmes.

10.1 For the National Target Programme (NTP) on Response to Climate Change

The national target programme to cope with climate change is intended to assess the level of the impacts of climate change in various sectors, branches and localities, define measures to cope with climate change, enhance scientific and technological activities to lay scientific foundations for measures to cope with climate change, consolidate and enhance organising capability, mechanisms and policies to cope with climate change,...However, the main objective of The national target programme to remedy pollution and improve the environment is to treat, remedy pollution and improve the environment at areas suffering from serious and special serious pollution such as unsanitary landfills, river basins and establishments causing serious environmental pollution, etc. That's why, the implementation of the national programme on pollution remedies and environmental improvement will contribute to raising the efficiency of the national target programme to cope with climate change in devising adaptation strategies and settling extreme upheavals of climate change as predicted.

Hence, the implementation of the two national target programmes at the same time will bring about the best environmental protection efficiency in general and reduce negative impacts of environmental pollution in particular. The contents and activities of the two programmes will not be coincisive and overlapped.

10.1 For the NTP on clean water and rural environmental sanitation

The national target programme to remedy pollution and improve the environment will focus on treating hotbeds of serious and special serious environmental pollution with the main beneficiaries of the programme being establishments causing serious environmental pollution, river basins, unsanitary landfills, pesticides residues, craft villages...Meanwhile, the national target programme on clean water and rural environmental hygiene focuses only on environmental hygiene at family scale such as building water-closets, breeding facilities, daily water supply and reducing environmental pollution at traditional food and foodstuff craft villages. That's why, the national target programme on clean water and rural environmental hygiene does not focus on treating and

remedying serious and special serious environmental pollution at craft villages. In the meantime, the national target programme to remedy pollution and improve the environment will focus on building and implementing pilot models to remedy pollution and improve the environment at craft villages causing serious or special serious environmental pollution in order to make theoretical and practical foundations for promoting activities to remedy pollution and improve the environment for all existing polluting craft villages in centrally-run cities and provinces.

Consequently, the implementation of the two national target programmes at the same time will achieve efficient results in remedying pollution and improving the environment, ensuring environment quality for residents' community in craft villages and the contents and activities of the two programmes will not be coincisive and overlapped.

XI. IMPLEMENTATION ORGANISATION OF THE PROGRAMME

11.1. Establishment of Programme Management Board

- Head of the Board: Minister of Natural Resources and Environment.
- Standing Deputy Head of the Board: Vice Minister of Natural Resources and Environment .
- Deputy Head of the Board: 01 Vice Minister of Planning and Investment.
- Deputy Head of the Board: 01 Vice Minister of Finance
- Members of the Board: Leaders of the concerned units.

11.2. Establishment of Office of the Programme Management Board:

The office of the Programme Management Board is located at the Vietnam Environment Administration (VEA). Head of the Office is the Director General of VEA; Standing Deputy Head is leader of the Department of Waste Management and Environment Improvement; Members are from Departments, units under VEA and a permanent working group.

11.3. Responsibilities of Ministries, sectors, centrally-run city, provincial People's Committee:

a. The Ministry of Natural Resources and Environment is a standing agency helping the Government manage the programme, implementing tasks stipulated in Article 18 of the Prime Minister's Decision No. 135/2009/QĐ-TTg dated November 4, 2009 on the management and administration of national target programmes, and assisting the Steering Committee coordinate with ministries, sectors and localities to manage and implement the programme with focuses on following tasks:

- Leading and coordinating with ministries and branches to build mechanisms and policies for managing and guiding the implementation of the programme and reporting to the Steering Committee for opinion and submit to the Government and the Prime Minister for promulgation or promulgation under the jurisdiction;

- Devising and reviewing a plan to implement the Programme and summing up cost estimates to report to the Programme Steering Committee for opinions and send to the Ministry of Planning and Investment, the Ministry of Finance to summerise under the Budget Law;

- Leading and collaborating with the Ministry of Planning and Investment and the Ministry of Finance to instruct ministries, branches and localities in devising and implementing plans, annual cost estimates to commensurate with objectives and tasks of the programme; building a mechanism for supervision and assessment of the implementation of the programme;

- Organising inspections and examinations, making periodical preliminary and final review of the programme in stages and overall coordinating all information, education and popularisation work relating to pollution remedies and

environmental improvement.

- Making annual reviews, reporting the results of the programme to the Steering Committee and the Prime Minister, proposing solutions to emerging issues in the implementation of the programme;

- Devising and implementing an action plan for the implementation of the ministry's programme and implementing assigned schemes and projects.

b. Ministry of Planning and Investment:

- Leading and coordinating with the Ministry of Finance and the Ministry of Natural Resources and Environment to propose balance capital level for each scheme, project, reporting to the Government to consider and decide for each planning period;

- Making an annual report to the Ministry of Natural Resources and Environment and agencies on the implementation of the programme on orientations to devise a plan to implement the programme for the yearly plan;

- Coordinating with the Ministry of Finance, the Ministry of Natural Resources and Environment to build principles, criteria and capital allocations of the programme to schemes, projects;

- Coordinating with the Ministry of Natural Resources and Environment in devising plans and allocating capital to schemes and projects of the programme;

- Summing up the programme's estimated capital to be allocated to ministries, branches, central agencies and centrally-run cities and provinces for the yearly plan to be presented to the Prime Minister for consideration and decision;

- Informing the Ministry of Natural Resources and Environment of the capital for implementing the programme under plans that had been given to implementing ministries and agencies.

- Coordinating with the Ministry of Natural Resources and Environment and implementing agencies to monitor, supervise and evaluate the implementation of the programme.

c. Ministry of Finance:

- Leading and coordinating with the Ministry of Planning and Investment, the Ministry of Natural Resources and Environment and relevant agencies to issue financial mechanism documents, propose annual budget allocations for the programme and include budget allocations for the programme in the scheme of central budget allocations;

- Guiding ministries, branches and localities to execute regulations on existing financial-accounting mechanism, organising periodic and unscheduled inspections and supervisions of ministries, branches and localities' use of

programme capital.

- Collaborating with the Ministry of Natural Resources and Environment to devise plans and schemes to allocate capital to ministries, branches and localities for implementing projects of the programme.

- Coordinating with the Ministry of Natural Resources and Environment to build principles and criteria for capital allocations of projects of the programme.

d. Ministries, ministerial-level agencies, and governmental agencies :

- Building and implementing an action plan in order to achieve the concrete objectives of the programme within one's own responsibility;

- Implementing projects provided in the programme;

- Actively taking part in joint activities under the instruction of the Steering Committee.

e. Ủy ban nhân dân các tỉnh, thành phố trực thuộc Trung ương:

- Establishing the provincial steering committee as stipulated in Point c, Clause 14, Article 6 of Decision No. 135/2009/QĐ-TTg dated in November 4, 2009 on the management and administration of national target programmes;

- Organising the implementation of concerned activities adopted in the Programme;

- Ensuring the logical and effective use of the programme capital, actively mobilising more sources and combining relevant activities of other programmes in the locality to achieve the programme's target; and abiding by the programme supervision and assessment principles.

- Periodically reporting the pace of implementing objectives and tasks of the programme in the locality.

f. Social organisations, non-governmental organisations and enterprises:

Undertake the Programme in line with functions, mandates related to the Programme.