

DRAFT

**NATIONAL TARGET PROGRAM
TO RESPOND TO CLIMATE CHANGE**

*(Implementing the Government's Resolution No. 60/2007/NQ-CP
dated 3rd December 2007)*

(Unofficial Translation of Vietnamese Draft Version of 27/7/2008)

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LIST OF ACRONYMS

TLP	Tropical Low Pressure
NSC	National Steering Committee of the National Target Program
CC	Climate Change
MPS	Ministry of Public Security
MIT	Ministry of Industry and Trade
MOET	Ministry of Education and Training
MOT	Ministry of Transportation
MOST	Ministry of Science and Technology
MPI	Ministry of Planning and Investment
MOLISA	Ministry of Labour, Invalids, and Social Affairs
MOFA	Ministry of Foreign Affairs
MARD	Ministry of Agriculture and Rural Development
MOHA	Ministry of Home Affairs
MOD	Ministry of Defense
MOJ	Ministry of Justice
MOC	Ministry of Construction
MONRE	Ministry of Natural Resources and Environment
MOIC	Ministry of Information and Communication
MOCST	Ministry of Culture, Sport and Tourism
MOH	Ministry of Health
CDM	Clean Development Mechanism
Agenda 21	Agenda 21
SEA	Strategic Environment Assessment
HCYU	Ho Chi Minh Communist Youth Union
EIA	Environmental Impacts Assessment
GDP	Gross Domestic Production
VFU	Vietnam Farmer Union
VWU	Vietnam Women Union
IPCC	Inter-governmental Panel on Climate Change
KgOE	Kilogram oil equivalent
GHGs	Green house gases
KP	Kyoto Protocol
UN	United Nations
SLR	Sea level rise
MTOE	Million tons of oil equivalent
ODA	Official Development Aid
ppm	Part per million
Tg CO ₂ e	Tetagrams CO ₂ equivalent
ToE	Ton of oil equivalent
SCEM	State Committee for Ethnic Minorities
UNFCCC	United Nation Framework Convention on Climate Change
OG	Office of the Government

GLOSSARY

Weather describes atmospheric conditions at a particular place in terms of air temperature, pressure, humidity, wind speed, and precipitation.

Climate is often defined as the weather averaged over time (typically, 30 years, WMO).

Climate variability refers to variations in the mean state of climate on all temporal and spatial scales beyond that of individual weather events. Examples of climate variability include extended droughts, floods, and conditions that result from periodic El Niño and La Niña events.

Climate change refers to a change in the state of the *climate* that can be identified by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or *external forcing*, or to persistent *anthropogenic* changes in the composition of the *atmosphere* or in *land use*.

Vulnerability to the impacts of climate change is a function of exposure to climate conditions, sensitivity to those conditions, and the capacity to adapt to the changes.

Respond to climate change: Human activities aiming at climate change adaptation and climate change mitigation.

Adaptation: Adjustment in natural or human systems to a new or changing environment. Adaptation refers to adjustments in natural or human systems, intended to reduce vulnerability to actual or anticipated cc and variability or exploit beneficial opportunities.

Mitigation: Actions resulting in reductions to the degree or intensity of GHG emissions.

Climate Change Scenario: A plausible description of how the future may develop based on a coherent and internally consistent set of assumptions about key driving forces (e.g., rate of technological change, prices) and relationships. Note that scenarios are neither predictions nor forecasts, but are useful to provide a view of the implications of developments and actions.

Sea Level Rise: is the rise in the average height of the oceans over the entire globe at a single point in time, it does not include ocean tides, storm surge. Sea level rise at a specific location in the ocean may be higher or lower than the global mean because of differences in ocean temperature and other effects.

I. RATIONALE

1.1. Importance of the program

Climate change, illustrated mainly by global **warming** and **sea level rise**, is one of the most serious challenges facing human being in the 21st century. Natural disasters and other extreme climate phenomena are more often observed all around the world, whereas average temperature and global sea level are increasing at unprecedented rate, becoming a major concern of all nations.

Climate change will seriously affect life, production and environment worldwide: up to 2080, grains production may decrease by 2-4% while grains price may rise by 13-45%, and famine may affect 35-60 % of the world population; sea level rise at high rate may cause floods and salt water intrusion in the low land areas, thus harm agriculture and pose risks to industries and future socio-economic systems. Such infrastructure designed with existing standards will hardly be durable in the future.

The annual average temperature of Vietnam has increased about 0.7°C in the last 50 years; sea level has increased about 20cm in the same time. El-Nino and La-Nina have seriously impacted Vietnam. Climate change has made natural disasters, especially storms, floods, and droughts, become increasingly severe. It is predicted that the average temperature will increase by 3°C and the average sea level of Vietnam will increase by 1m at the year 2010.

According to the World Bank (2007), Vietnam is among the countries which are hardest hit by climate change and sea level rise. Mekong and Red rivers' delta are projected to be the most seriously inundated. With sea level rise of 1 meter, about 10% of the population would be directly affected and lost of GDP would be about 10%. About 40.000km² of the coastal deltas are inundated every year, in which, about 90% of the Mekong River delta is almost completely inundated. If sea level rises by 3 meters, about 25% of the population would be directly affected with GDP lost of about 25%.

Climate change impacts to Vietnam are considered to be serious. It is obviously a challenge to the cause of hunger eradication and poverty reduction, the implementation of millennium development goals, and the country's sustainable development.

Sectors, areas, and localities vulnerable to climate change are defined as Water resources, Agriculture and Food Security, Public Health, Deltas and coastal areas.

The Government of Vietnam, with a clear vision on climate change impacts, early ratified the United Nation Framework Convention on Climate Change and the Kyoto Protocol.

Some ministries, sectors, regions have launched programs/projects to study trends and impacts of climate change on natural resources, environment and socio-economic development, propose and implement climate change adaptation measures.

However, such above-mentioned efforts are considered insufficient for effective responding to climate change impacts and risks. Therefore, development of a National Target Program to Respond to Climate Change (hereinafter referred to as the NTP) as

requested by the Government's Resolution No. 60/2007/NQ-CP dated 3rd December 2007 is of very high importance.

1.2. Legal basis

- In Official Correspondence No. 1357/CP-QHQT, the Prime Minister has assigned the former Hydro-meteorological Service as the leading and focal point organisation of the Government of Vietnam to participate and carry out activities related to the Climate Convention and Kyoto Protocol. From 2003 this responsibility was transferred to the MONRE
- The Government of Vietnam ratified UN Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol on November 16th 1994 and in September 2002, respectively. Since February 1995, Vietnam officially was a Non-Annex I Party of the Convention.
- The Law on Environment Protection has stated clearly as hereinafter: The Government of Vietnam is ready to carry out its international commitments and responsibilities in terms of environment protection that the nation entered into agreements before.
- In Resolution No. 35/2005/CT-TTG dated October 17th 2005, the Prime Minister has regulated the organization of implementing the Kyoto Protocol under the UN Framework Convention on Climate Change in Vietnam.
- In Decision No. 47/2007/QĐ-TTg dated April 6th 2007, the Prime Minister has assigned MONRE and other related ministries/sectors as well as local authorities to implement Kyoto Protocol and Clean Development Mechanism (CDM).
- In Resolution No. 60/2007/NQ-CP dated December 3rd 2007 the Government has assigned MONRE to be in charge in collaboration with other related ministries and sectors to develop a NTP for coping with global climate change.

II. OVERVIEW OF CLIMATE CHANGE IN VIETNAM

2.1. Current Situation and Trend of Climate Change

According to observed data, changes of climate have the following noticeable points:

- *Temperature:* during the last fifty years (1951 - 2000), annual average temperature in Vietnam increased by 0.7°C. Annual average temperature in the last four decades (from 1961 to 2000) was recorded higher than annual average value of the three previous decades (from 1931 to 1960). Annual average temperature in the period from 1991 to 2000 in Hanoi, Da Nang and Ho Chi Minh City were 0.8°C; 0.4°C and 0.6°C, respectively, higher than average value in the decade of 1931 and 1940. In 2007, annual average temperature at these three locations were all higher than the average in the 1931 - 1940 decade by 0.8 - 1.3°C and similarly higher than average in the 1991 - 2000 decade by 0.4 - 0.5°C.
- *Rainfall:* At every location, change of annual average rainfall in the last 9 decades (1911 - 2000) was not consistent with each other. There was ascending time and also descending time. In the whole country of Vietnam, the trend of rainfall change varies from region to region.
- *Sea level:* According to the observation in the last 50 years at Cua Ong and Hon Dau stations the average sea level rised by about 20cm, which is comparable with global tendency.
- *Number of cold fronts:* In the last two decades (the end of the 20th century and the beginning of the 21st century) number of cold fronts affecting Vietnam was reduced significantly. In the years of 1994 and 2007, annually there were only 15 - 16 cold fronts equalling 56% of multi-year average. Six out of seven cases with least number of cold fronts (0-1 event) in a winter month (from November to March) appeared in the past two decades (in Jan. 1993, Feb. 1994, Mar. 1990, Dec. 1994, Feb. 1997, Nov. 1997). Recent climate abnormal is the cold front resulting in extreme and damaging cold in 38 consecutive days in January and February 2008. This caused significant damage on agricultural production.
- *Number of Typhoon:* in the recent years, there were more typhoons with higher intensity affecting Viet Nam, typhoon track has moved towards Southern latitude and typhoon season ends later. Many typhoons moved more abnormally.
- *Number of average drizzle days* per year in Hanoi in the decades of 1981 - 1990 declined gradually and in recent 10 years there was only half of multi-year average number (15 days per year).

2.2. View of Climate Change Tendency in Vietnam

- *Temperature:* In all regions, annual average temperature would increase by 2°C in 2050. At 2100 the temperature is projected to rise by 3°C.
- *Rainfall:* rainfall varies in different regions. It may increase by 0-10% in rainy season and decrease by 0-5% in dry season, and becomes more fluctuant
- *Sea level:* Averaged in the entire coastal areas of Vietnam, it is estimated that sea level may rise by 100cm in 2100.

2.3. Initial assessment of potential impacts of climate change in Vietnam

Vietnam is facing a number of impacts of climate change on many aspects, e.g., human life, livelihood, natural resources, social structure, infrastructures and economy. Vietnam is considered as one among the countries most seriously impacted by climate change and sea level rise. In order to respond to climate change, proper investments as well as efforts from the whole society are required.

2.3.1. Vulnerability to Climate Change

Data and analysis have shown that climate change causes potential impacts on various sectors, regions, areas as well as communities in Vietnam. Climate change would increase vulnerability and hinder or reverse the development process. The poorest, who commonly live in rural areas, are the most vulnerable people impacted by climate change, especially poor people living along the coastal areas and high mountainous areas.

Vulnerability assessment for each sector, region, and community at both present and future must be carried out. Vulnerability to climate change (including climatic variations and climatic extremes) of a system depends on nature and scale of climatic variations, impacts of climate change on the system as well as sensitivity and adaptation capacity of the system. Adaptation capacity of a system depends on natural, socio-economic and environmental properties of the system. Serve comprehensive impacts of climate change on systems with weak adaptation capacity results in high vulnerability.

In Vietnam, sectors/objects, which are considered most vulnerable to climate change, are agriculture and food security, water resources, public health, and habitat (particularly coastal and mountainous areas) (see Table 2.1 and 2.3).

Vulnerable regions are coastal regions (including deltas, especially those affected by storms and storm-induced floods), mountainous regions (especially those often encounter flash flood and land slide) (see Table 2.1).

It is reasonable to say that climate change will magnify natural disasters' severity in terms of intensity and frequency.

Vulnerable community includes farmers, fishers (especially those living in vulnerable region), ethnic minority groups in mountainous areas, senior citizens, women, children and poor people living in urban areas (see Table 2.1).

2.3.2. Potential Impacts of Climate Change in Vietnam

According to assessment of the Intergovernmental Panel on Climate Change (IPCC), and initial studies of Vietnamese scientists, potential impacts of climate change on Vietnam are serious and need to be further studied.

1) Summary of serious impacts of climate change

Most serious impacts of climate change in Vietnam are summarized as the followings:

a) Impacts of sea level rise

Vietnam has a long coastline of about 3,260km, million square kilometres of water shelf, and more than 3,000 off-shore islands, large coastal low land areas. Therefore, Vietnam experiences high floods in rainy season and droughts and salt intrusion in dry season. Climate change and sea level rise would make these risks more serious, increase flooded areas, obstruct water drainage, intensify coastal line erosion and salt intrusion which causes difficulties for agricultural production and domestic water usage, and create critical risks to coastal infrastructures such as sea malnutrition, road, docks, and factories, urban areas and coastal communities. Sea level and sea water temperature rising have potential adverse effects on coral reefs and mangrove forests, biological foundations which are bases for coastal aquaculture and fishery. Therefore, significant investments should be attracted into sea-dyke construction and consolidation to respond to sea level rise, infrastructure development, resettlement of coastal communities, and construction of urban areas which have high adaptability to sea level rise.

b) Impacts of global warming

Increasing temperature has potential impacts on natural ecosystems. It would cause shifts in thermo-border of continental ecosystems and fresh water ecosystems as well as shifts in flora and fauna structure in certain regions. Degradation of biodiversity would accelerate due to loss of some temperate and sub-tropical species.

For agricultural production, cropping pattern and livestock may be changed in some regions, e.g. winter crop in the North would be shortened or even no longer exist, whereas the main crop would prolong. Therefore, cultivation methods must be adjusted. Temperature rise with higher variability (both maximum and minimum temperatures) will combine with other climatic extremes and natural disasters to induce pestilent insects and diseases to wide spread. Consequently, agricultural production and food security would be seriously threatened.

High temperature and humidity would elevate pressures on human health, especially for old people and children, and cause diseases, particularly tropical and infectious diseases by favouring growing condition of bacteria, insects and diseases vectors.

Temperature rise would also badly affect such sectors as energy, transportation, industry, construction, tourism, trade, etc. due to the fact that higher cost would be spent for cooling, ventilation, and maintenance.

b) Impacts of climatic extremes

The increase of climatic extremes in both frequency and intensity due to climate change is a frequent risk, both short-term and long-term, to all sectors, regions and

communities. Storms, floods, droughts, heavy rains, and high temperature are annual disaster in many parts of the country, causing large damages for production and life.

Climate change would make those natural disasters much more severe, even become catastrophes, posing risks to socio-economic development and clear up achievements of many years of development, including achievements of millennium development goals. Regions/areas which are expected to suffer biggest impacts of those extremes are coastal zone along the Central Part, mountainous region in the North and Northern Center, Red River Delta and Mekong River Delta.

2) Potential impacts of climate change on specific sectors/regions

a) Impacts of climate change on Water Resources

Water resources are put under additional risks due to ever increasing droughts in some regions and seasons. This will directly affect agriculture, water supply for rural and urban areas as well as electricity generation.

Changing rainfall pattern would cause serious floods in raining season and droughts in dry season, thus obstruct water supply and cause conflicts on water use. For such big river like Red river and Mekong river, annual flow and flow in dry season would be decreased, in contrary the flow in flood season increased.

b) Potential Impacts of Climate Change on Agriculture and Food Security

Climate change has significant impacts on growth and productivity of plants, affects cropping seasons, and may induce pestilent insect. Climate change would also affect growth and reproductive of livestock, increase risk of pathogenesis and spread of dangerous diseases.

Due to warming over the country, the adaptable time for tropical plants will be longer while for the sub-tropical plants is shorter. Increased temperature results in northward and upward movement of tropical plants, whereas the area of sub-tropical plants tends to shrink. It is estimated that in the 2070s upland sub-tropical plants would be observed to grow normally at the height of more than 100-500 m and 100-500 km further to the North, as compared with their present-day location.

Climate change is likely to increase the frequency, intensity, oscillation and extreme levels of dangerous weather phenomena such as storms, whirlwinds or temperature and rain induced natural disasters such as dry weather condition, floods, or droughts, damaging cold, salt intrusion, pests, which may all result in decreased livestock and crops productivity.

Climate change will also narrow down area of agricultural land. A significant fraction of agricultural land in the coastal plain, the Red River Delta and the Mekong River Delta will be exposed to salt water intrusion as a result of rising sea level if no responding method is applied.

c) Impacts of climate change on Forestry

Due to climate change, forest ecosystems would be affected in different ways:

- Sea level rise can make the existing mangrove forests shrunken, which in turn has negative effects on indigo forest and forests planted on acid-contaminated land in Southern provinces.

- Dipterocarpaceae can move northward and upward to the higher belts while deciduous forest with high percentage of drought-resistant trees are growing strongly.
- High temperature combined with rich sunlight may boost photosynthesis, thus enhance tree assimilation process. However, the growth rate of forest plants, in terms of biomass, could be reduced due to lower humidity
- Plants and animals are at higher risk of extinction, particularly some valuable species.
- Increase of temperature and drought may cause forest fire, pests outspread and diseases, etc.

d) Impacts of climate change on Aquaculture

Sea level rise and salt-water intrusion could result in the followings:

- Salt water reaches further upstream therefore progressively damaging the habitat of some fresh water creatures.
- Existing mangrove forests are getting shrunken, thus interfere the ecosystem of some marine species.
- The ability to sustain organic matter of seaweeds would be weakened and in return, this would result in a reduced supply of those products needed for photosynthesis and nutrients for benthos. Therefore, the habitat of many marine species would be degraded.

Rising temperature may also lead to some consequences such as:

- Distinctly different temperature layers in still waters, thus, directly affect the habitat of marine creatures.
- Some species would be forced to move to the Northwards or to deeper water, causing a shift in depth-wise pattern of marine creatures.
- Shorter photosynthesis and faster decomposition of organic substances will affect the food sources for marine creatures. Consequently, they would spend more energy for respiratory process and other associated living activities, and productivity and quality of marine products will eventually be degraded.
- Coral reefs would be degraded and destructed, and physiological and biochemistry processes under the interactive relation between coral reefs and seaweeds would be alternated.
- High intensity rainfall would lower sea water salinity in certain period of time, resulting in mass death of brackish water and coastal creatures, particularly *Malacology* (shell and oyster, etc.) since they cannot adapt to the change in salinity.

Impacts of climate change on aquaculture and fishing industry may be found as the followings:

- Sea level rise would badly affect marine physiological-biological processes, thus cause changes in the composition and reduced quantity of existing marine population.
- Increased temperature would definitely disperse aquatic product resources. Production of subtropical fish species with high economic values would be dropped or even stopped. Coral reef fishes are found to have almost disappeared.
- Phytoplankton species – the first link of food chain, the food source for zooplankton - would be destroyed. As a consequence, phytoplankton would decrease in number, and the food source for sub-surface and middle layer creatures would be eventually exhausted.

d) Impacts of climate change on Energy

Sea level rise may have such impacts as the followings:

- The operation of offshore based oil rigs, gas-pipe system and gas-fuelled power plants located near the sea will be affected, making the operation and maintenance of machine and equipments more costly.
- Those electricity distribution stations located below the rising sea level would need more energy for pumping water out. Furthermore, the rising sea level would also have considerable impacts on the course of big rivers that are associated with hydroelectric plants.

A rise in temperature would also affect energy industry:

- Higher cost for ventilation and cooling for mining work and lower output of power plants.
- Increased demand for electricity consumption for daily life and rather higher cost for cooling activities for industries, transportation and trading services.
- Temperature rise combines with higher evaporation rate and unusual rain would affect the water reserve and reservoir intake.
- Climate change taking place with increased rainfall and storm frequency would also affect, firstly to offshore oil rigs, gas-pipe system, electricity distribution network, etc.
- Requirement to limit green house gases emission would also affect energy industry.

e) Impacts of climate change on Transportation

Climate change would have negative impacts on transportation, which is considered consuming large amount of energy and emitting increasing amount of green house gases to meet socio-economic development demands in the period of industrialization and modernization. The sector needs to renovate itself and apply modern technologies, which consume less energy to control and limit green house gases emission. However, these also mean a larger investment put into the sector.

Temperature rise would make engines to consume more fuel, while cooling and ventilation requirement would also be more costly to transportation sector.

e) Impacts of climate change on Industry and Construction

Industrial zones, serving as the country's important economic centres and located mostly in low-lying deltas are facing with increased occurrence of floods and challenges in seeking for drainage solutions as a result of floods from rivers and rising sea level. This requires thorough assessment and more costs for the construction and design of industrial zones and it is necessary that mitigation measures are taken, particularly for those industrial zones with hazardous wastes constructed in low lying regions.

Climate change would cause difficulties in water and material supply for industries and construction such as textile, manufacturing, exploitation and processing of mineral resources, agricultural products, forest product and aquaculture products, industrial and domestic construction, nuclear technologies, and communication. More frequent extreme climatic phenomena and natural disasters would reduce life span of materials, equipment, machines, and buildings, whereas maintenance costs would be higher.

These sectors need to review and renovate the plans and technical standards to respond to climate change.

e) Impacts of climate change on Human Health

Temperature rise would have negative impacts on human health, e.g. those threaten elderly people with heart related or mental diseases. Warming climate would also result in a change in the seasonal pattern of annual temperature. In the North of Vietnam, winter would become warmer and thus, changing the biological characteristics of human bodies.

Climate change will lead to more frequent incidence of such tropical diseases as malaria, viral hemorrhagic fever, proliferation of viruses and pests, pathogenic agents, and increased number of people with infection diseases, etc.

Natural disasters such as surges, storms, floods, heavy rainfall and landslides, and more that take place in a more frequent and more intense manner would also result in higher number of deaths and negatively affect human health by causing environmental pollution, malnutrition, diseases. The most vulnerable people are poor farmers, ethnic minority groups, elderly people, children and women.

e) Impacts of climate change on Culture, Sport, Tourism, Trade and Services

Climate change can directly affect the activities in the field of culture, sport, tourism, trade and services and indirectly affect other fields as transportation, construction, agriculture, human health etc.

Sea level rise affects coastal beaches, some of them can be disappeared, the others have to move deeper inland and exploitation of the beaches may be negatively affected. Sea level rise can damage the culture and historical heritage, preservation areas and related infrastructures etc.

Due to increasing temperature and shorter cold season, an attraction of the well known tourism areas and resorts in mountains can be reduced; meanwhile summer tourism season can be longer (see Table 2.2 and Table 2.3)

Climate change needs to be counted as a risk in developing and implementing strategies and plans for socio-economic development or sectoral/local development. Climate change impacts would challenge the goal of poverty reduction and hunger elimination, millenium development goals and the country's sustainable development. Potential impacts of climate change and sea level rise to millenium development goals are illustrated in Table 2.4.

Table 2.1: Vulnerability to climate change

Climate Change Impact	Vulnerable Areas	Vulnerable Sectors	Vulnerable Communities
Temperature increase	<ul style="list-style-type: none"> Mountainous Areas: Northern East, Western East and North Central Part Northern Part Delta 	<ul style="list-style-type: none"> Agriculture and food security Aquaculture Natural ecology systems and biodiversity Water resources Energy (production and consumption) Community health care 	<ul style="list-style-type: none"> Poor farmers Ethnic minority people, senior citizens, children and women
Sea level rise	<ul style="list-style-type: none"> Coastal Areas, especially deltas and flooded areas (Mekong River Delta, Red River Delta and coastal Central Part) Islands 	<ul style="list-style-type: none"> Agriculture and food security Aquaculture Sea and coastal ecological systems Water resources (surface and ground water) Energy Tourism Residential Space Infrastructure, industrial zones 	<ul style="list-style-type: none"> Coastal communities, especially poor farmers and fishermen Senior citizens, children and women
Floods, flash floods, and land-slide	<ul style="list-style-type: none"> Coastal Areas (including delta areas and flooded areas: Delta and coastal Northern Part, Mekong River Delta and 	<ul style="list-style-type: none"> Agriculture and food security Aquaculture Transportation Water resources Infrastructure Residential Space Health care and life 	<ul style="list-style-type: none"> Coastal communities Mountainous communities, especially ethnic minority groups Senior

	coastal Central Part) <ul style="list-style-type: none"> • Mountainous areas: Northern West, Northern East, North Central Part and Highlands 	<ul style="list-style-type: none"> • Trade and Tourism 	citizens, children and women
Tropical cyclones	<ul style="list-style-type: none"> • Coastal Areas: , especially coastal Central Part, Red River delta and Mekong river • Islands 	<ul style="list-style-type: none"> • Agriculture and food security • Aquaculture • Transportation • Energy • Offshore and coastal activities • Infrastructure • Place of Residence • Health care and life • Trade and Tourism 	<ul style="list-style-type: none"> • Coastal communities, especially fishermen • Senior citizens, children and women
Droughts	<ul style="list-style-type: none"> • Central Part, especially South Central Part • Delta and Northern Part Midland • Mekong Delta • Highlands 	<ul style="list-style-type: none"> • Agriculture and food security • Water resources • Energy (hydro power) • Waterways • Health care and life 	<ul style="list-style-type: none"> •

Table 2.2: Level of sensitiveness and adaptability

Target Categories	Sensitiveness	Adaptability
Water resources	Highly sensitive	Adaptable to a certain extent
Agriculture and food security	Highly sensitive	Adaptable to a certain extent
Marine and coastal ecosystems	Highly sensitive	Unclear or hardly adaptable
Forestry	Sensitive	Adaptable to a certain extent
Aquaculture	Sensitive	Adaptable to a certain extent
Irrigation (mostly infrastructure)	Sensitive	Adaptable to a certain extent
Energy	Sensitive	Adaptable to a certain extent
Transportation	Sensitive	Adaptable to a certain extent
Industry and Construction	Sensitive	Adaptable to a certain extent
Tourism, Sport, and Recreational activities	Sensitive	Adaptable to a certain extent
Trade and Services	Sensitive	Adaptable to a certain extent
Residential areas	Sensitive	Adaptable to a certain extent
Health care	Sensitive	Adaptable to a certain extent
Migration	Sensitive	Adaptable to a certain extent
Natural Landscape	Sensitive	Unclear

Table 2.3: Potential Impacts of Climate Change and Sea Level Rise

Sector, Area, Object	Impact factors					
	Temperature rise	Sea level rise	Tropical cyclones	Flood	Drought	Other climatic extremes (*)
Agriculture and food security	High	High	High	High	High	High
Aquaculture	High	High	High	High	Medium	Medium
Energy	High	Medium	Medium	Medium	High	Medium
Industry	High	High	Medium	Medium	Medium	Medium
Transportation	High	High	High	High	Medium	Medium
Construction	High	High	High	High	Medium	High
Tourism	Medium	High	High	High	Medium	Medium
Health care	High	Medium	Medium	High	High	High
Natural ecosystems and biodiversity	High	High	Medium	Medium	Medium	Medium
Water resources	High	High	Medium	High	High	Medium
Residential area	Medium	High	High	High	Medium	Medium

Table 2.4: Potential impacts of climate change and sea level rise on millenium development goals

Millenium development goals	Potential impacts of climate change and sea level rise
Goal 1: Eradicate extreme poverty and hunger	<ul style="list-style-type: none"> - Impacts on properties and livelihoods including housing, water supply, health and infrastructure. These impacts may reduce human ability in maintain their daily life; - Reduce agricultural production, thus badly affect food securities; - Cause changes in natural and natural resources system, infrastructures and productivitiy, lower income opportunities and economic development; - Social pressures in natural resources utilization may causes conflicts and instabilities, thus force communities to migrate;
Goal 2: Achive universal primary education	<ul style="list-style-type: none"> - Loss of assets and livelihoods; natural disasters reduce opportunities to be regularly educated and trained. Many children (especially female) may be forced to quit school in order to help the family raise income or take care of the illd family members; - Malnutrition and diseases would also reduce the rate of school children and their ability to learn; - Resettlement and migration may reduce the opportunity to have education.
Goal 3: Promote gender equality and empower women	<ul style="list-style-type: none"> - Gender inequality would be more serious due to the fact that women livelihoods are heavily depend on the environment, such as agriculture. This would lead to health damage of women as well as reduce their opportunity to participate in decision making processes; - Women and female children are usually in charge in collecting water, fuel, and food. In the context of increasing impacts of climate change, they would have to adapt with natural resources decline and have to spend more time working; - Women are usually the main force of families which have very few properties. Unfortunately, these properties are usually very vulnerable by climate change induced disasters.
Goal 4: Reduce child mortality	<ul style="list-style-type: none"> - Morality and diseases would increase due to warmer weather, floods, droughts, and storms; - Children and pregnant women are useually most vulnerable to diseases infection (e.g. malaria and petechial fever) and water-born diseas. These diseases

	may bloom and spread to other regions.
Goal 5: Improve maternal health	<ul style="list-style-type: none"> - Reduce water resources quality, increase children malnutrition; - Natural disasters threaten food security, increase malnutrition and poverty.
Goal 6: Combat HIV/AIDS, malaria and other diseases	<ul style="list-style-type: none"> - Pressures on water resources and warmer weather would intensify diseases' - Households affected by AIDS have low livelihoods properties and high potential of malnutrition. This would magnify negative impacts of the diseases.
Goal 7: Ensure environmental sustainability	<ul style="list-style-type: none"> - Climate change impacts may cause changes and degradation of natural resources and ecosystems; - Cause biodiversity degradation and make environmental degradation more serious; - Climate change would cause changes in ecosystem-human relationship which would lead to loss of biodiversity and basic life support system.
Goal 8: Develop a global partnership for development	<ul style="list-style-type: none"> - Climate change is a global challenge. Response to climate change required global cooperation, especially to developing countries which need to adapt to negative impacts of climate change; - International relationships may be affected by climate change impacts

III. GUIDING PRINCIPLES, OBJECTIVES AND SCOPE

3.1. Guiding principles

- 1) Response to the climate change should be carried out on the principle of sustainable development, integration, sector/inter-sector, and region/inter-region;
- 2) Activities responding to climate change must be carried out with clear focuses which help to effectively respond to immediate emergent impacts as well as potential long-term impacts; The NTP is developed on the principle that proposed projects must be immediately implemented. Investment is considered economically effective in terms of mitigation of later serve damages.
- 3) Response to the climate change is the responsibility of the whole political system; society; sectors, organizations at all levels; communities and every individual. Response to climate change is an global, regional and national issue;
- 4) Climate change issues must be integrated into development strategies, plans, planning at all sectors and levels; into strategic environmental assessment, legal documents and policy institution; into legal documents development and implementation
- 5) Following the principle of “common but differentiated responsibility” as defined in the United Nations Framework Convention on Climate Change, Vietnam will successfully implement climate change response program if it receives sufficient finance and technology transfer from developed countries as well as other international funding sources.

3.2. Objectives

3.2.1. General Objectives

Strategic objectives of the NTP are to *assess climate change’s impacts on sectors/areas and regions in specific periods and develop feasible action plan to effective respond to climate change in each short-term/long-term periods* to ensure sustainable development of Viet Nam, take over opportunities to develop towards a low-carbon economy, and joint international community’s effort to mitigate climate change impacts and protect global climatic system.

3.2.2. Specific Objectives

1. To identify climate change features of Vietnam due to global climate change; Assess climate change impacts (including climate variability, sea level rise and climatic extremes) on every sector, area and locality;
2. To identify measures to respond to climate change;

3. To promote scientific and technological activities to establish scientific and practical foundation for climate change responding measures;
4. To enhance organisational structure, institutional capacity and the development and implementation of policies on climate change;
5. To enhance public awareness, responsibility and participation; human resource development to respond to climate change;
6. To expand international cooperation to obtain external supports in response to climate change, take over opportunities to develop towards a low-carbon economy, and joint international community's effort to effectively protect global climatic system.
7. To incorporate the NTP into socio-economic development strategies, and strategies of sectoral and local development;
8. To develop action plan of all ministries/sectors and localities to respond to climate change; to implement pilot projects to respond to climate change.

3.3. Approaches

- 1) Stakeholder Consultation approach involves broad range of stakeholder groups, focusing on local communities, considering current vulnerability and urgent adaptation needs, using two-way discussions and feedback;
- 2) Multidiscipline approach with participation of social organizations, experts from different fields, especially active and dynamic participation of sectors and localities;
- 3) Succession approach based on reference to the national strategies, including socio-economic development strategy, sector and local development strategies, review the knowledge and traditional experiences in response to natural disasters and climate extremes;
- 4) Base on *existing organizations* of the State, localities and sectors; domestic resources and international support;
- 5) Flexible, simple and plain.

3.4. Scope

3.4.1. Temporal scope:

- Phase I (2009-2010): Start-up.
- Phase II (2011-2015): Implementation
- Phase III (post 2015): Development

3.4.2. Spatial Scope:

- The whole country.

IV. MAIN ACTIVITIES

The program will be implemented by a combination of researches and practical climate change responding measures. While climate change scenarios, especially sea level rise, must be soon completed for ministries/sectors and localities to develop their own action plans, activities to respond to climate change (particularly natural disaster mitigation and prevention) must be immediately carried out in vulnerable areas/sectors/localities such as water resources, agriculture and food security, energy, construction, transportation, public health, deltas and coastal areas.

4.1. Assessment of Climate Change Impacts in Viet Nam

The key tasks that need to be implemented immediately are to assess climate variability and impacts of climate change (including climate variability, sea level rise, and climatic extremes) on different fields, sectors and regions, and develop climate change scenarios and sea level rise scenarios.

4.1.1. Targets to be achieved

1) Targets to be achieved by 2010

- Complete climate change scenarios, especially sea level rise, in Vietnam by early 2009 based on existing studies so that ministries/sectors and localities will develop their action plan to respond to climate change.
- Complete climate change scenarios development for the period 2010-2100 by 2010. The scenarios have scientific and practice basics with agreement and acceptance of the ministries, sectors and localities and can be used in the assessment of climate change impacts;
- Complete the assessment of level, nature and trend of climate factors in Viet Nam;
- Complete scientific foundation, methodologies, and guidance on climate change impacts, especially sea level rise, assessment on different fields, sectors and localities;
- Implement pilot projects to assess climate change impacts, especially sea level rise, on vulnerable sectors/areas/localities that are sensitive and vulnerable to climate change impacts, i.e. water resources, irrigation, agriculture, health and livelihoods, some delta and coastal provinces.

2) Targets to be achieved by 2015

- Update climate change scenarios in Vietnam, especially sea level rise;
- Complete climate change impacts assessment, especially sea level rise, for sectors/areas/localities.

4.1.2. Key activities:

a) Assessment of Climate Change and Climate Variability in Vietnam

- Develop a methodology for the assessment of climate change and variability in Vietnam;
- Assess the level, nature and trend of climate change.

- Assess trend of climatic factors such as temperature, rainfall, sea level, natural disasters (storm, flood, drought, etc.).

b) Development of Climate Change Scenarios for Vietnam for the Period of 2010-2100

- Develop climate change scenarios, especially sea level rise, for specific regions in each period based on global and regional green house gases emission scenarios.

c) Assessment of Climate Change Impacts on sectors/areas and localities

Based on statistics of recent decades and the agreed climate change scenarios, assessment can be made on the impacts of climate change on different sectors and localities; particularly those are sensitive and vulnerable to climate change impacts.

- Assessment of climate change impacts on natural condition and natural resources (water resources, land and ecosystems, biodiversity, etc.);
- Assessment of climate change impacts on different sectors i.e., Agriculture, Forestry, Aquaculture, Energy, Construction, Transportation, Healthcare, Livelihood and Tourism, etc;
- Assessment of climate change impacts on region (Southern Part Delta, Northern Part Delta, coastal areas, mountainous and highland areas, urban areas and industrial zones);
- Identify sectors/areas which are most vulnerable to climate change;
- Assessment of opportunities for Vietnam in response to climate change;

Climate change has adverse impacts on socio-economic development; yet, it also incurs a need for environmental friendly technologies. The action to respond to climate change would also create business opportunities since new markets for the technology of the energy, goods and services that consume less carbon to will be established. Changes in energy technologies and structures of different economies make it possible to distinguish between growth and emission. For a developing country like Vietnam, it is necessary to take into account access to bilateral funds to respond to climate change and other adaptation funds; and Clean Development Mechanism (CDM) also needs to be considered.

4.2. Identify measures to respond to climate change

The measures to respond to climate change will be identified based on results of climate change impact assessment and vulnerability assessment for sector/areas and localities.

4.2.1. Targets to be achieved

1) Targets to be achieved by 2010

- Complete developing methodologies and guidance for identifying measure to cope with climate change;
- Implement a number of pilot projects on coping with climate change for sectors/areas and localities which are vulnerable to climate change and sea level rise.

2) *Targets to be achieved by 2015*

- Complete identifying measures to respond to climate change for sectors/areas and localities;
- Start to implement selected measures for sectors/areas and localities according to action plan.

4.2.2. Key activities:

- Develop methodologies and guidance for identifying responding measures;
- Identify measures to respond to climate change for sectors/areas and localities;
- Assess socio-economic and environmental effects of identified measures;
- Select prioritised measures for each sector/area and locality based on given criteria;
- Develop and implement a number of pilot projects to respond to climate change for sectors/areas and localities which are vulnerable to climate change, particularly sea level rise;
- Start to implement measures to respond to climate change for sectors/areas and localities according to action plans.

4.3. Develop a scientific-technological program on climate change

The national scientific-technological program on climate change will be developed and implemented to provide scientific basics for the development of policy, institution and action plans to respond to climate change; to actively participate into international cooperation on climate change; to carry out research and start actions to use energy effectively; to develop technologies using clean technologies, to strengthen capacity to respond to climate change for ministries/sectors.

4.3.1. Targets to be achieved

1) *Targets to be achieved by 2010*

- Design and develop framework of a database on climate change;
- Develop and start to implement the national scientific-technological program on climate change with identified scientific-technological obligations;
- Identify domestic and foreign financial resources for scientific-technological activities.

2) *Targets to be achieved by 2015*

- Complete and update a database on climate change;
- Effectively implement the national scientific and technological program on climate change at ministries/sectors and localities;
- Research on nature, trend and scenarios of climate change impacts on sectors/regions and responding measures are updated and effectively

implemented, thus contribute to strengthening capacity to respond to climate change;

- Scientific-technological capacity of ministries/sectors/localities on climate change issues are developed; scientific-technological activities are effectively implemented;
- Domestic and foreign financial resources for scientific-technological activities on climate change are sufficiently mobilized.

4.3.2. Key activities

1) Develop the National scientific and technological program on climate change

- Identify objectives and develop contents of the National scientific-technological program on climate change;
- Develop organizational management structure of the program;
- Develop a list of scientific-technological projects on climate change in each period, including researches on scientific basis and methodology; identify objectives and contents of every single research project;
- Select and approve scientific-technological projects for ministries/sectors/localities.

2) Implement the National scientific and technological program on climate change

- Develop a climate change database for research and assessment of climate change impacts and identify measures to respond to climate change;
- Study the nature of “unclear” issues on climate change, impacts of climate change on socio-economic development and environment, analyse and assess economic aspect of activities to respond to climate change;
- Research to develop and apply technologies to respond to climate change.
- Transfer technologies to respond to climate change to sectors/areas/localities to apply in implement action plans to respond to climate change;
- Carry out international cooperation programs/projects on climate change, transfer and apply climate friendly technologies.

3) Scientific and technological resources development

- Strengthen scientific-technological organizational structure of sectors on climate change at all levels;
- Develop human resources and develop foundation for scientific-technological activities on climate change for sectors/levels;

4) Mobilizing financial resources for science-technological researches

- Mobilize and effectively use financial resources for scientific-technological activities and training on climate change;
- Develop policies and mechanism to encourage or punish enterprises/organizations/individuals who promote or obstruct scientific-technological research on climate change and related issues.
- Promoting development of coordination mechanism between research, education/ training and technology implementation institutions in the related areas;
- Using effectively financial resources and transferred technologies from bilateral/multi-lateral cooperation, from the governments, international organizations.

4.4. Strengthen the Capacity in the Organization, Institution and Policy on Climate Change

To develop, amend and perfect the system of legal normative documents concerning climate change response and other related policies, and to ensure the legal basis to implement the activities, focusing on determined regime for incorporation of climate change issues into strategies, plans and planning for socio-economic and sectors development; To develop mechanism to encourage coordination of NTP implementation in whole country, territorial regions, localities and sectors; To encourage science-technological research, awareness raising to serve the implementation and management of NTP; To perfect and improve efficiency of management organization structure relating to the climate change from central to local levels.

4.4.1. Targets to be achieved

1) Targets to be achieved by 2010

- The framework of legal documents and policy, mechanism is basically developed and perfected;
- Mechanism to co-ordinate among the ministries/sectors/localities and program management apparatuses will be established. Almost every localities and ministries, managing fields and sectors, which are sensitive and vulnerable to climate change participate in the implementation of this mechanism.

2) Targets to be achieved by 2015

- The framework of legal documents and policy, mechanism is basically issued and updated;
- The mechanism to co-ordinate among the ministries/sectors/localities and program management apparatuses is implemented and fully updated. Generally, all ministries/ sectors at central and provincial level implement this mechanism;
- Mobilization of many sectors and other stake-holders to participate in implementation of the NTP.

4.4.2. Key activities

- a) Develop and improve the system of policies, legal documents on climate change at all relevant levels and sectors; focusing on the determined regime for incorporation of climate change issues into strategies, plans and planning for socio-economic and sectors development.
- b) Develop coordination mechanism to implement the NTP in the whole country, territorial regions, localities and sectors. The coordination mechanism would be developed based on the following principles:
 - Tasks should be clearly and specifically assigned to each ministry, sector and level;
 - Participation of business sector and communities should be maximized.
 - The NTP should be effectively integrated into socio-economic development plans and strategy, and development plans of sectors and localities in both legal documents and practical implementation.
 - Climate change factors should be integrated into strategic environment assessment and environmental impact assessment procedure to forecast environmental evolution of plans and development projects, thus effective measures to respond to climate change could be actively proposed.

4.5. Awareness Raising and Human Resources Development

Strengthening the communication, education to raise the awareness and responsibilities of the climate change for the whole society; re-enforcing the coordination among line ministries, sectors in decision-making and coordination mechanism and the participation of the community and enterprises in the implementation of activities to respond to climate change.

4.5.1. Targets to be achieved

1) Targets to be achieved by 2010

- Awareness raising plan and strategy would be basically developed and initially implemented at the localities and the ministries managing the fields, sectors sensitive and vulnerable to climate change;
- Plan of awareness raising in education and training system would be initially implemented; materials and tools for raising awareness are developed and popularised;
- Science-technological resources development plan would be completed and implemented in localities and in ministries/sectors which have authority in state management of sensitive and vulnerable fields to climate change;
- Over 10% of population communities and over 65% Government officials/staff possess basic knowledge on the climate change and its impacts.

2) Targets to be achieved by 2015

- Plan for awareness raising on climate change would be gradually and effectively implemented at central and local levels;
- Materials and tools for raising awareness would be completed, updated and widely popularised.
- Awareness raising plan would be implemented in training and education system at all levels;
- Over 80% population communities, 100% Government officials /staff would obtain basic knowledge on the climate change and its impacts.

4.5.2. Key activities

1) Awareness Raising

Speed up the communication, propaganda, and education to raise the awareness for all levels, organizations, sectors, and individual. The activities will be done in two ways: (i) Popularise common knowledge of climate change to the communities (ii) Provide in-depth information to a group of screened and selected people.

Specific activities:

- Develop the strategy and education plan to raise the awareness and communication about climate change;
- Develop overall plan to raise awareness on climate change to screen and selected target groups (including management officials at all levels);
- Develop the proposal to establish a network of communicator and complete the mechanism to maintain regular activities of this network to commune level;
- Develop overall plan to integrate the contents of climate change in educational curriculum of popular school and university level;
- Develop programs for training courses to specific target people, training and technology transfer: compose communication, education and training documents and materials; use communication tools: books, Newspaper, gazette, radio, movies to disseminate the activities within the climate change context;
- Develop behaviour/habit in sustainable development for the community (save electric, water; classify and recycle waste, etc).
- Encourage the participation of the enterprises and community in the activities within the context of climate change.

2) Human Resources Development

The activities to develop the human resources should be done in all levels, sectors and staff related (managers, planner, program officer, project staff and experts, etc). The contents of human resources development comprise of the below:

- Training need assessment for each period, each sector, each level;
- Assess the capacity of current training centres in the country;

- Identify the professional areas that needs training related to climate change: the areas of basic study; analyse the policy on climate change adaptation and mitigation, information system and project management;
- Develop strategy and plan to train human resources domestically and internationally; emphasize in-depth training for human resources in science and technology on climate change;
- Develop program, curriculum, training procedures for the professional training courses organized by the program;
- Develop the mechanism to attract talented persons and provide favourable condition for young scientists developing their expertise;
- Encourage local scientists to participate in international scientific and technical researches in the field of global climate change and hold positions in international institutes of scientific and technical research organizations.

4.6. Enhancement of International Cooperation

Enhancement of international cooperation aims at two main purposes: (1) taking opportunity obtain and effectively use supports from international community, including financial support and technological transfer, through bilateral and multilateral cooperation channels; and (2) Participate in regional and global cooperation activities on climate change.

4.6.1. Targets to be achieved

1) Targets to be achieved by 2010

- A cooperation mechanism between Vietnam and international donors in implementing the NTP established;
- Bilateral and multilateral cooperation between Vietnam and some other countries/international organizations to respond to climate change established;
- Initial aid (financial support, technology and expertise transfer) of international community to Vietnam to implement the NTP primarily identified;
- Vietnam to contribute to the development of international agreements/documents on climate change after 2012;
- A framework of legal documents on mechanisms/policies to encourage investment into CDM projects, climate change response projects, and environmental friendly technology transfer projects supplemented and finalized so as to facilitate foreigner partners to invest into such projects in Vietnam.

2) Targets to be achieved by 2015

- A cooperation mechanism between Vietnam and international donors in implementing the NTP finalized and comprehensively implemented;

- Many countries/international organizations encouraged supporting Vietnam in implementation of the NTP. International support for Vietnam to implement the NTP raised up to 50% of total budget of the program. This would be an important basis to mobilize resources for the program implementation;
- International support to Vietnam to implement the NTP effectively used;
- Capacity in international negotiation on climate change of Vietnam's staff considered adequate;
- Development and implementation of CDM projects in Vietnam popular in potential sectors/fields.

4.6.2. Key activities

- Establish a Task force to support Vietnam to respond to climate change among the international donors at national/ministerial/sectoral/local levels;
- Establish specific and transparent cooperation mechanisms between Vietnam's ministries/sectors/organizations/localities and international donors/partners in order to facilitate the implementation of the NTP;
- Negotiate and sign bilateral and multilateral agreements on coping with climate change between Vietnam's ministries/sectors/localities and corresponding agencies of other countries and international organizations in order to encourage international investment into projects in the field of responding to climate change, technology transfer, including CDM projects;
- Develop and perfect mechanisms/policies to effectively utilize international support for the NTP implementation;
- Develop a plan to obtain financial support from multilateral funds and Climate change adaptation funds of international organizations as well as bilateral support from developed countries;
- Participate in international conferences, meetings, workshops, and negotiations to discuss and contribute to development of international agreements/documents on climate change for the post 2012 period according to the Bali roadmap;
- Exchange information/experience on climate change with other countries and international organizations;
- Develop human resources, strengthen capacity of staff of ministries/sectors/localities working in the field of climate change via domestic and overseas training courses.

4.7. Mainstreaming the NTP in Strategies, Plans, Socio-economic Development Planning and other Sectoral/Local Development Plans

Mainstreaming climate change factors into socio-economic development strategies and plans (hereinafter referred to as Development plan) is the adjustment and supplementation of the Development plan, including guiding principle, institution, organization and operation relating to the implementation of Development plan, tasks

and outputs of the Development plan as well as apparatus to implement the Development plan to be appropriate with trends of climate change, climatic extremes as well as their short-term and long-term effects on the Development plan.

For climate change impacts, mainstreaming climate change factors into Development plan is reviewing, admendment and supplementation of existing and future Development plans which recognize climate change impacts and corresponding measures to cope with those impacts. Mainstreaming climate change into Development plan is a thorough implementation of guiding principle of the Communist Party and the State

Climate change factors should be comprehensively integrated into national strategies, plans, projects and programs in all three aspects: Institution, organization and operation, thus find out gaps and demands of existing programs and policies in terms of human resources and socio-economic aspects for amendment and supplementation. Mainstreaming climate change factors into exisiting and future Development plans is to ensure the efficiency and sustainability of Development plans, prevent risks to those plans caused by climatic extremes, long-tem trends of climate change, or unexpected impacts caused those plans implementation on the society and environment.

4.7.1. Targets to be achieved

1) Targets to be achieved by 2010

- Complete the assessment of climate change impacts, especially sea level rise, on Development plans;
- Complete the classification of responding measures for each Development plan;
- Develop and issue legal documents and guidance documents on how to comprehensively mainstream climate change factors into Development plan in all three aspects: institution, organization and operation; start to mainstream climate change factors into Development plans following the given legal documents.

2) Targets to be achieved by 2015

- A mechanism for mainstreaming process is widely and effectively applied;;
- Complete the mainstreaming of climate change factors into all Development plans of sectors and localities which are being implemented or will be implemented in the period of 2010-2020;
- Complete the assessment of mainstreaming process for Development plans in the period of 2010-2015.

4.7.2. Key activities

The mainstreaming process comprises of the following steps (see details in Annex I):

- Identify targets of the mainstreaming process;
- Evaluate climate change impacts on sectoral and local Development plans;
- Evaluate the implementation of sectoral and local Development plans;
- Evaluate awareness and capacity for mainstreaming process;

- Evaluate impacts of mainstreaming process (Positive and negative impacts)
- Develop strategies and mechanisms for mainstreaming (Regarding to financial, economic and policy aspects)
- Implement mainstreaming process for each sectoral and local development plans;

Key activities of the mainstreaming process include:

1) *National Strategy on Socio-economic Development*

This is important document of Viet Nam Government aimed at orientation the development for all sectors, localities over the country in the period from 5 to 10 years with the vision of 20 years. To ensure the synchronous among the components, activities of the NTP and National Strategy on socio-economic development the following tasks should be implemented:

- a) Assess the risks, challenges and opportunities generated by the climate change during the drafting development plan and criteria for sectors and localities;
- b) The solutions, activities of the NTP should be considered as components of National Strategy on socio-economic development and inserted in the priority plans of National Strategy on socio-economic development.

2) *Strategies, Plans, Planning of Sectoral and Local Development*

Integrate the NTP into sectoral and local development strategies and plans, such as: National strategy on hunger eradication and poverty reduction, national strategy on protection of community health, National strategy on Gender equity, National strategy on environment protection, National strategy on protection of water resources, National strategy on integrated management of coastal areas, National strategy on agriculture development, National strategy on forestry development, National strategy on fishery development, National strategy on transportation development, National strategy on energy development, National strategy on infrastructure development, National strategy on natural disasters prevention and other plans and planning of the sectors and localities. To integrate the NTP into sectoral and local development strategies and plans, the following solutions should be taken:

- a) Carry out in-depth studies to assess the threats, impact levels of climate change to sectors and regions. On the basis of these studies, it is possible to evaluate the influence of the implementation of development strategies, plans to the climate change, as well as the climate change related risks affecting the completion of the objectives set in the strategies and plans;
- b) Develop the mechanism and legal documents in order to move forwards to make the impact assessment of the climate change become one of the compulsive requirements of the programs, plans and development projects;

Among the above-mentioned strategies, the National strategy on natural disasters prevention directly links with responding measures to cope with immediate impacts of climate change, whereas the National strategy on energy development closely links with climate change mitigation.

- *National strategy on natural disasters prevention*

Increasing frequency and intensity of natural disasters as well as their expanding affected areas are immediate and long-term impacts of climate change. Therefore, integration of climate change issue into the National strategy on natural disasters prevention, approved by the Prime Minister at Decision No. 172/2007/QĐ-TTg dated 16 November 2007, is one of important activities to be complete at the soonest. This is an important strategy to minimize damage of life and properties, natural resources, environment and cultural heritages, thus ensure the country's sustainable development and security.

As climate change is causing more natural disasters, components of the National strategy on natural disasters prevention and mitigation to 2020 must, at least in guiding principles, reckon more serving and unforecastable natural disasters. Therefore, natural disasters prevention and mitigation are becoming more difficult. The following issues may impact objectives of the National strategy on natural prevention and mitigation to 2020:

- a) Capacity to forecast floods, droughts and salt intrusion, notify earthquakes and warn tsunami and other hydrometeorological dangers is developed by may not meet the country's demands; Application of the 72h forecast period for typhoon and tropical low pressure has brought big errors, thus prevention and mitigation will be less cost-effective;
- b) Under climate change condition, drought has become a frequent and serious natural disasters as typhoon, flood, flash-flood, earthquake, tsunami, etc. Therefore, drought monitoring throughout the country should be a content of the National strategy on natural disasters prevention and mitigation;
- c) Development planning, socio-economic infrastructure standards, and residential areas in regions threatened by natural disasters may not be appropriate with natural disaster prevention and mitigation standards of each region, since these standards are subjected to change and such regions may be displaced by climate changed;
- d) Resettlement areas for people living in regions threatened by natural disasters are no longer appropriate due to climate change impacts;
- e) Dike system from Ha Tinh northward may be impacted by sea level rise and strong typhoons caused by climate change; flood prevention level of dike system in Central coastal areas, Central Highland and Eastern South may be changed; sea-dike system of the country must be steadily upgraded in accordance with climate change and sea level rise scenarios for each period and financial resources.

- *National Strategy on Energy Development:*

In the upcoming years, energy sector will be the major green house gases emission source of Vietnam. Therefore, activities to respond to climate change in energy sector play a key role in National Strategy on Energy Development approved by the Prime Minister in 2008.

Climate change may negatively affect the target to ensure national energy security and provide socio-economic development with sufficient and high quality energy source.

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Therefore, activities to respond to climate change need to be integrated into the National Strategy on Energy Development with the following trends:

- a) Increase the contribution of new and renewable energy sources (over 3% of total primary commercial energy in 2010, over 5% in 2020 and over 11% in 2050). Bring forward policies to encourage programs/projects in the field of new and renewable energy sources by preferential tax, infrastructure, subsidy, etc.
- b) Develop national grid to meet electric power demand of socio-economic development in the condition that summer average temperature may increase by 1-2⁰C;
- c) Promote the Energy saving and effective using Program to have the saving ratio of 3-5% over the total national energy consumption by 2010 and of 5-8% by 2011-2015 (compared to non-energy saving scenario in socio-economic development forecast);
- d) Promote application of new technologies, climatic friendly technologies by transferring technologies from CDM projects in energy sector to reduce green house gases emission.

4.8. Develop Action Plans to respond to climate change

Based on the assessment of climate change variability, agreed climate change scenarios, the assessment of climate change impacts, relevant ministries, sectors, and localities should take initiative in developing their own action plans to respond to climate change. Development of action plans should be taken step-by-step following a given procedure which ensures the quality and feasibility of those plans.

4.8.1. Targets to be achieved

1) Targets to be achieved by 2010

- Framework documents, action plans for coping with climate change are basically developed for the fields, sectors and localities vulnerable and sensitive to climate change;
- Action plans are implemented in the localities and ministries that manage fields, sectors and localities vulnerable and sensitive to climate change.

2) Targets to be achieved by 2015

- Action plans for coping with climate change and climate change mitigation in the main fields will be implemented throughout in all relevant sectors and levels.

4.8.2. Key Activities

1) Climate Change Adaptation

Vietnam is considered as one of the countries that will be suffering from strong impacts of climate change and sea level rise. Climate change adaptation has become a

crucial, immediate and long-term issue. Key adaptation activities are included in the NTP.

a) Climate change adaptation in different sectors

The most important part of the NTP is the orientation and basic strategy of the Government and sectors, localities to respond to climate change, particularly those sectors and localities that are sensitive and vulnerable to climate change impacts.

- *Water resources*

Key policy to respond to climate change is utilizing water resources scientifically, properly and cost-effectively. To ensure sufficient safe water, the following key activities must be included:

- Develop and improve a legal framework including laws and regulations, circulars, and amended policies.
- Related ministries/sectors strengthen their management mechanism over water resources at different levels in the context of the climate change;
- Develop implementation plans, programs to respond to climate change in the field of water resources at all sectors and levels;
- Identify suitable scientific and technical solutions, such as overall plan for river basins, change specifications for water use and exploitation projects, methods for cost-effective use of water sources, protection and preservation of water sources, water pollution control.
- Raise community awareness on methods for water use in response to climate change.

- *Agriculture*

Policies to respond to climate change in agriculture include the development of an agriculture that is diverse, sustainable, fast grasp and effective application of scientific achievements; new and high technologies and competitive in local and international markets. Construct new rural areas with developed and modernizing infrastructures with relevant economic structure of agriculture-industry-services. Ensure enough employment, hunger eradication and poverty reduction, a rural model of socially civilizing, democracy and equity with people living in wealth. Ensure food security, ecological balance and bio-diversity.

Ministry of Agriculture and Rural Development and other ministries and sectors should develop a program of the climate change adaptation, among, noticeable contents comprised of:

- Develop and improve the framework of a synchronous legal documents, Laws and circulars to protect the agriculture of commodity, diversity and sustainable development;
- Amend and improve policies and mechanisms to support the application of new technologies, modern scientific and technical solutions to change crops pattern, livestock and new farming techniques suitable with climate change condition.

- Develop and implement scientific and technical activities to adapt to climate change in agricultural sector;
- Plan effective use of agricultural land and water for fishery in consideration of immediate and potential impacts of climate change to ensure a sustainable agricultural production.

- *Public and human health*

Climate change adaptation in public health sector requires a strategy to control and monitor health care in all localities to protect human health under climate change and natural disasters condition.

Ministry of Health and other ministries/sectors should develop a program to adapt with climate change and natural disasters within Health sectors. Noticeable contents comprised of the followings:

- Establish standards of health and environmental hygiene for areas of condensed population, and develop and stipulate the standards of health and public health protection in all activities of the population in the consideration of the climate change;
- Tightly keep in quarantine of diseases at the boundary, border gates to prevent infection;
- Promote application of technological solutions, equipments, and control system of diseases in occurrence, growth, infection in the condition of the climate change, especially after each natural disaster;
- Develop and implement community education plans to raise the knowledge, awareness on environmental hygiene and health under the impact of the climate change.

- *Other fields*

Ministries/sectors should develop programs to adapt with the climate change within their sectors, in which important contents are as the followings:

- Develop adaptation strategy on the basis of reviewing sectors' activities and adjust Laws, regulations, rules, norms and procedures as well as activities of the sectors to adapt to climate change condition;
- Develop plans to apply advanced technologies which are highly adaptable to climate change in order to protect safe and sustainable development of the economic sectors;
- Develop and implement plans to raise community awareness on climate change within their areas of authority.

b) Climate change adaptation for regions

Climate change affects all regions and areas in the whole country but the impacts are different for regions which have different geographic location, and different conditions of nature and socio-economic. Therefore it is necessary to develop adaptation strategy

for each region of typical specifications. Action plan to cope with climate change needs to be soon developed and implemented for more vulnerable regions.

- *Coastal zones*

Basic principle for climate change adaptation in coastal zones is to ensure integrated management and sustainable development, food security, people safety, and maintain cultural assets under serious impacts of climate change and sea level rise. Ministry of Planning and Investment and Ministry of Defence in collaboration with other ministries, sectors and localities of coastal zone to soon develop action plans to cope with climate change and prevent and mitigate natural disasters with the following activities:

- Develop storm and flood prevention and rescue plans to ensure people safety; implement integrated coastal zone management with community based approach;
- Reconstruct infrastructures and adjust economic structure and traditional production practices to adapt to sea level rise;
- Calculate the expenses and implement pilot re-settlement projects, relocation of houses and infrastructures out of high-risk areas. Develop plans to upgrade sea dykes and dykes at river mouth;
- Establish storm and flood early warning system;
- Reinforce researches on the function of coastal ecological system, such as: wet land, mangrove, coral reef, etc. and the impact of the climate change and their adapting capacity.

- *Northern and Southern Deltas*

For two most important Deltas, People's Committees of provinces should coordinate with the Ministry of Planning and Investment, Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development, and other related ministries/sectors to develop climate change adaptation strategy for each province with the following contents:

- Summarize experiences in natural disaster prevention and mitigation, develop the guidelines to apply technological achievements in climate change adaptation and integrate into regional developing strategy;
- Study and develop the plan to renovate the system of sea dykes, dykes at river mouth, dykes surrounded low resident areas, enhance the ability to live with the flood and the rise of sea water level.

- *Mountainous and high land areas*

People's Committee of the provinces in the region in collaboration with Ministry of Planning and Investment, Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development and other related ministries/sectors to develop climate change adaptation strategy for the provinces in the region as the follows:

- Develop and implement the strategy to protect biodiversity, prevent and limit impacts climatic extremes induced by climate change;

- Protect, maintain and expand vegetation carpet at watershed areas, high mountains, and regional protection areas;
- Strengthen the communication and information dissemination in the communities of ethnic groups, improve living condition of the ethnic communities whose life tightly depends on forests;
- Enhance the integration of agro-forestry, encourage reasonable exploitation of land resources in the trend of commodity production; step by step overcome the self-provision state.
- Develop irrigation system towards sustainable water supply for domestic use, agriculture production, and other purposes.

2) *Climate Change Mitigation*

To maintain and boost up socio-economic development, Vietnam will continue to develop energy sector and increase energy consumption. As a consequence, green house gases emission will relatively increase. However, fully aware of potential threats of the climate change and its role of the party not included in Annex I of UNFCCC, Vietnam will develop and implement the solutions to cut of green house gases emission with possible condition and ability. Green house gases emission reduction includes: (i) Apply technologies which allow lower emission amount than currently used one in all socio-economic activities; and (ii) Develop policies and management methods available to implement the objectives to increase green house gases sinks. Vietnam will effectively reduce green house gases emission if financial and technical supports from developed countries and other international resources are available.

- *Energy sector*

Main and overall strategy of energy sector is to ensure sufficient energy supply to socio-economic development and domestic use, firstly for the cause of industrialization and modernization following the principle of comprehensive exploitation of local primary energy sources. The sector would need to effectively and properly utilize of all kinds of energy based on a policy system to manage the energy needs. Reduce the impact of the energy sector to the environment to ensure the sustainable development of the economics would also be of very important.

The strategy of green house gases reduction in energy sector will be developed within the scope of the programs, plans and energy development strategy, and concurrently be a part of the NTP. That strategy is demonstrated through the following policies:

- Effectively use and save the energy under climate change context;
- Properly and effectively use natural energy resources, develop and maximize the exploitation of hydro power and natural gases;
- Develop and exploit new forms of energy: geothermal energy, solar power, wind power and nuclear power;
- Establish the standards of exhaust fumes; evaluate environmental cost and benefit of energy projects.

Ministry of Industry and Commerce and Electricity of Vietnam would collaborate with other sectors to develop the action plan of the energy sector. The action plan would have to include activities from strengthening the institution to the application of policy, scientific and technological solutions and awareness raising to mitigate green house gases emission.

- *Agriculture, forestry sector and land use change*

Collaborate the programs of agro-forestry sector such as the programs to protect and conserve existing forest areas and forest plantation program, etc. in order to speed up the implementation of the programs to conserve and enhance the greenhouse gas sinks in Vietnam. Protection, develop and sustainably use of 16,24 million ha of land that have planned for the forestry. Increase forest coverage from 37% in 2005 to 42,6% by the year of 2010 and 47% by the year of 2020.

Ministry of Agriculture and Rural Development co-ordinate with other Ministries, sectors and localities to develop sectoral action plan to mitigate green house gases emission, protect forest and green house gases sinks via policies, technologies, awareness raising. Those are:

- Develop the programs to effectively utilize bare land and bold hills to create more employment, thus promote hunger eradication and poverty reduction, and resettlement;
- Participate in the programs of forestry sector to propose the policy encouraging the use of alternative materials;
- Develop a plan to participate in forestry socialization, settled agriculture and resettlement program;
- Develop the program to carry out the measures irrigating paddy fields; change of the crops; properly plan the season to reduce the greenhouse air;
- Push up the livestock rearing, closely linked to animal feed industry and treatment of animal waste (in form of biogas);

- *Waste disposal*

Management and treatment of waste is one of the priorities to protect environment and mitigate the greenhouse gas emission. Prioritised measures are:

- Develop plan to apply advanced technology in organic waste disposal to turn to compost, reduce application of measures of burning which badly affects the environment and generates methane.
- Carry out the measures to absolutely capture methane from the landfill for fuel.

- *Continue to develop and implement Clean Development Mechanism (CDM) projects*

CDM is a mechanism under the Kyoto Protocol, which aims to assist developing countries like Vietnam to achieve sustainable development goal and contribute to global joint efforts in reduction of green house gases emission.

To date, Vietnam has had only two CDM projects approved and implemented. However, Vietnam has very large potential for CDM projects development and implementation in many economic sectors, particularly energy (production and consumption), transportation, waste treatment, and forestry.

The Prime Minister has issued a number of legal documents relating to CDM project development and implementation as the followings:

1. Instruction No.35/2005/CT- TTg dated of 17 October 2005 on implementation of the Kyoto Protocol under the United Nations Framework Convention on Climate Change;
2. Decision No.47/2007/QD-TTg dated of 06 April 2007 on approving the Plan on organization of the implementation of the Kyoto Protocol under the United Nations Framework Convention on Climate Change in the period of 2007-2010, which regulates that Ministry, agencies at ministry level and agencies under the Government, within their scope of authorized power and responsibilities, are responsible to develop CDM projects and submit to authorized level for approval; Provincial People Committee, following guidelines of Ministry of Natural Resources and Environment and related ministries, directs and facilitates agencies, organizations, businesses to develop CDM projects under the management authority of localities to submit to authorized level for approval.
3. Decision No.130/2007/QD-TTg dated of 02 August 2007 on some financial mechanisms and policies of investment project following CDM.

Ministry of Natural Resources and Environment has issued Circular No.10/2006/TT-BTNMT dated of 12 December 2006 to instruct the development of CDM projects.

Those are the basis for Ministries, sectors, and localities to boost up the development and implementation of CDM projects.

Proposed Logframe for Action plan development and Framework of action plan to respond to climate change of ministries/sectors/localities are shown in Annex II.

To implement the above-mentioned main activities of the NTO, a list of priority projects should be done is presented in Annex III.

V. EFFECTS OF NATIONAL TARGET PROGRAM

5.1. Effects on Economy, Society and Environment

5.1.1. Economic Effects

- 1) Strengthening the capacity of sectors, regions, and communities to take initiative in adaptation to the climate change and to prevent economic damages caused by the climate change;
- 2) During implementing the NTP, the relevant sectors and regions have the opportunity to improve their technology capacity, economic efficiency of the activities of sectors/regions, and also of each resident;
- 3) A reduction of negative impacts of climate change to the health, disease spreading, etc. will certainly lead to a reduction the cost to prevent/treat disease;

- 4) Considerably save the cost to overcome the consequences of climate change to architectural items, the culture and the life of the inhabitants, and the other values of the country.

5.1.2. Social Effects

- 1) Contributing to an improvement of life quality, the security and the safety of the inhabitants;
- 2) Promoting social equality by preferential policies to poor vulnerable communities such as those living in mountainous areas or ethnic groups in the Mekong Delta, etc. and programs for preferential groups such as the poor, ethnic groups, women and children;
- 3) Ensuring social security for the community, especially emigrants; Creating the suitable and safe living conditions in every region/place for the inhabitants and reduce the number of unplanned migrations;
- 4) Enhancing civilized lifestyle, being ready for coping with climate change; willing to support each other and cooperate to overcome any difficulty and consequences of the climate change.

5.1.3. Environmental Effects

- 1) Implementation of NTP would contribute to the efforts of international community in defence of the earth climate system, mitigation of climate change and its adverse impacts;
- 2) Control the rate of green house gases emission; mitigate climate change impacts on living environment such as reducing air pollution and water and ground water pollution, cleaner industrial production and safer agricultural production, and reducing natural disaster borne pathogenic factors
- 3) Mitigating climate change and its impacts to the environment and habitat and ecological systems; avoiding the environmental catastrophe due to natural disaster.

5.2. Effects of the Integration into other Programs

- 1) A good implementation of the NTP for coping with climate change will create a favourable condition and opportunity for the programs of other sectors like agriculture; irrigation; fishery; industry; energy; transportation; construction; science and technology, in enhancing technological capacity and improvement of economic efficiency.
- 2) Socio-economic programs and plans are more stable and sustainable; the risks caused by the climate change will be decreased.

VI. ORGANIZATIONAL STRUCTURE FOR THE IMPLEMENTATION

6.1. Strengthening the Management and Organization System

Establish and consolidate the management and organization systems of the NTP from Central to local level: the regulations on the functions and tasks; decentralization of the management; co-ordinating, monitoring, evaluation, and reporting mechanism of the program implementation.

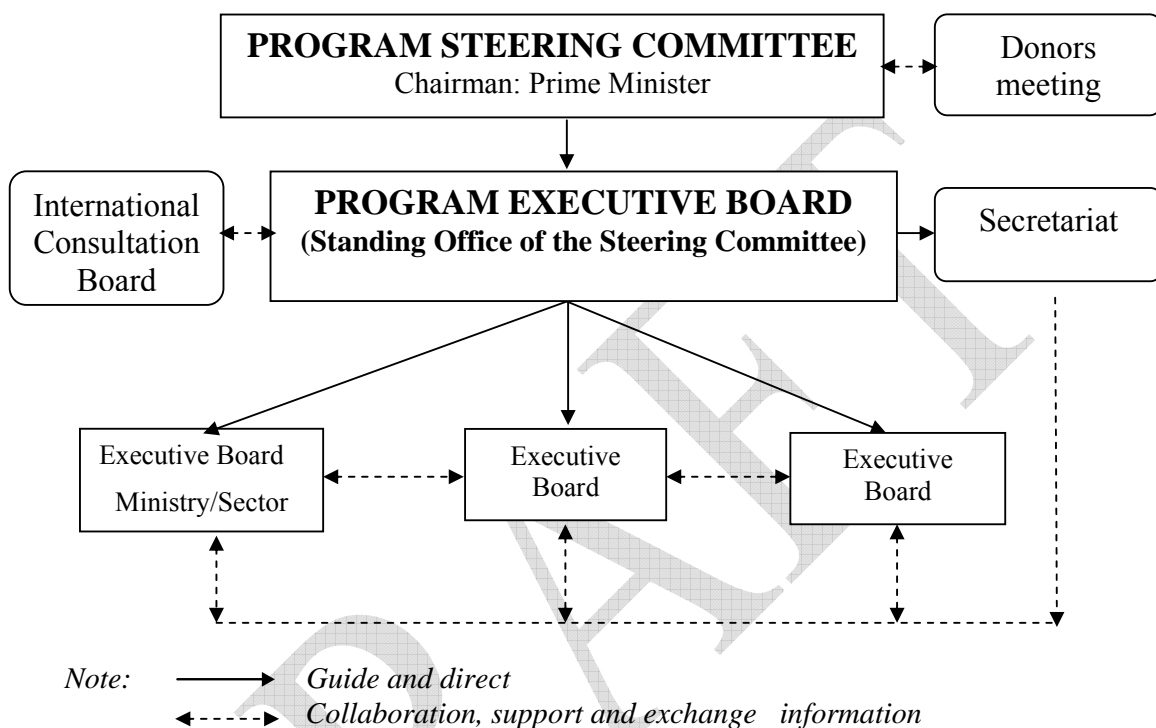


Figure 6.1: Organization chart of National Target Program to respond to climate change

Figure 6.1 represents a simplified structure of the program management framework. Specific management/coordination at ministry/sector/province level is not shown in this figure but in guideline documents for the program implementation. Detailed operational mechanism would be represented in the Program Implementation and Management Manual (PIMM), which include a system of management tools to ensure that the program would be systematically managed. Such management tools are Planning and Reporting System, Management Information System (MIS), Monitoring and Evaluation (M&E), Quality Assurance (QA), Financial Management System, etc.

6.1.1. Establishing the National Steering Committee and Executive Board

1) National Steering Committee for the National Target Program to respond to climate change (or Program Steering Committee, in short) will be established by the Government and will comprise of: Prime Minister - Chairman, Minister of Ministry of Natural resources and Environment - Standing Vice Chairman; Minister of Planning and Investment - Vice Chairman; Minister of Finance - Vice Minister; Others Members are the Ministers of Foreign Affairs and Agriculture and Rural Development.

Main functions and tasks of the Program Steering Committee are as follows:

- Identify the strategy, orientation and solution to cope with climate change. Propose to the Government the changes in the policy and legality related to the climate change;
- Organize, guide the research activities and recommendations to the Government on the guidelines, policies, large projects and other important issues relating to the coping with climate change;
- Guide the review, analysis and assessment of implementation of the NTP objectives and indicators annually and in five-year Plans.

2) The Minister of Natural Resources and Environment submit to the Prime Minister staff of the Program Executing Board and its operation regulation for approval.

Staff of the Executive Board comprises of:

- Chairman: The Minister of Natural Resources and Environment;
- Vice-Chairmen: The Vice- Ministers of Planning and Investment, Finance;
- Other members are the representatives of the ministries, sectors: Agriculture and Rural Development, Foreign Affairs, Judiciary, Industry and Commerce; Labour, Invalids and Society; Transportation; Construction; Information and communication; Education and Training; Interior; Health; Science and Technology; Culture, Sport and Tourism; National Defence; Police; Government Office; Committee of Ethnicity; Representatives from mass organizations.;...

The Program Executing Board is the Standing Office of the Program Steering Committee, and has main tasks and functions as follows:

- Organize, guide and direct the implementation of NTP. Direct the establishment and coordinate the operation of the Executing Boards at ministerial, sector and local levels;
- Manage, propose budget allocation of the NTP;
- Organize and Collaborate inter-sector, inter-area operations to develop projects, integrate the plans for coping with climate change into socio-economic development plans; direct the implementation of large inter-sector/inter-areas projects in inter-sector, inter-area manner. Support the ministries, sectors and provinces in developing Action plans for coping with climate change;
- Direct monitoring and evaluation of the results of NTP implementation;
- Direct the information dissemination, education, raising awareness of all levels/sectors, and the community on climate change. Develop and operate the communication apparatuses on the climate change;
- Periodically summarize and report (quarterly, annual) the implementation of the NTP and submit to related agencies.

Secretariat

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Secretariat, located at the Ministry of Natural Resources and Environment, is an assisting agency of the National steering committee.

Functions, tasks and organization structure of the NTP Secretariat are decided by the Minister of Natural Resources and Environment.

The staff of Secretariat comprises of the specialized officials of the Ministry of Natural Resources and Environment, concurrent staff upon agreement, Employment contracts recruited for the projects.

6.1.2. International consultation

The annual donors meetings will be the consultation body which help the Program Steering Committee to mobilize and coordinate international support to the activities of the NTP.

The annual donors meetings will appoint an International Consultation Board to assist the Program Steering Committee to direct and manage the NTP implementation. The donors meetings with consensus of Vietnamese Government will identify structure and obligations of the International Consultation Board. Budget for International Consultation Board operation will be provided by international donors.

Some ministries and localities may have their own international consultant out of the Action Plan Steering Committee depending on their own conditions.

6.1.3. Appointment of Responsibilities among Ministries, Sectors and Levels

Climate change affects to each sector/province, therefore the crosscutting direction is to hand over the responsibilities to implement the NTP to all the ministries, sectors and provinces.

1. Central level

a) The Government direct all relevant activities, including:

- Mainstream issues of responding to climate change into plans and strategies; integrate climate change information into development of state budget;

b) Ministry of Natural Resources and Environment:

Ministry of Natural Resources and Environment assists Executive Board in coordinating activities of all the ministries/ sectors/provinces and managing the implementation of the NTP with the following main tasks:

- To chair and co-operate with the relevant agencies and authority of different levels in developing mechanism, policies for the management and execution of Program implementation of the NTP to submit to the Prime Minister for issuing or to issue according to the designed functions;
- To define objectives, develop tasks, calculate the necessary budget, and propose program implementation solution for submitting to Executing Board in order to summarize and incorporate into annual and five-year plans for submitting to the Government. Based on the proposed tasks and total approved budget for the NTP, collaborate with the Ministries of

Planning and Investment and Finance to develop and submit the plan for detailed fund allocation for ministries/sectors/ provinces to the Prime Minister for approval;

- To guide and assist ministries/sectors/provinces in developing and implementing their action plans for coping with climate change;
- To chair, co-ordinate with Ministry of Planning and Investment to develop regulations/policies to monitor and evaluate the implementing progress of the NTP and submit to the Prime Minister for approval;
- Generally to co-ordinate the activities of the information publicity, training, education, communication related to the climate change;
- To instruct, monitor and evaluate the implementing progress of the NTP.

▪ *Ministry of Planning and Investment:*

Ministry of Planning and Investment carry out the following tasks:

- To chair and co-ordinate with the ministries/sectors/provinces to review and revise the national strategies and socio-economic development plans taking into account the climate change;
- To direct and guide ministries/sectors/provinces in incorporating the NTP for coping with climate change into the strategies and socio-economic development plans of the country, ministries, sectors and provinces;
- Together with the Ministry of Finance to allocate the resources, coordinate the budget and funds, including the allocation of annual national budget for the programs and projects related to the climate change;
- To develop and implement its action plan for coping with climate change.

▪ *Ministry of Finance:*

- Together with the Ministry of Planning and Investment to allocate the resources, coordinate the budget and funds, including the allocation of annual national budget for the programs and projects related to the climate change;
- To develop and implement its action plan for coping with climate change.

▪ *Ministries, ministerial agencies and other Governmental authorities:*

- To develop and implement their action plan for coping with climate change;
- To carry out the tasks assigned in the NTP;
- To take initiative in participating in common coordinated activities under direction of the Steering committee.

2. Province and City

Chairmen of provincial People's Committees are responsible for:

- Developing and implementing the action plans for coping with climate change of their provinces and cities;
- Organizing implementation of the related activities, approved in the NTP;
- Ensure the rightness and the efficiency in using the fund allocated from the NTP, anti-corruption and lose of program fund;
- Mobilizing additional resources and combine all related activities of other program within provinces/cities to achieve the objectives in the NTP;
- Ensuring and following the monitoring and evolution principles defined in the NTP;
- Preparing periodical reports on the implementing progress of the NTP objectives and tasks at the provinces/ cities level.

3. District level

Chairman of District People's committee is responsible for:

- Organizing implementation of the objectives, tasks and related activities of NTP according to the planned figures assigned by the province/city people Committee;
- Mobilizing and utilizing effectively local resources to implement the NTP.

6.2. Promotion and Mobilization of Public Participation and Private Sector

6.2.1. General Orientation

Activities to respond to climate change are the course of the whole population. The process of policy making, organization and implementation of activities of the NTP should mobilize participation of the whole population in the manner of "people know, people discuss, people implement and people supervise"

Socio-political organizations, social-career organizations, mass organizations in Vietnam are widely developed and strictly organized with many practical experiences and goals of public solidarity and participation improvement. Every social group has its own organization, via that the individual activities of each member are combined to become widespread movements

Climate change is not only an environmental problem but also a problem of globally sustainable development. Therefore, it is necessary to integrate this information into the solution of public participation mobilization to carry out in practice.

6.2.2. Social organizations, community and households

Implementation of the NTP is the tasks of all people in the society. According to their functions, social organizations need to take initiative in participating in climate change coping activities, especially in the area of information, education and communication; support and mobilise the communities in active participation, operation and management of constructions to respond to climate change, expansion and dissemination of the experiences of climate change coping models.

Forms of public participation mobilization in implementing the NTP are described as follows:

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- In the development process of legal regulations, it is necessary to display the initiatives and ownership of the people in the management of the society and community. Strengthening public participation in assessing environmental impacts by institutionalizing the roles of the people and developing compulsory measures, firstly for major projects with significant impacts on people. Socio-political organizations, social – career organizations, mass organizations play an important role in ensuring the sustainability of the socio-economic development and environment protection in their local areas. It is necessary to enhance the responsibilities and capacity of these organizations to effectively undertake this role;
- Thanks to the mass organizations and activities in the community, propaganda and education to raise public awareness on climate change, natural resource and environment protection and sustainable development can be done via mass media means and community activities, such as celebration of information finding competition. Public activities should be encouraged;
- Launching mass campaigns in each social group, locality as well as on National scale with the mentioned contents. Continue to extend and strengthen the movement of the masses and community activities to create more jobs, business experience exchange, poverty reduction and hunger eradication; ensuring sanitary environment, preserving natural resources, and environment in the locality and raising public awareness on climate change, environment protection, and sustainable development;
- Establish self-control organization in each community to monitor and initially respond to harmful impacts of climate change, especially unusual natural disasters;
- Each household, apart from participate in social and community's activities, need to store food, fresh water and medicines in case of natural disasters
- Authorities at all levels need to coordinate, support and facilitate in many aspect for socio-political, social - career and mass organizations and communities to implement the objectives of the mentioned movements;
- Develop and replicate successful models.

6.2.3. Non-government Organizations:

- Participate in developing policies, programs, and plans to respond to climate change as critics;
- Assist the community by information propaganda and awareness raising; implement natural disaster mitigation measures;
- Assist people in application of cultivation methods which emit less green house gases, promote the use of bio-fuel and limit the use of coal.

6.2.4. Private sector:

- Participate in assessment of vulnerability to climate change and climatic extremes in areas/regions that are likely to be hit by climate change;
- Participate in community-based planning to identify responding measures based on practical condition of each localities and identify criteria for prioritized activities;
- Select prioritized activities to provide as an input to the action plan to respond to climate change of ministries/sectors/localities;
- Take lead or participate in programs/projects under the NTP and action plans of ministries/sectors/localities to meet urgent demands on climate change adaptation; Implement or participate in implementation of programs/projects under the NTP and Action plans of ministries/sectors/localities; receive and apply environmental-friendly technologies;
- Participate in financial markets and insurance regarding to climate change in accordance with laws and regulations.

6.3. Phasing

The program is divided into the following phases:

6.3.1. First Phase (2009 – 2010): Kick-off Phase

There should be an adequate preparedness on institution, organization, assessment, plan, mechanism and management regulation, necessary resources and experiments for implementation initiation. The outputs of kick-off phase compose of:

- Legal documents and basic related regulations will be developed and issued at ministerial and sectoral levels;
- Management and executing apparatuses of NTP with defined function and tasks will be established and operated;
- Climate scenarios will be developed;
- Effect of the scenarios on different fields and localities will be evaluated;
- Action plans of the ministries, sectors and localities will be developed and implemented at pilot scale;
- System for management of information, monitoring and evaluation will be developed and guided for implementation;
- Strategy and plan for public awareness raising and man power training will be developed and implemented;
- Coastal provinces and cities to have detailed plans to respond to climate change.

6.3.2. Second Phase (2011 – 2015): Implementing Phase

- The content of NTP will be widely implemented to attain, step by step, the objectives of NTP;

- Implementing results of an annual plan will be evaluated and experiences will be used to perfect the next annual plan;
- Summing up and developing plan for the third phase

6.3.3. Third Phase (after 2015): Developing Phase

Extending and developing the actions for coping with climate change, based on the results and experiences of implementing phase.

6.4. Financial Mechanism

In the past years, the budget for the activities of climate change has mainly been taken from the fund from international sponsors, technical assistance of the financial mechanism from Convention and bilateral cooperation fund of the countries. The investment of the Government has been only to maintain the operation of Climate Change Convention office of the Ministry of Natural Resources and Environment - Focal Point on climate change. The Decision No. 130/2007/QĐ-TTg, dated August 2nd 2007 of the Government Prime Minister mentioned of main financial mechanism and policy for the Clean Development Mechanism (CDM) projects, there has been no mechanism and policy to mobilize the resources for other activities, including the NTP for coping with climate change. The approach of the NTP concentrates more in the activities to develop the programs without financial identification and supports to the activities. Therefore, there should be the renovation of the financial mechanism, including mobilization, management and investment mechanism on the basis of upholding experiences and lesson collected from the programs, in reflection of specific particulars of the activities of the climate change.

The approach in this case is to bring into play national sources at the same time to mobilize international sources for implementing NTP based on common principles:

- Combination of international finance sources (grant, loan) and state finance source, credit and individual money;
- Rationalization of finance structure, in which state source plays a role of support and stimulation of other sources;
- Encouragement and creation of rational environment for attraction of investment from enterprises and individuals under all possible forms.

Budget estimation, approval, allocation, disbursement; management, utilization and balancing for the NTP must be done according to the regulation of State Budget Law and the guidelines.

Due to the specification of the NTP, it is necessary to develop a separate financial management for the project, activities of the NTP similar to other NTPs.

In addition, it is possible to study and apply the form of *Objectives oriented budget support* which is the model of support and utilization of Official Development Assistance (ODA) fund, directly supplement the budget without a project mechanism and a separate management structure.

Objectives oriented budget support program will provide the budget for the program operation defined in the NTP by the Government and fund disbursement, monitoring

and management according to the mechanism of State budget law and the NTP. The goals of Objectives oriented budget support program are also the goals of the NTP approved by Vietnamese Government.

The disbursement of Objectives oriented budget support program is planned to take place very soon following the agreed progress on the principles 'ODA fund is mixed with the Government budget and directly transferred to the Programs'. The program of objectives oriented budget support will create favourable condition to integrate ODA fund with the efforts of the Government to achieve the same goals. This is a new forwarding step in harmonizing the procedures between the Government and the Donors.

The program of objectives oriented budget support will be carried out based on the mechanism that the NTP makes changes in fund allocation; monitoring and evaluation on the basis of implementing decentralization of the management. Reporting system is based on regular process/ procedures of the Government, just a renovation that does not create another separate process in the execution of Objectives oriented budget support program.

6.4.1. Implementing Fund

In order to gain the objectives of the NTP, fund for implementing the Program activities is estimated as 2,374 milliards VND for the period from 2009 to 2015 and is divided for each activity group as follows:

- Strengthening science-technological activities: about 812 milliards or 34.2% of total fund;
- Strengthening capacity on organization, institution and policy on climate change: about 163 milliards, or 6.9% of total fund;
- Awareness raising and develop human resource capacity: about 285 milliards, or 12.0 % of total fund;
- Promote international cooperation: about 61 milliards, or 2.6% of total fund;
- Incorporating NTP into other strategies, plans, programs, projects and planning: about 172 milliards, or 7.2% of total fund;
- Developing action plans of the ministries, sectors, localities to respond to climate change: about 881 milliards or 37.1% of total fund;

Finance source structure for Program activities in the period of 2008-2015 is foreign capital 50% and domestic capital 50%.

Fund of the Program for the post-2015 periods will be defined together with concrete objectives of each period, objectives and tasks of action plans of the ministries, sectors and localities, implementing Program. Structure of investment finance sources for NTP is as follows:

Foreign capital: 50%,

Domestic capital: 50%, in which:

Central budget: about 15%,

Local budget: about 10%

Special credit: about 15% and

Population contribution: about 10%.

6.4.2. Fund Mobilization

Renovate fund mobilization methods and focus on socialization of funding resources: create legal basis to encourage participation of all people, economic components and the whole society into the cause of responding to climate change; bring into play domestic resources; and encourage donors to provide more ODA and other resources for the program implementation;

Give high priority to coastal zone, mountainous areas, poor regions and other regions which are often hit by natural disasters.

1) Capital of State budget

The Government should define the capital of State budget allocate for the NTP to respond to climate change sufficiently and equally to the position of the Program in the socio-economic development strategy of the country.

Capital of State budget allocated for the NTP to respond to climate change should be integrated and collaborated with other projects of the NTP right from the stage of inspection and approval.

2) Capital of concessionary loan

The need for credit capital for the NTP is significant. To achieve this plan, it is necessary to increase in the source of credit capital, and expand the scope and target customers of concessionary credit fund to carry out the Program of climate change. Credit loan would mostly be medium term or long term with low interest or even no interest.

3) Capital of citizens, enterprises, other economic elements

Speed up the information dissemination, campaigning to mobilize investment capital from the enterprises, other economic elements. Develop and improve the policy to encourage the contribution from the investors, enterprises, social organizations; encourage the participation of private sectors and other economic elements to invest in the implementation of the climate change projects via favourable policy, such as: on land, tax reduction and exemption, concessionary loan, etc.

4) Capital of international assistance

The capital of international assistance should be absolutely prioritised, in which the basic and long-term financial resource is multilateral funds on climate change, The United Nations Development Program (UNDP), Asian Development Bank (ADB), The World Bank (WB), and bilateral funds of developed countries.

This financial resource comprises of non-refundable assistance and long-term or low interest loans. This source of capital is mobilized via the forms of multilateral and bilateral cooperation, joint contribution to assistance fund and credit fund, and subsidies for a projects or a region.

Capital of international assistance for the Program of climate change must be planned right from the stage of inspection, approval and shown in annual plan of the Government.

6.4.3. Budget Allocation

Based on the budget of the NTP announced by authorized level, Ministry of Natural Resources and Environment chairs and co-ordinate with other related ministries, sectors estimate the plan to allocate the fund of the Program to each projects, ministries, sectors, mass organizations of central and provincial/city levels with detailed operation suited with assigned objectives and tasks.

Ministry of Natural Resources and Environment summarizes the allocation and sends to Ministry of Finance, Ministry of Planning and Investment together sum up in budget estimate of ministries, sectors, localities to submit to the Prime Minister to present to National Assembly according to the regulation of State Budget Law.

Other ministries and agencies at central level would assign the budget allocated by the Prime Minister to their subordinate agencies in accordance with the NTP's contents, and submit the budget allocation to the Ministry of Finance.

Localities are responsible to integrate national target programs in the region and allocate budget to such programs based on the total budget for projects assigned by the Prime Minister.

6.4.4. Disbursement and Auditing

Disbursement of the program is implemented via three main channels:

- Disbursement of loan and support of donors through banks at provincial level. This disbursement is implemented in accordance with Assistant Agreement between the Vietnam's Government and donors.
- State budget is disbursed via the State Treasury system in accordance with the Law on State budget.
- Concessionary loan is disbursed through social welfare banks.

The units that directly use the budget of the NTP are responsible to enter and balance the account of all expenditures in the project implementation according to chapter, type, article in line with the index of State budget; code of the NTP and the regulation of State Budget Law, Law of Accountancy and other legal documents of Law enforcement and guidelines.

The projects and the operation of the purchasing Program: equipments, goods and materials, Information technology services, etc. should be carried out according to the legal regulations of tender.

For some activities of the Program done by the offices, organizations through the contract with Project management agencies, the documents of the disbursement and balance are stored in Project management agencies, comprises of: Contract of task implementation (attached with detailed estimate approved by Project management agencies), handover minutes, contract liquidation minutes, Payment voucher and other

related documents. Concrete justification documents of expenses are stored by the project implementing organization as of stipulated by Law.

6.4.5. Reporting System

- a) Ministries, project management sectors, Chairman of provincial/city People's committees are responsible to report financial situation and results of the implementing the projects and send to Ministry of Natural Resources and Environment, Ministry of Finance and Ministry of Planning and Investment according to current regulation applied for the NTP.
- b) Ministry of Natural Resources and Environment is responsible to sum up the evaluation and report on the implementation of the target, contents and efficiency of the NTP according to current regulation applied for the NTP

6.4.6. Tax

Exempt definite business tax; reduce the land use tax for all economic elements participating in the projects under the NTP.

6.5. Monitoring and Evaluation

6.5.1. Goals

Monitoring and evaluation system is designed to ensure objectiveness in monitoring and evaluation of the implementation process to see if the set goals and tasks of the NTP have met.

1) Objectives of monitoring and evaluation

- To help the Program Steering Committee and the Program Executive Board to tightly keep up with the program implementation, difficulties and weaknesses of the implementation and to find appropriate solutions;
- To give recommendations to promote positive aspects, overcome negative aspects, and help policy making to obtain practical data for study and adjust implementation policies/mechanism in each period;
- To find consensus among communities, organizations, and individuals in implementing the NTP;
- To provide a database on the status and results of the program, thus perfect information resource and statistical data on the program.

2) Criteria of monitoring and evaluations

- To ensure objectiveness and honesty in collection, analysis and provision of information on the implementation of the program's targets;
- To ensure continuity, inheritability, and consensus in monitoring the program's targets, but also give adequately concern on specification of each ministry/sector/locality;
- To ensure the unity and close collaboration among ministries/sectors/localities at all levels in monitoring and evaluation process in order to harmonize the implementation of the program;

- To not to obstruct or slow down the implementation of the program, and to speed up this implementation via the finding of pros and cons, insufficiencies and challenges as well as opportunities.
- To mobilize active participation of social organizations and communities into implementation of the program, and create consensus in this implementation.

6.5.2. Contents of monitoring and evaluation

Monitoring and evaluation process not only focus on assessment of *whether the program's objectives and targets are achieved or not* but also assessment of *how* it is implemented, *what* are the impacts of this implementation on the program nationwide and sector-wide (implementation level; capacity and organizational structure of implementation; impacts and effects, etc.), *why* it happened (reasons, causes), and *what is needed* to do (proposals, recommendations). Main contents of monitoring and evaluation are as follows:

1. Monitor and evaluate *mobilization and allocation of resources* for the program's objectives (inputs); achievements and efficiency of resources utilizations.
2. Monitor and evaluate implementation of the Program's *criteria* (output); achievements and level of implementation.
3. Monitor and evaluate development and implementation of the program's *mechanisms* and *policies*.
4. Monitor and evaluate *participation of communities* in implementing the program: level of participation and impacts on the implementation.
5. Monitor and evaluate implementation of *objects* of the NTP by Government, sectors, and localities: results and implementation measures.
6. Find out *weaknesses* and *strong points*, *inadequateness*, *challenges* and *opportunities* in implementing the NTP. Based on this finding, monitoring and evaluation should identify *reasons* and *make recommendations* on how to overcome shortages and take advance of opportunities.

6.5.3. Operational Mechanism

In line with 5 year socio-economic development plan is designed so that monitoring and evaluation can be done. Therefore, monitoring and evaluation of the NTP is done based on the evaluation and monitoring of outcome under implementation of the NTP, to be accompanied with an easy to update and evaluated software. Same as for Monitoring and Evaluation Framework to be checked based on the implementation of the NTP and set of indicators and criteria for monitoring and evaluation for each goal and activity as well as impact of the NTP.

6.5.4. Implementation Period

Monitoring and evaluation of all goals and tasks of the NTP is carried out per annum in all levels and done by the organizers of the program and would be gathered by Steering Committee to report later on to the Government.

6.5.5. Indicators and Criteria

Set of indicators and criteria for monitoring and evaluation would be studied and specifically provided for each group of activity of the NTP.

6.5.6. Responsibility of the Implementation

1) District level

- a) Office of Natural Resources and Environment is to consolidate, gather, manage and maintain all information and data to prepare for regular report;
- b) District People's Committee is to send consolidation report regularly per region or commune to standing agency of the NTP within provincial or city level, i.e. to Department of Natural Resources and Environment.

2) Provincial level

- a) Department of Natural Resources and Environment is responsible to manage, and store the summarizing information by regions or commune reported by the districts;
- b) Supervise and instruct district level to send periodical reports timely;
- c) Summarize the information and send periodical report to Steering committee of the NTP.

3) Central level

- a) Standing office of National steering committee is responsible to manage and store the information reported by the provinces;
- b) Supervise and instruct the provincial level to send periodical report timely;
- c) Check the source of data and liability of the figures;
- d) Assist the Steering committee to prepare periodical and submit to the Government.

6.6. Adjustment mechanism

Based on updated research results on the trends and scenarios of climate change in Vietnam and the world, new forecasts/warnings on climate change impacts, negotiation process for a new climate convention for the post 2012 period, domestic economic condition, and experience and lesson learnt from implementation of the NTP in each period, the NTP would be adjusted and updated in terms of contents and methodologies after every 2 years to meet the new condition.

Local staff would propose adjustments in final report for each phase as well as the NTP implementation reports. The Program Executive Board is in charge in collecting adjustment requests and submits to the Program Steering Committee for approval.

6.7. Difficulties in the Implementation

First difficulty in implementing the NTP is the poor awareness in scope and level as well as the measures to respond to climate change. The lack of awareness has existed in the levels, from the decision makers, officials in sectors and localities in social mass

organizations, to the vulnerable communities. Therefore, raising awareness of all levels is obviously the first priority of the activities.

Second difficulty in implementing the NTP is the lack of coordination to respond to climate change in developing the policies, plans and programs in sectors/regions, even in climate highly sensitive sectors/regions. There are still not awareness of the necessity to integrate climate change information into policies/plans. Integrating the climate change in the developing master plans, designing and implementing the policies do not almost exist, in particular, the links between the climate change and the activities of poverty reduction and hunger eradication, livelihood are missing.

Third difficulty in implementing the NTP (when the awareness raised up) is the lacks of tools and methodologies to instruct and give out consultancy to the decision makers. This happens also with the experts in the sectors/local levels as well, as in vulnerable communities. Therefore, training and knowledge upgrading; collecting and utilizing the data on climate change; developing tools/methodologies for analysis and adaptation with the climate change, are important activities that should be done immediately.

Fourth difficulty in implementing the NTP is the lacks of knowledge. Climate change is a long-term issue, the impact of the climate change are very complex including present impact and potential impact in the future. The knowledge of the world and Vietnam on the trend of the climate change and its impacts to socio-economic activities is still limited.

VII. RECOMMENDATIONS

7.1. Mechanism and Policies Needs to be stipulated

A sufficient and perfect system of legal documents and regulation will create necessary legal environment to implement the NTP. However, current legal document and regulation system to respond to climate change in not enough and synchronous. Some documents stipulated without sufficient legal backup to adjust all operations related to the climate change. Besides, there have not been clear and concrete institutions of the coordination among ministries, sectors and localities, as well as participating and collaborating structure of all elements of the society, communities in the programs to respond to climate change. Therefore this system of legal documents needs to be soon supplemented, improved in order to respond to actual requirement of social life on sustainable development, adaptation and mitigation of the climate change.

To overcome the above shortcomings, it is necessary to give priority to the review, revision and request of supplemental of legal documents and regulations to impulse the implementation of the NTP in period of 2009 - 2010 following the guidelines, principles and approaches of National sustainable development strategy to 2020 and generate legal basis to well manage and effectively implement the activities to respond to climate change. Specifically as follow:

1) Legal documents to be reviewed

- a) Review and supplement Instruction No. 35/2005/CT-TTg dated October 17th 2005 and Decision No. 47/2007/QĐ-TTg, dated April 6th 2007 of the Prime

Minister to have a suitable mechanism to adjust the operations related to Convention of Climate and Kyoto Protocol for the period from now to 2012, comprises of:

- Timely and synchronously organize the implementation of the climate change operation in country wide, including the activities of adaptation and mitigation of the climate change;
 - Clearly regulate tasks, power and participating duty of Ministries, sectors, levels, localities and people in the activities to respond to climate change and also participate in international operations to deal with the climate change.
- b) Review, adjust, supplement the Decision No. 130/2007/QĐ-TTg, dated August 2nd 2007 of the Prime Minister in an aim to absolutely mobilize all resources to carry out Socio-economic development plan of the period 2008-2010 and after 2010. Implement the integration of the climate change issues into all Socio-economic development programs of sectors and localities. Stipulate legal documents and regulations on guidelines, inspection, supervision and use of the fund to execute the NTP.
- c) Review, supplement Circular No. 10/2006/TT-BTNMT dated December 12th 2006 of Ministry of Natural Resources and Environment in order to encourage wide participation of organizations, domestic and foreign investors in the activities of Clean development mechanism, encourage to renovate the technology, receive and apply clean technology for sustainable development in line with the adaptation and mitigation of the climate change.

2) Legal documents to be formulated

- a) Study, formulate the Decree of the Government regulating Foreign investment of capital related to the climate change suitable with current management regulations of the Government, suitable with legal documents and international rules, ensure the flexibility and effectiveness;
- b) Decision of the Government to form National steering committee on the NTP to respond to climate change, where Prime Minister is chief of the committee and with the attendance of leaders of related ministries and sectors;
- c) Study and formulate the Decision of the Prime Minister to approve Plan of execution the Kyoto Protocol of Convention of Climate in the period of 2011-2020 and oriented for the period after 2020;
- d) Step by step formulate and stipulate National standard on 'Climate change' and priority criteria for the program, projects of the climate change;
- e) Study, formulate, stipulate the Decision of the Prime Minister on decentralization and Circular to instruct the development, organization of the management, execution and financial system for the projects of climate change;

- f) Stipulate the Circular to instruct the supervision of the integration the climate change in overall development plan of the ministries, sectors and locality, socio-economic activities as one contents of strategic environment assessment.

7.2. Other Recommendations

- 1) Evaluate the organization of implementing Action plan to carry out Kyoto Protocol and the operations related to Convention Frame of United Nations on the climate change to have proposal and fully update the NTP;
- 2) Comprehensively and sufficiently evaluate the impact of the climate change to sectors, localities in order to have basis to improve coping strategy for the next period;
- 3) Organize wide-spced propaganda on the NTP and its implementation on public communication means. Take advantage of the financial and technical support of international organization to carry out the NTP.

ANNEX I: FRAMEWORK PROCEDURE OF MAINSTREAMING CLIMATE CHANGE ISSUE INTO SOCIO-ECONOMIC AND SECTORAL AND LOCAL DEVELOPMENT PLANS AND STRATEGIES

The mainstreaming process aims at raising awareness on climate change, developing capacity to respond to climate change impacts, maintaining stability and effectiveness of existing socio-economic development and local and sectoral development plans and strategies, and contributing to the socio-economic development of the country.

The mainstreaming process may be implemented following the procedure mentioned below:

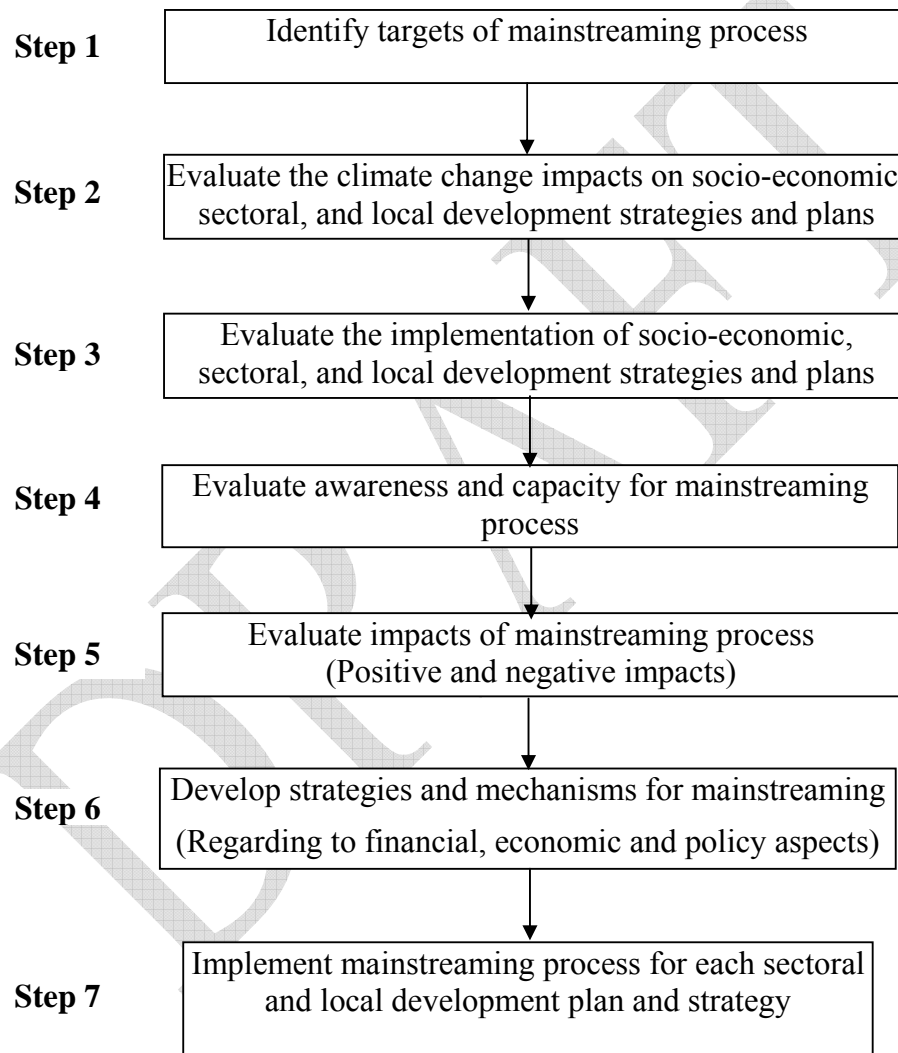


Figure 1: Procedure of mainstreaming climate change into socio-economic development and sectoral/local development plans and strategies

Step 1: Identify targets of mainstreaming climate change into socio-economic development and sectoral and local development plans and strategies

Step 2: Evaluate climate change impacts on socio-economic development and sectoral and local development plans and strategies

It is necessary to prove climate change's impacts on socio-economic development strategies and plans of sectors and localities. Evaluation process must be scientific and highly convincing, thus highlight the importance of mainstreaming the NTP's contents in to development plans and strategies. Due to the fact that climate change's impacts are considered long-term and variable, evaluation of climate change's impacts on development plans and strategies must show probable damages, at the present as well as in the future, if the integration is not implemented.

Step 3: Evaluate the implementation of socio-economic development and sectoral and local development plans and strategies

Such socio-economic, sectoral, and local development strategies and plans, which need to be mainstreamed with the NTP, must be evaluated to identify scope and priorities of the integration, thus ensure the effectiveness of the integration strategies and policies. This evaluation would focus on activities implemented or being implemented of each development strategies and plans. Some vulnerable sectors/regions will be of particular concern.

The evaluation should be implemented under the collaboration of ministries/sectors, agencies, organizations, and local authorities, who are implementing sectoral/local development plans and strategies.

Step 4: Evaluate awareness and capacity of human resource of sectoral development strategies/plans on mainstreaming process

Mainstreaming process would be implemented with the collaboration among the Program Steering Committee, Program Executive Board and staff of development strategies/plans. However, specific activities of mainstreaming process would mostly be done by staff of development strategies/plans. Therefore, it is important to evaluate their awareness on the issue. The evaluation process would also contribute to the development of mainstreaming policies/mechanisms/strategies, and would help to find out specific areas/regions which need to be particularly focused in response to climate change.

Step 5: Evaluate impacts of mainstreaming process (Positive and negative impacts)

Impacts, either negative or positive, of the mainstreaming process on prioritised sector/areas and future implementation of development strategies/plans under the context of climate change would be evaluated.

This evaluation would provide initial information for development of policies/strategies/plans and specific activities of the mainstreaming process.

Step 6: Develop strategies and mechanisms for mainstreaming (Regarding to financial, economic and policy aspects)

This step would involve the Program Steering Committee and the Program Standing Office with technical assistance from the Program Executive Board and representatives from development strategies/plans. Strategies and mechanisms for mainstreaming process should be developed based on the previous evaluations.

Development of strategies and mechanisms should highlight prioritized sectors/regions; point out specific activities and guidelines for evaluation/monitoring

under the direction of Program Steering Committee and the Program Standing Office with technical assistance form the Program Executive Board.

Step 7: Implement mainstreaming process for each development plan and strategy

The mainstreaming process would be implemented under the direction of direction of Program Steering Committee and the Program Standing Office with assistance form the Program Executive Board of development strategies/plans of sectors and localities.

DRAFT

ANNEX II: PROPOSED STEPS TO DEVELOP ACTION PLAN TO RESPOND TO CLIMATE CHANGE

1) Design of action plan development process

- Overview of research result on climate change, including green house gases inventory, climate change impact assessment and vulnerability, progress of implementation of 5 year socio-economic development plan 2001-2005, 2006-2010 and orientation of socio-economic development in the period of 2011-2015 of the State, ministries/sectors and localities;
- Identify Government's agencies, organizations, ministries and localities, enterprises, NGOs, community-based organizations to participate into the action plan development to ensure highest consensus;
- Establish Steering Committee for action plan development of ministries/sectors and localities;
- Establish a Taskforce to develop action plan of ministries/sectors and inter-sector, ensure the direction and close cooperation between the National Steering Board and the Task force during the action plan development

2) Identify general objectives and specific objects of the Action plan

General and specific objectives of action plans will be identified depending on condition of specific ministry/sector/locality, nature and scope climate change impacts to specific sector/locality to meet development demands of ministries/sectors/localities in accordance with national development objectives.

General objectives of the action plan are:

- Ensuring possibility to integrate identified and selected measures to respond to climate change in the action plan into development programs, plans and projects.
- Creating a high consensus on major identified and selected measures to respond to climate change to contribute to sustainable development;
- Developing strategies and plan to implement measures to respond to climate change to achieve specific objectives of the Action plan;
- Contributing to the implementation of national objectives in climate change adaptation and mitigation and sustainable development.

3) Develop general work plan for the Action plan development

A general workplan would help members of the Task force to fully understand general approaches, key issues of the Action plan as well as collaboration during the Action plan development

The general workplan must clearly identify:

- Role, responsibilities of agencies, organizations, especially government's agencies in developing Action plan and coordination mechanism;

- Issues on areas/sectors and inter-sectors that needed to be concerned, priorities in each areas and methodologies to summarize contents relating to areas/sectors and inter-sectors;
- Methods used to assess and implement measures to respond to climate change;
- Proposed outputs of the Action plan and criteria of the outputs;
- Procedure of implementing the Action plan;
- Financial and human resources required for the Action plan development, including technical support requirement (information, experts, training, tools for analysis and assessment, etc.) and coordination with donors;
- Following up activities after the Action plan is approved by authorized agencies (Action plan launching, implementation, updating, adjustment, assessment, etc.);
- Estimated budget for each tasks and total budget of the Action plan, in which each financial sources are clearly defined (State budget, local budget, international support, fund provided by international organization, enterprises, individuals, etc);
- Annexes (if necessary).

4) Assess and implement measures to respond to climate change for areas/sectors and inter-sectors

Agencies/organizations in charge of each sector/area at central and local level need to identify, assess and implement measures to respond to climate change for their sector/area. Measures for inter-sector issues (e.g. education, training, scientific research, technology, organization, culture and information, etc.) also needed to be assessed and implemented. Main contents are:

- Identify priorities of sectors/areas/regions/systems that need to get focus in assessment;
- Select and develop assessment measures;
- Carry out technical assessment;
- Assess measures regarding to socio-economic and environmental aspects at sectoral and local level;
- Select measures;
- Present outputs of measures assessment.

5) Prepare strategy and plan to implment selected measures

Main contents are:

- Clearly identify organizations/agencies to be in charge in implementing selected measures and roles and responsibilities of such organizations/agencies in implementing the Action plan;
- Identify steps to implement the Action plan and specific jobs for each step;

- Identify financial and human resources for implementing the Action plan and procedure to receive such resources;
- Supporting activities to the implementation of the Action plan to ensure expected outputs are achieved (propaganda, training and education, etc.)

6) Draft Action plan to respond to climate change

After completing the above mentioned 5 tasks, the Action plan needs to be documented for recommendations and comments of key agencies, organizations and experts, then completed and submitted to authorized agencies for approval.

Main contents are

- Draft components of the Action plan for sector, area, and locality;
- Summarize, adjust component of the Action plan for area, sector and inter-sector;
- Draft the Action plan;
- Hold consultation meetings to get recommendations from key agencies, organizations and experts, enterprises, non-governmental organizations, community-based organizations, and donors, etc.
- Complete the Action plan;
- Submit the Action plan to authorized agencies for approval;
- Promulgate the Action plan.

ANNEX III: LIST OF PRIORITY PROJECTS WITHIN THE NATIONAL TARGET PROGRAMME (NTP)

No.	Projects	Expected results	
		Toward 2010	2015
	Task 1: To assess levels of climate change and its impacts on sectors and regions		
	Task 1.1: Assessment of levels of climate change (CC) CHAIR: MINISTRY OF NATURAL RESOURCES (MONRE) In coordination with: sectors and regions		
1.	Assess climate change (CC) in Vietnam. Main activities include: <ul style="list-style-type: none"> - Overview of domestic and foreign research - Assessment for trends of main climatic elements, detailed for all climate regions of Vietnam in relevant to trends of sea level rise, natural disasters and climatic extremes, etc. 	<ul style="list-style-type: none"> - Overview report on climate change of domestic and foreign research - Variation report on main climatic elements and related elements (sea level rise, natural disasters) 	- Reports will be updated regularly
2.	Develop specific scenarios of climate change and sea level rise for every region in each stage includes: <ul style="list-style-type: none"> - Develop scenarios of climate change and estimation of trends of main climatic elements, detailed for all climate regions of Vietnam in period of 10 years until 2100 and - In relevant to trends of sea level rise, natural 	Climate change scenarios, sea level rise and related elements for 7 climatic regions.	Scenarios will be updated regularly

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No.	Projects	Expected results	
		Toward 2010	2015
	disasters and climatic extremes, etc.		
	Task 1.2: Assessment of CC impacts Chair: MONRE, MARD, MOC, MOT, MOH, MOIT, MSCT In coordination with: localities, regions		
3.	Assess impacts of climate change on natural resources and environment, include: <ul style="list-style-type: none"> - Detailed and science based assessments with high reliability in term of climate change impacts according to scenarios on sectors/regions (Environment, Land, Water, Mineral, Hydro-meteorology, Sea) and specific localities: - Reports and maps of key and vulnerable sectors/areas - Preliminary assessment of damage and injuries caused by climate change 	<ul style="list-style-type: none"> - Scientific basic, methodology and guidelines of impact assessment of CC and sea level rise for each sector, locality; - Preliminary results of pilot implementation in term of impact assessment of CC and sea level rise in vulnerable sectors/areas such as water resources, agriculture, health, livelihood, lowland areas and coastal lines 	<ul style="list-style-type: none"> - Potential impacts and economic loss evaluation caused by CC will be updated regularly in each sector/area; - Reports and maps of key and vulnerable sectors/areas; (Results will be updated regularly)
	Task 2: Determination of solutions to climate change adaptation CHAIR: MINISTRIES, REGIONS		
4.	- Research and specify solutions to respond to	- Scientific basic, methodology	- Complete development of

No.	Projects	Expected results	
		Toward 2010	2015
	<p>CC, emissions reduction and enhancement of green house gases sinks in sectors, localities;</p> <ul style="list-style-type: none"> - Develop and implement pilot projects on CC adaptation and mitigation and enhancement of green house gases sinks in vulnerable sectors/areas because of CC and sea level rise (water resource, agriculture, coastal lines, public health, etc); - Initially implement measures to respond to CC in all sectors/areas according to action plans. 	<p>and guidelines of impact assessment of CC and sea level rise for each sector, locality;</p> <ul style="list-style-type: none"> - Preliminary results of pilot implementation in term of impact assessment of CC and sea level rise in vulnerable sectors/areas such as water resources, agriculture, health, livelihood, lowland areas and coastal lines. 	<p>solutions to respond to climate change in sectors/areas and localities;</p> <ul style="list-style-type: none"> - Complete solutions to respond to CC, emissions reduction and enhancement of green house gases sinks in sectors, localities; - Implement selected solutions in all sectors/areas and localities according to action plans.
<p>Task 3. Development of Science and Technology Programs on CC</p> <p>CHAIR: MINISTRY OF SCIENCE AND TECHNOLOGY, MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT</p> <p>In coordination with: MARD, MPI, Ministries, sectors, regions</p>			
5.	<p>Strengthen research and implement Science and Technology. Main results include:</p> <ul style="list-style-type: none"> - Develop National Science and technology Program (long-term and short-term) on CC; - Continuously strengthen research on: (1) phenomena, scientific nature, no clear 	<ul style="list-style-type: none"> - Framework database on CC; - National Science and technology Program on CC; - Guidelines on management and implementation of National science and technology Program; - Integrated results of project 	<ul style="list-style-type: none"> - Database on CC will be developed and updated regularly; - Annual national science and technology Program on CC; - Action results and preliminary summarization

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No.	Projects	Expected results	
		Toward 2010	2015
	<p>information about CC; (2) impacts of CC to social economy, analysis and assessment of socio-economic effectiveness (expense – profit) of CC adaptation activities;</p> <ul style="list-style-type: none"> - Integrate Programs on environment protection, efficient and effective use of natural resources and disaster prevention, Program on sea study in relevant to CC; - Strengthen research, develop and improve monitoring system of climate and CC; - Develop database serving impact assessment of CC; - Study technologies to GHG emissions reduction and technology to CC adaptation; - Strengthen development of coordination mechanism among research agencies, human resources training and implementation of technology in related sectors; - Strengthen international cooperation in science and technology activities, effective application and transmission of climate-friendly technology. 	<p>programs in relevant to CC;</p> <ul style="list-style-type: none"> - Annual plan; - Action results and annual summarization of National Science and technology Program; 	
	Task 4: Building capacity of organization, institution, policy on CC		
	CHAIR: OFFICE OF THE PARTY CENTRAL COMMITTEE (PCC)		
	In coordination with: MONRE, MPI, relevant Ministries and sectors, regions		

No.	Projects	Expected results	
		Toward 2010	2015
6.	Develop Resolution of Secretariat Committee - Politburo on response to climate change.	Resolution of Secretariat Committee - Politburo on response to climate change.	
CHAIR: NATIONAL COMMITTEE FOR IDEOLOGY AND CULTURE In coordination with: PCC, MONRE, relevant Ministries and sectors, regions			
7.	Implement Resolution of Secretariat Committee - Politburo in term of action plan to respond to climate change. Execute resolution of the Communist Party on response to climate change at all levels of Party executive committee, authorities, social organizations and sectors.	<ul style="list-style-type: none"> - Result of Resolution in the system of Communist Party in sectors/localities; 	<ul style="list-style-type: none"> - Summary, evaluate and learn from experience in each stage.
8.	Establish policy framework and guidelines in developing AP to respond to climate change for sectors/regions. <ul style="list-style-type: none"> - Establish legislation framework in consistence with subordinate legislation relating to climate change adaptation and 	<ul style="list-style-type: none"> - Legislation and implementation guidelines in ministries, sectors/areas; - Training courses is organized to grasp guidelines, policies and implementation direction. 	<ul style="list-style-type: none"> - Review and consolidate policies and institutions.

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No.	Projects	Expected results	
		Toward 2010	2015
	mitigation measures for all levels and sectors; - Develop coordination mechanism among line ministries, sectors and regions in climate change adaptation; - Conduct training courses to implement action plans to cope with climate change at all levels/sectors.		
CHAIR: MINISTRY OF PLANNING AND INVESTMENT In coordination with: MONRE, MARD, Cities, and other relevant ministries/sectors and regions			
9.	- Develop strategic environmental assessment process in relevant to CC and technological instruction applying for development plan and planning.	- Government Decree and attached Circular define integration of CC into strategic environmental assessment ; - Training courses is organized to implement Decree.	- Impacts will be updated regularly - Reports and maps of vulnerable sectors/areas will be updated regularly
CHAIR: GOVERNMENT OFFICE In coordination with: MONRE, sectors and regions			
10.	Develop and complete organization and management mechanism of NTP to respond to climate change at all levels and relevant ministries/sectors. Main activities include:	- Organization and management system is established and operated in all related ministries, sectors and localities	- Grasp organization system; - Supplement to complete Guidelines, etc.

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No.	Projects	Expected results	
		Toward 2010	2015
	<ul style="list-style-type: none"> - Establish management mechanism for NTP to respond to climate change at all levels/sectors (personnel, office, facilities, tasks, functions, operation regulations, etc.); - Develop management and implementation regulations of NTP. 	<ul style="list-style-type: none"> ; - Guidelines on NTP operation and implementation. 	
11.	<ul style="list-style-type: none"> - Develop management and supervision system of NTP: Program's Plan, monitoring and evaluation system, quality ensure, financial Management; - Conduct training courses to implement NTP. 	<ul style="list-style-type: none"> - Regulations on operation and organization of NTP management tools; - Training courses will be established. 	<ul style="list-style-type: none"> - Implement the system according to defined periods; - Grasp management tool system.
Task 5: Awareness enhancement and human resources training			
CHAIR: MONRE			
In coordination with: Ministry of Public Security (MOPS), Department of Propaganda and Training, and other relevant ministries/sectors and regions, social organizations			
12.	Develop strategies, plans and enhancement of public awareness for selected groups (members of the Party, managers at all levels, mass organizations, correspondents, etc).	<ul style="list-style-type: none"> - Strategies on enhancement of public awareness for selected groups; - Raising awareness for selected groups; 	<ul style="list-style-type: none"> - Implement activities according to plan.

No.	Projects	Expected results	
		Toward 2010	2015
		<ul style="list-style-type: none"> - Programs and training materials for selected groups; - Communication programs; - Results of pilot projects 	
CHAIR: MINISTRY OF EDUCATION AND TRAINING (MOET) In coordination with: MONRE, MOPS and other relevant ministries/sectors and regions			
13.	Develop programs on integration of climate change information into curriculums at schools. Main activities include: <ul style="list-style-type: none"> - Assess current state; - Develop strategies and plans; - Guidelines and methods of integration. 	<ul style="list-style-type: none"> - Action plan on CC education in education system; - Integrate contents on CC in training program at all levels. 	- Annual results and products of action plans
CHAIR: MINISTRY OF INFORMATION AND COMMUNICATION In coordination with: MSCT, MONRE, MARD, MOET, and other relevant ministries/sectors and regions			
14.	Establish thematic channels on public media (newspaper, radio, television, web, etc) for climate change information exchange. Main activities: <ul style="list-style-type: none"> - Assess current state; - Develop contents for public media; - Implementation organization. 	<ul style="list-style-type: none"> - Action plans of Communication information on response to CC; - Movements, activities of physical exercise are organized. 	- Annual results and products of action plans

No.	Projects	Expected results	
		Toward 2010	2015
CHAIR: VIETNAMESE FATHERLAND FRONT, THE VIETNAM GENERAL FEDERATION OF LABOR (VGFL) In coordination with: relevant ministries/sectors and regions and social organizations			
15.	Develop and implement action plans in implementing NTP of Vietnamese Fatherland Front. Main objects: <ul style="list-style-type: none"> - Raise awareness of public community on CC; - Ensure social, political security; - Encourage all classes to jointly implement NTP 	<ul style="list-style-type: none"> - Action plan of Vietnamese Fatherland Front in implementing NTP; - Plan on raising awareness for all classes; - Measures and training materials and communication; - Communication movements; - Activities of raising awareness. 	<ul style="list-style-type: none"> - Annual results and products of action plans
CHAIR: WOMEN'S UNION, VGFL In coordination with: MOPS and other relevant ministries/sectors and regions and social organizations			
16.	Develop and implement action plans in	- Action plans of Women's	- Annual results and products of

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No.	Projects	Expected results	
		Toward 2010	2015
	implementing NTP of Women's Union. Main objects concentrate on gender issue in CC adaptation activities.	Union in implementing NTP; - Plan to solve gender in CC adaptation activities.	action plans
CHAIR: HOCHI MINH's YOUTH COMMUNIST UNION In coordination with: VGFL, and other relevant ministries/sectors and regions and social organizations			
17.	Organize communication campaigns, contests on CC. Main results include: - Build communication campaigns and contests for each audience; - Implementation organization	- Communication movements; - Study contests; - Communication materials on CC.	- Annual results and products of action plans
Task 6: Further international Cooperation CHAIR: NATIONAL STEERING COMMITTEE FOR NTP TO RESPOND TO CLIMATE CHANGE In coordination with: All ministries/sectors and regions			
18.	- DEVELOP COOPERATION MECHANISM BETWEEN VIETNAM AND INTERNATIONAL DONORS TO IMPLEMENT NTP CONTENTS.	- International cooperation Organizations, focal points in ministries, sectors and localities will be designated establishment ; - Thematic groups on supporting	- International cooperation Organizations, focal points in ministries, sectors and localities will effectively operate; - Thematic groups on

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No.	Projects	Expected results	
		Toward 2010	2015
		<p>Vietnam to respond to CC within donor community are established in ministries, sectors, localities;</p> <ul style="list-style-type: none"> - Clear, transparent, close and active cooperation mechanism among ministries, sectors, localities, donors and international partners will be established; 	<p>supporting Vietnam to respond to CC within donor community effectively operate;</p> <ul style="list-style-type: none"> - cooperation mechanism among ministries, sectors, localities, donors and international partners will be comprehensively completed and implemented
19.	<ul style="list-style-type: none"> - Improve international support use effectiveness (financial support, climate-friendly technologies transference, experience exchange) to contribute to implement NTP contents on CC. 	<ul style="list-style-type: none"> - Mechanism, policy on effective use of international assistance; - Plan on assistance exploitation use from bilateral, sectoral and multilateral cooperation channels will be developed; - Initial international assistance will be preliminarily defined; 	<ul style="list-style-type: none"> - Mechanism, policy on effective use of international assistance will be completed; - Plan on assistance exploitation use from bilateral, sectoral and multilateral cooperation channels will be completed and implemented; - International assistance to Vietnam accounts for high proportion within total budget in implementing NTP contents.

No.	Projects	Expected results	
		Toward 2010	2015
20.	Develop and complete legal framework to encourage international investment in CC adaptation and Clean development mechanism projects in Vietnam.	Legal framework on mechanism, policies to create favorable conditions and encourage international investment in CC adaptation and Clean development mechanism projects in Vietnam will be developed and completed.	Development and implementation of CC adaptation and Clean development mechanism projects will be widely implemented in potential sectors, areas.
21.	Enhance cooperation with CC adaptation international countries, organizations to implement contents of NTP to respond to climate change.	- Negotiate, sign bilateral and multilateral cooperation agreements on response to CC among ministries, sectors and respective agencies of countries, international organizations.	Bilateral and multilateral cooperation relation between Vietnam and the world will be continuously widened.
22.	Build capacity in implementing contents of NTP to respond to climate change.	- Building capacity of officials; - Professional competence, international negotiation skills of officials, international focal points on CC adaptation of ministries/sectors and regions and localities will be improved through domestic and international training courses. - Disseminate propaganda climate change information to	- Proficient official meet working demands; - Awareness on climate change of policy makers, social classes, community will be continuously raise

No.	Projects	Expected results	
		Toward 2010	2015
		raise awareness for policy makers, social classes, and community.	
23.	Strengthen participation into regional and international negotiations on climate change	Contribute to building procedure of regional and international agreements, documents on climate change after 2012 under Bali roadmap through participation in regional and global conferences on climate change.	Vietnam's position in the region as well as in the world will be lifted.
24.	Enhance international information exchange system on climate change	Collection, analysis and information exchange system on climate change in ministries/sectors and regions and localities will be established and jointly linked with regional and global information systems.	Domestic and international collection, analysis and information exchange system on climate change will gain high effectiveness.
Task 7: Integration of NTP into Strategies, Plans, Planning, Programs and other Projects			
CHAIR: MINISTRY OF PLANNING AND INVESTMENT			
(In coordination with: Other relevant ministries/sectors and climate change offices in relevant ministries)			
25.	Integrate NTP into Agenda 21, socio-economic development strategies and plans at national level. Main results include: - Consistent documents and	- Integrate Agenda 21, socio-economic development strategies and plans into CC issues; - Guideline documents of integration.	- Periodically improve integration effectiveness

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No.	Projects	Expected results		
		Toward 2010	2015	
	<p>guidelines to prepare for integration of NTP into Agenda 21, socio-economic development strategies and plans at national level;</p> <ul style="list-style-type: none"> - Documents after integration 			
26.	<p>Integrate NTP/AP into Agenda 21, development plans at local/sectoral level. Main results include:</p> <ul style="list-style-type: none"> - Consistent documents and guidelines to prepare for integration of NTP/action plans into Agenda 21, development plans at local/sectoral level; - Documents after integration. 	<ul style="list-style-type: none"> - Guideline documents of integration; - Integration of Agenda 21, at local/sectoral level. 	Periodically effectiveness	improve integration
27.	<ul style="list-style-type: none"> - Integrate NTP/action plans into national programs/projects. Main results include: - Consistent documents and guidelines to prepare for 	<ul style="list-style-type: none"> - Guideline documents of integration for each program/project; - Programs/projects after integration. 	Periodically effectiveness.	improve integration

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No.	Projects	Expected results	
		Toward 2010	2015
	integration of NTP/action plans into national programs/projects; - Documents after integration.		
Task 7: Development and application of action plans to respond to climate change			
CHAIR: MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT			
In coordination with: MPI and other relevant ministries/sectors and regions			
28.	Develop and implement of action plans to carry out NTP in CC adaptation and mitigation includes: - Integrate CC issues into related plans, projects, programs; - Assess impacts of CC scenarios and sea level rise on natural resources, environment, natural disasters and climatic extremes, etc. - Propose and implement sea level rise adaptation of natural ecosystems;	- Action plan of natural resources and environment sector; - Guidance on NTP management and implementation - Guidance on natural disaster prevention and minimization in sectors/regions caused by CC; - Process of recovering damages after natural disasters in sectors/regions; - Strategies, plans, guidance and documents on raising awareness for selected groups: community, officials of governmental systems; public organizations, etc... - Projects on building capacity for national focal point agency on CC. - Results of pilot projects: river basin management model, integrated coastal zone	- Annual results/products in implementing action plans of this sector.

No.	Projects	Expected results	
		Toward 2010	2015
	<ul style="list-style-type: none"> - Propose exploitation and proper use of natural resources modification and amendment towards CC adaptation; - Develop comprehensive management model of river basins to respond to CC; - Develop comprehensive management model of coastal zones to respond to CC; - Build capacity of natural disaster prevention and minimization caused by CC; - Study measures to recover damages after natural disasters (floods, typhoons) caused by CC; - Develop strategy on raising awareness for selected groups (within communist, all-level governmental systems, public organizations, etc.) - Improve Vietnam's position 	management, planning modification of wetland protected areas, etc...	

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No.	Projects	Expected results	
		Toward 2010	2015
	in the region and in the world in international negotiation activities; - Implement out pilot projects.		
CHAIR: MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT In coordination with: MONRE, MPI and other relevant ministries/sectors and regions			
29.	Develop and implement action plans in carrying out NTP in Agriculture and Rural Development (Agriculture, Forestry, Aquaculture, Irrigation, etc) in CC adaptation and mitigation includes: - Integrate CC issues into related plans, planning, projects; - Develop coastal ecological-economic models in CC adaptation; - Study science bases, realities and propose projects on socio-economic	- Action plans of Agriculture and Rural Development sector; - Plan on development of protective forests to adapt and mitigate natural disasters; - Plan on forest development and distributing tree planting to develop carbon dioxide sinks - Results of pilot projects: agricultural models in coastal and mountainous zones in CC adaptation; Models on demand and water quality management to cope with CC, etc.	Annual results in implementing action plans of this sector

No.	Projects	Expected results	
		Toward 2010	2015
	<p>development in regularly dry areas;</p> <ul style="list-style-type: none"> - Propose to integrate CC issues with measure development ensuring security of water sources, sea dyke system, reservoir; - Propose development methods of protective forests (upstream forests and coastal forests) according to climate change scenarios; - Study to modify management Strategy and Planning of protected areas system to respond to CC in Vietnam; - Implement pilot projects. 		
	<p>CHAIR: MINISTRY OF PLANNING AND INVESTMENT</p> <p>In coordination with: MONRE, MARD and other relevant ministries/sectors and regions</p>		
30.	Develop and implement action plans in carrying out NTP of	<ul style="list-style-type: none"> - Action plan of MIP in implementing NTP; - Integrate 2011-2015 national socio-economic 	<ul style="list-style-type: none"> - Annual results in implementing action plans of this sector.

No.	Projects	Expected results	
		Toward 2010	2015
	<p>MPI includes activities as follow:</p> <ul style="list-style-type: none"> - Integrate CC issues with national socio-economic development plan; National 21 agenda; - In coordination with MONRE to develop guidance on integrating CC issues with local socio-economic development plan and sectoral development plan - Plan on CC adaptation in areas and regions; - Develop mechanisms, policies encouraging investment in CDM sectors, emission reduction, environment protection: <p>+ Policies, guidelines, legislation creating mechanism, favorable</p>	<p>development plan with CC elements;</p> <ul style="list-style-type: none"> - Instruct ministries, sectors and regions and localities to integrate CC elements with socio-economic development plan and sectoral development plan; - Plan on CC adaptation in regions, areas; - Legal documents guiding and encouraging foreign investment under CDM; - Results of pilot projects. 	

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No.	Projects	Expected results	
		Toward 2010	2015
	conditions for foreign investors according to CDM; + Issue and disseminate documents, implementation trainings - Implement pilot projects		
CHAIR: MINISTRY OF PUBLIC SECURITY In coordination with: MONRE, MARD and other relevant ministries/sectors and regions			
31.	Develop and implement action plans in carrying out NTP of public security sector includes activities as follow: - Develop curriculum/training manual and practice/drill in rescuing and fast reacting to urgent situations relating to climate change; - Integrate CC issues into measure development ensuring environment security/natural disasters;	- Action plan of Public Security sector in implementing NTP; - Plans and practice/drill in rescuing and fast reacting to urgent situations relating to climate change; - plan and measures to tackle environment security relating to CC; - Results of pilot projects: rescue models; measures tackling environment security caused by CC; - Results of pilot projects	- Annual results in implementing action plans of this sector.

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No.	Projects	Expected results	
		Toward 2010	2015
	- Implement pilot projects.		
CHAIR: MINISTRY OF DEFENSE			
In coordination with: MONRE, MARD and other relevant ministries/sectors and regions			
32.	<p>Develop and implement action plans in carrying out NTP of defense sector includes activities as follow:</p> <ul style="list-style-type: none"> - Integrate CC issues into plans, planning, sectors relating to national defense; - Adjust plans, planning according to impacts of climate change scenarios; - Develop curriculum/training manual and practice/drill in rescuing and fast reacting to urgent situations relating to climate change/natural disasters; - Implement pilot projects. 	<ul style="list-style-type: none"> - Action plan of national defense in implementing NTP; - results integrating CC issues with plans, planning according to impacts of climate change scenarios; - Plans, planning are Adjusted in accordance with climate change scenarios; - Plan and practice/drill in rescuing and fast reacting to urgent situations relating to climate change; - plan and measures to tackle environment security relating to CC; - Results of pilot projects: rescue models; measures; measures to solve environment security. 	- Annual results/products in implementing action plans of this sector.
CHAIR: MINISTRY OF TRANSPORT			

No.	Projects	Expected results	
		Toward 2010	2015
In coordination with: MONRE, MARD and other relevant ministries/sectors and regions			
33.	<p>DEVELOP AND IMPLEMENT ACTION PLANS IN CARRYING OUT NTP OF NATIONAL DEFENSE SECTOR INCLUDES CC ADAPTATION AND MITIGATION ACTIVITIES AS FOLLOW:</p> <ul style="list-style-type: none"> - INTEGRATE CC WITH PLANS, PLANNING OF SECTOR; - PROJECTS TO ADJUST PLANNING AND DESIGNS OF TRANSPORT WORKS (PORTS, ROADS, ETC...) - PLAN AND METHODS OF EMISSION REDUCTION AND CC 	<ul style="list-style-type: none"> - Action plans of transport sector in implementing NTP; - results integrating CC issues with plans, planning according to impacts of climate change scenarios; - Plans and planning are adjusted according to climate change scenarios; - Plan on energy proper use and saving; - Plan on renewable energies use; - Results of pilot projects. 	Annual results/products in implementing action plans of this sector.

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No.	Projects	Expected results	
		Toward 2010	2015
	MITIGATION: SAVE AND PROPER USE OF ENERGIES, STRENGTHENING USE OF FRIENDLY-ENVIRONMENTAL NEW ENERGIES, TRAFFIC JAM REDUCTION. - IMPLEMENT PILOT PROJECTS.		
	CHAIR: MINISTRY OF INDUSTRY AND TRADE In coordination with: MONRE, MPI and other relevant ministries/sectors and regions		
34.	Develop and implement action plans in carrying out NTP of industry and trade sector includes CC adaptation and mitigation activities as follow: - Energy saving and proper use; Study and apply technologies helping	<ul style="list-style-type: none"> - Action plans of industry and trade sector in implementing NTP; - Plan on energy saving and proper use; - results integrating CC issues with development plans; - Plan on adjusting planning of industrial zones, infrastructure according to climate change scenarios; - Plan on renewable energies use; 	<ul style="list-style-type: none"> - Annual results/products in implementing action plans of this sector.

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No.	Projects	Expected results	
		Toward 2010	2015
	emission reduction and energy saving (concentration on renewable energies use) <ul style="list-style-type: none"> - Integrate CC with plans, planning of Sector; - Study and adjust planning of industrial zones, infrastructure, oil rigs; - Study to propose measures ensuring energy security to cope with CC; - Study to propose measures to respond to CC in trade activities; - Implement pilot projects. 	<ul style="list-style-type: none"> - Results of pilot projects: saving models and energy proper use; Models of renewable energy use, etc. 	
CHAIR: MINISTRY OF HEALTH In coordination with: MONRE, MPI and other relevant ministries/sectors and regions			
35.	Develop and implement action plans in carrying out NTP of health sector includes CC adaptation and mitigation	<ul style="list-style-type: none"> - Action plans of health sector in implementing NTP; - Process of disease prevention (including water and intermediary born diseases) caused by CC; 	<ul style="list-style-type: none"> - Annual results/products in implementing action plans of this sector.

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No.	Projects	Expected results	
		Toward 2010	2015
	activities as follow: <ul style="list-style-type: none"> - Methods to adapt to high temperate/heat wave; - Solutions to prevent water and intermediary born diseases, etc caused by CC; - Solutions of epidemic prevention for regions / climatic refugees; - Sanitary methods of epidemic prevention after natural disasters (typhoons, floods, droughts); - Solutions to control new diseases caused by CC; - Study to propose additional contents in criteria, norms, technical directions in building industrial zones, factories to respond to CC; - Implement pilot projects. 	<ul style="list-style-type: none"> - Process of epidemic prevention after natural disasters caused by CC; - Process of epidemic prevention for regions / refugees; caused by CC; - Results of pilot projects: Models of epidemic/disease prevention; - Results of pilot projects on environment sanitation and epidemic prevention caused by CC. 	
CHAIR: MINISTRY OF CONSTRUCTION In coordination with: MONRE, MARD and other relevant ministries/sectors and regions			

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No.	Projects	Expected results	
		Toward 2010	2015
36.	<p>Develop and implement action plans in carrying out NTP of construction sector includes CC adaptation and mitigation activities as follow:</p> <ul style="list-style-type: none"> - Integrate Cc issues with sectoral Plans and planning; - Measures to adjust technical infrastructure planning, urban areas according to CC scenarios; - Integrate projects on building flood adaptable residential areas in relevant to CC; - Study to propose additional contents in criteria, norms, technical directions in building to respond to CC; - Implement pilot projects. 	<ul style="list-style-type: none"> - Action plans of construction sector in implementing NTP; - Plan on adjusting plans, planning caused by CC - Results on Integrating CC into plans, planning; - A series of criteria, norms, building technical directions to respond to CC; - Results of pilot projects on adjusting technical infrastructure planning, residential areas, etc. 	Annual results/products in implementing action plans of this sector.
<p>CHAIR: MINISTRY OF LABOUR, INVALIDS AND SOCIAL AFFAIRS (MOLISA)</p> <p>In coordination with: MONRE, MPI and other relevant ministries/sectors and regions</p>			
37.	Develop and implement action plans in carrying out NTP of	<ul style="list-style-type: none"> - Action plans of Labour, Invalids and Social Affairs sector in implementing NTP; 	Annual results/products in implementing action plans of this sector.

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No.	Projects	Expected results	
		Toward 2010	2015
	<p>Labour, Invalids and Social Affairs sector including CC adaptation and mitigation activities as follow:</p> <ul style="list-style-type: none"> - Research and propose solutions in term of employment security, poverty reduction for the most vulnerable areas by climate change; - Research and propose solutions and plans on migration, resettlement and life insurance for residents in the most vulnerable areas by climate change and sea level rise; - Issues on Gender, population, livelihood, etc... - Issues on HIV and other social evils; - Implement pilot projects. 	<ul style="list-style-type: none"> - Plan on ensuring employment security, food security, poverty reduction for the most vulnerable areas by climate change;s - Plans on migration, resettlement in the most vulnerable areas by sea level rise; - Results of pilot projects: migration and resettlement models, solutions ensuring employment security, food security, poverty reduction. 	

No.	Projects	Expected results	
		Toward 2010	2015
CHAIR: NATIONAL COMMITTEE FOR SEARCH AND RESCUE			
In coordination with: MONRE, MPI and other relevant ministries/sectors and regions			
38.	<p>Develop and implement action plans in carrying out NTP of National Committee for Search and Rescue including CC adaptation and mitigation activities as follow:</p> <ul style="list-style-type: none"> - Research and establish salvage and rescue network in adaptation to climate change for each region/sector and natural disaster; - Regulations to ensure effectiveness of rescue network; - Implement pilot projects. 	<ul style="list-style-type: none"> - implementing NTP; - Salvage and rescue network for regions/sectors caused by CC; - Salvage and rescue solutions; - Results of pilot projects: Salvage and rescue models. 	Annual results/products in implementing action plans of this sector.
CHAIR: MINISTRY OF CULTURE, SPORTS AND TOURISM			
In coordination with: MONRE, MPI and other relevant ministries/sectors and regions			
39.	Develop and implement action plans in carrying out NTP of	<ul style="list-style-type: none"> - Action plans of Culture, Sports and Tourism sector in implementing NTP; 	Annual results/products in implementing action plans of this sector.

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No.	Projects	Expected results	
		Toward 2010	2015
	<p>Information and Tourism including CC adaptation and mitigation activities as follow:</p> <ul style="list-style-type: none"> - Research and propose solutions on conservation of cultural and tourism areas in adaptation to climate change. - Analyze current status and predict future trends of cultural and tourism areas under climate change impacts; - Develop adaptation responses; - Implement pilot projects. 	<ul style="list-style-type: none"> - Adjustment of planning and protect conservation of cultural and eco-tourism areas in adaptation to climate change. - Results of pilot projects on Adjusting planning and protect conservation of cultural and eco-tourism areas 	

ANNEX IV: TENTATIVE BUDGET OF PROJECTS WITHIN THE NATIONAL TARGET PROGRAMME

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
Task 1: To assess levels of climate change and its impacts on sectors and regions					
Task 1.1: Assessment of levels of climate change (CC) CHAIR: MINISTRY OF NATURAL RESOURCES (MONRE) In coordination with: sectors and regions					
1.	Assess climate change in Vietnam. Main activities include: <ul style="list-style-type: none"> - Overview of domestic and foreign research - Assessment for trends of main climatic elements, detailed for all climate regions of Vietnam in relevant to trends of sea level rise, natural disasters and climatic extremes, etc. 	6	5	2	13
2.	Develop scenarios of climate change and sea level rise for every region in each stage includes: <ul style="list-style-type: none"> - Develop scenarios of climate change and estimation of trends of main climatic elements, detailed for all climate regions of Vietnam in period of 10 years until 2100 and; - In relevant to trends of sea level rise, natural disasters and climatic extremes, etc. 	15	25	3	43
Task 1.2: Assessment of CC impacts					

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No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
CHAIR: MONRE, MARD, MOC, MOT, MOH, MOIT, MSCT					
In coordination with: regions					
3.	Assess impacts of climate change on natural resources and environment, include: <ul style="list-style-type: none"> - Detailed and science based assessments with high reliability in term of climate change impacts according to scenarios on sectors/regions (Environment, Land, Water, Mineral, Hydro-meteorology, Sea) and specific localities: - Reports and maps of key and vulnerable sectors/areas - Preliminary assessment of damage and injuries caused by climate change 	30	30	69	129
Task 2: Determination of solutions to climate change adaptation					
Chair: Ministries, regions					
1.	<ul style="list-style-type: none"> - Research and specify solutions to respond to CC, emissions reduction and enhancement of green house gases sinks in sectors, localities; - Develop and implement pilot projects on CC adaptation and mitigation and enhancement of green house gases sinks in vulnerable sectors/areas because of CC and sea level rise (water resource, agriculture, coastal lines, public health, etc) 	30	30	60	120
Task 3. Development of Science and Technology Programs on CC					
MINISTRY OF SCIENCE AND TECHNOLOGY, MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT					
In coordination with: MARD, MPI, Ministries, sectors, regions					
4.	Strengthen research and implement Science and Technology. Main results include: <ul style="list-style-type: none"> - Develop National Science and technology Program (long-term and short-term) on CC; 	31	36	440	507

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
	<ul style="list-style-type: none"> - Continuously strengthen research on: (1) phenomena, scientific nature, no clear information about CC; (2) impacts of CC to social economy, analysis and assessment of socio-economic effectiveness (expense – profit) of CC adaptation activities; - Integrate Programs on environment protection, efficient and effective use of natural resources and disaster prevention, Program on sea study in relevant to CC; - Strengthen research, develop and improve monitoring system of climate and CC; - Develop database serving impact assessment of CC; - Study technologies to GHG emissions reduction and technology to CC adaptation; - Strengthen development of coordination mechanism among research agencies, human resources training and implementation of technology in related sectors; - Strengthen international cooperation in science and technology activities, effective application and transmission of climate-friendly technology. 				
Task 4: Building capacity of organization, institution, policy on CC CHAIR: OFFICE OF THE PARTY CENTRAL COMMITTEE (PCC) In coordination with: MONRE, MPI, relevant Ministries and sectors, regions					
5.	Develop Resolution of Secretariat Committee - Politburo on response to climate change.	2	2		4
CHAIR: NATIONAL COMMITTEE FOR IDEOLOGY AND CULTURE In coordination with: PCC, MONRE, relevant Ministries and sectors, regions					
6.	Implement Resolution of Secretariat Committee - Politburo in term of action plan to respond to climate change. Execute resolution of the Communist Party on response to climate change	2	2		4

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No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
	at all levels of Party executive committee, authorities, social organizations and sectors.				
7.	Establish policy framework and guidelines in developing AP to respond to climate change for sectors/regions.		25	15	40
8.	<ul style="list-style-type: none"> - Establish legislation framework in consistence with subordinate legislation relating to climate change adaptation and mitigation measures for all levels and sectors; - Develop coordination mechanism among line ministries, sectors and regions in climate change adaptation; - Conduct training courses to implement action plans to cope with climate change at all levels/sectors. 	15	12	20	47
CHAIR: MINISTRY OF PLANNING AND INVESTMENT					
In coordination with: MONRE, MARD, Cities, and other relevant ministries/sectors and regions					
9.	Develop strategic environmental assessment process in relevant to CC and technological instruction applying for development plan and planning.				
CHAIR: GOVERNMENT OFFICE (GO)					
In coordination with: MONRE, sectors and regions					
10.	<p>Develop and complete organization and management mechanism of NTP to respond to climate change at all levels and relevant ministries/sectors. Main activities include:</p> <ul style="list-style-type: none"> - Establish management mechanism for NTP to respond to climate change at all 	20	31		51

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No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
	levels/sectors (personnel, office, facilities, tasks, function, operation regulation, etc.); Develop management and implementation regulations of NTP.				
11.	- Develop management and supervision system of NTP: Program's Plan, monitoring and evaluation system, quality ensure, financial Management; - Conduct training courses to implement NTP.	10	5		15
Task 5: Awareness enhancement and human resources training					
Chair: MONRE					
In coordination with: Ministry of Public Security (MOPS), Department of Propaganda and Training, and other relevant ministries/sectors and regions, social organizations					
12.	Develop strategies, plans and enhancement of public awareness for selected groups (members of the Party, managers at all levels, mass organizations, correspondents, etc).	10	15	35	60
CHAIR: MINISTRY OF EDUCATION AND TRAINING (MOET)					
In coordination with: MONRE, MOPS and other relevant ministries/sectors and regions					
13.	Develop programs on integration of climate change information into curriculums at schools. Main activities include: - Assess current state; - Develop strategies and plans; - Guidelines and methods of integration.	15	15	30	60

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No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
CHAIR: MINISTRY OF INFORMATION AND COMMUNICATION					
In coordination with: MSCT, MONRE, MARD, MOET, and other relevant ministries/sectors and regions					
14.	Establish thematic channels on public media (newspaper, radio, television, web, etc) for climate change information exchange. Main activities: - Assess current state; - Develop contents for public media; - Implementation organization.	15	15	40	70
CHAIR: VIETNAMESE FATHERLAND FRONT, THE VIETNAM GENERAL FEDERATION OF LABOR (VGFL)					
In coordination with: relevant ministries/sectors and regions and social organizations					
15.	Develop and implement action plans in implementing NTP of Vietnamese Fatherland Front. Main objects: - Raise awareness of public community on CC; - Ensure social, political security; - Encourage all classes to jointly implement NTP	3	3	2	8
CHAIR: WOMEN'S UNION, VGFL					
In coordination with: MOPS and other relevant ministries/sectors and regions and social organizations					
16.	Develop and implement action plans in implementing NTP of Women's Union. Main objects concentrate on gender issue in CC adaptation activities.	3	2	2	7
CHAIR: HO CHI MINH'S COMMUNIST YOUTH UNION					
In coordination with: VGFL, and other relevant ministries/sectors and regions and social organizations					

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No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
17.	Organize communication campaigns, contests on CC. Main results in clued: - Build communication campaigns and contests for each audience - Implementation organization.	15	35	30	80
Task 6: Further international Cooperation CHAIR: NATIONAL STEERING COMMITTEE FOR NTP TO RESPOND TO CLIMATE CHANGE In coordination with: All ministries/sectors and regions and localities					
18.	Develop cooperation mechanism between Vietnam and international donors to implement NTP contents on CC.	2	3		5
19.	Improve international support use effectiveness (financial support, climate- friendly technologies transference, experience exchange) to contribute to implement NTP contents on CC adaptation.	2	3		5
20.	Develop and complete legal framework to encourage international investment in CC adaptation and Clean development mechanism projects in Vietnam.	2	3		5
21.	Enhance cooperation with CC adaptation international countries, organizations to implement contents of NTP to respond to climate change.	2	3	3	8
22.	Build capacity in implementing contents of NTP to respond to climate change.	5	5	10	20
23.	Strengthen participation into regional and international negotiations on climate change.	2	3	3	8
24.	Enhance international information exchange system on climate change.	4	4	2	10

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
Task 7: Integration of NTP into development Strategies, Plans, Planning, Programs and other Projects					
CHAIR: MINISTRY OF PLANNING AND INVESTMENT					
In coordination with: Other relevant ministries/sectors and steering committee offices for climate change in sectors, localities					
25.	Integrate elements into socio-economic development strategies and plans at national level. Main results include: - Consistent documents and guidelines to prepare for integration of NTP into Agenda 21, socio-economic development strategies and plans at national level; - Documents after integration	1	2	4	7
26.	Integrate CC elements into development plans at local/sectoral level. Main results include: - Consistent documents and guidelines to prepare for integration of NTP/action plans into Agenda 21, development plans at local/sectoral level; - Documents after integration.	30	50	75	155
27.	Integrate CC elements into national programs/projects. Main results include: - Consistent documents and guidelines to prepare for integration of NTP/action plans into national programs/projects; - Documents after integration.	2	6	2	10
Task 8: Development and implementation of action plans to respond to climate change					
CHAIR: MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT					
In coordination with: MPI and other relevant ministries/sectors and regions					

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
<i>Note: Budget to implement specific activities of ministries/sectors and regions will be specified in accordance with action plans of ministries/sectors and regions and direct allocated to ministries/sectors and regions</i>					
28.	<p>Develop and implement of action plans to carry out NTP in natural resources and environment sector and activities of CC adaptation and mitigation includes:</p> <ul style="list-style-type: none"> - Improve/upgrade early warning system on CC/natural disaster; - Integrate CC issues into related plans, projects, programs; - Assess impacts of CC scenarios and sea level rise on natural resources, environment, natural disasters and climatic extremes, etc. - Propose and implement sea level rise adaptation of natural ecosystems; - Propose exploitation and proper use of natural resources modification and amendment towards CC adaptation; - Develop comprehensive management model of river basins to respond to CC; - Develop comprehensive management model of coastal zones to respond to CC; - Build capacity of natural disaster prevention and minimization caused by CC; - Study measures to recover damages after natural disasters (floods, typhoons) caused by CC; - Develop strategy on raising awareness for selected groups (within communist, all-level governmental systems, public organizations, etc.) - Improve Vietnam's position in the region and in the world in international negotiation activities; - Implement pilot projects. 	90	90	270	450

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
CHAIR: MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT					
In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
29.	Develop and implement action plans in carrying out NTP in Agriculture and Rural Development (Agriculture, Forestry, Aquaculture, Irrigation, etc) in CC adaptation and mitigation includes: <ul style="list-style-type: none"> - Integrate CC issues into related plans, planning, projects; - Develop coastal ecological-economic models in CC adaptation; - Study science bases, realities and propose projects on socio-economic development in regularly dry areas; - Propose to integrate CC issues with measure development ensuring security of water sources, sea dyke system, reservoirs; - Propose development methods of protective forests (upstream forests and coastal forests) according to climate change scenarios; - Study to modify management Strategy and Planning of protected areas system to respond to CC in Vietnam; - Implement pilot projects. 	20	20	50	90
CHAIR: MINISTRY OF PLANNING AND INVESTMENT					
In coordination with: MONRE, MARD and other relevant ministries/sectors and regions					
30.	Develop and implement action plans in carrying out NTP of MPI includes activities as follow:	15	15	20	50

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
	<ul style="list-style-type: none"> - Integrate CC issues with national socio-economic development plan; National 21 agenda; - In coordination with MONRE to develop guidance on integrating CC issues with local socio-economic development plan and sectoral development plan; - Plan on CC adaptation in areas and regions; - Develop mechanisms, policies encouraging investment in CDM sectors, emission reduction, environment protection: <ul style="list-style-type: none"> + Policies, guidelines and legal documents create mechanism and environment attracting foreign investors according to CDM; + Issue and disseminate documents, implementation trainings; - Implement pilot projects 				
CHAIR: MINISTRY OF PUBLIC SECURITY					
In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
31.	<p>Develop and implement action plans in carrying out NTP of public security sector includes activities as follow:</p> <ul style="list-style-type: none"> - Develop curriculum/training manual and practice/drill in rescuing and fast reacting to urgent situations relating to climate change; - Integrate CC issues into measure development ensuring environment security/natural disasters; - Implement pilot projects. 	4	10	10	24
CHAIR: MINISTRY OF DEFENSE					

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
In coordination with: MONRE, MARD and other relevant ministries/sectors and regions					
32.	Develop and implement action plans in carrying out NTP of defense sector includes activities as follow: - Integrate CC issues into plans, planning, sectors relating to national defense; - Adjust plans, planning according to impacts of climate change scenarios; - Develop curriculum/training manual and practice/drill in rescuing and fast reacting to urgent situations relating to climate change/natural disasters; - Implement pilot projects.	2	4	6	12
- CHAIR: MINISTRY OF TRANSPORT					
In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
33.	DEVELOP AND IMPLEMENT ACTION PLANS IN CARRYING OUT NTP OF TRANSPORT SECTOR INCLUDES CC ADAPTATION AND MITIGATION ACTIVITIES AS FOLLOW: - INTEGRATE CC WITH PLANS, PLANNING OF SECTOR; - MEASURES TO ADJUST PLANNING AND DESIGNS OF TRANSPORT WORKS (PORTS, ROADS, ETC...) - PLAN AND METHODS OF EMISSION REDUCTION AND CC MITIGATION: SAVE AND PROPER USE OF ENERGIES, STRENGTHENING USE OF FRIENDLY-ENVIRONMENTAL NEW ENERGIES, TRAFFIC JAM REDUCTION. - IMPLEMENT PILOT PROJECTS.	3	5	10	18

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No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
CHAIR: MINISTRY OF INDUSTRY AND TRADE					
In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
34.	Develop and implement action plans in carrying out NTP of industry and trade sector includes CC adaptation and mitigation activities as follow: <ul style="list-style-type: none"> - Energy saving and proper use; Study and apply technologies helping emission reduction and energy saving (concentration on renewable energies use) - Integrate CC with plans, planning of Sector; - Study and adjust planning of industrial zones, infrastructure, oil rigs; - Study to propose measures ensuring energy security to cope with CC; - Study to propose measures to respond to CC in trade activities; - Implement pilot projects. 	25	25	30	80
CHAIR: MINISTRY OF HEALTH					
In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
35.	Develop and implement action plans in carrying out NTP of health sector includes CC adaptation and mitigation activities as follow: <ul style="list-style-type: none"> - Methods to adapt to high temperate/heat wave; - Solutions to prevent water and intermediary born diseases, etc caused by CC; - Solutions of epidemic prevention for regions / climatic refugees; - Sanitary methods of epidemic prevention after natural disasters (typhoons, floods, 	2	5	8	15

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No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
	droughts); - Solutions to control new diseases caused by CC; - Implement pilot projects; - Study to propose additional contents in criteria, norms, technical directions in building industrial zones, factories to respond to CC; - Implement pilot projects.				
CHAIR: MINISTRY OF CONSTRUCTION In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
36.	Develop and implement action plans in carrying out NTP of construction sector includes CC adaptation and mitigation activities as follow: - Integrate CC issues with sectoral plans and planning; - Measures to adjust technical infrastructure planning, urban areas according to CC scenarios; - Integrate projects on building flood adaptable residential areas in relevant to CC; - Study to propose additional contents in criteria, norms, technical directions in building to respond to CC; - Implement pilot projects.	12	15	15	42
CHAIR: MINISTRY OF LABOUR, INVALIDS AND SOCIAL AFFAIRS (MOLISA) In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
37.	Develop and implement action plans in carrying out NTP of Labour, Invalids and Social	15	35	30	80

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
	Affairs sector including CC adaptation and mitigation activities as follow: <ul style="list-style-type: none"> - Research and propose solutions in term of employment security, poverty reduction for the most vulnerable areas by climate change; - Research and propose solutions and plans on migration, resettlement and life insurance for residents in the most vulnerable areas by climate change and sea level rise; - Issues on Gender, population, livelihood, etc... - Issues on HIV and other social evils; - Implement pilot projects. 				
CHAIR: NATIONAL COMMITTEE FOR SEARCH AND RESCUE In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
38.	Develop and implement action plans in carrying out NTP of National Committee for Search and Rescue including CC adaptation and mitigation activities as follow: <ul style="list-style-type: none"> - Research and establish salvage and rescue network in adaptation to climate change for each region/sector and natural disaster; - Regulations to ensure effectiveness of rescue network; - Implement pilot projects. 	5	5		10
CHAIR: MINISTRY OF CULTURE, SPORTS AND TOURISM In coordination with: MONRE, MPI and other relevant ministries/sectors and regions					
39.	Develop and implement action plans in carrying out NTP of Information and Tourism including CC adaptation and mitigation activities as follow: <ul style="list-style-type: none"> - Research and propose solutions on conservation of cultural and tourism areas in 	5	5		10

No.	Project	Tentative Budget (billion VND)			
		2009	2010	2011-2015	Total
	adaptation to climate change. - Analyze current status and predict future trends of cultural and tourism areas under climate change impacts; - Develop adaptation responses; - Implement pilot projects.				
	Total budget to implement NTP <i>(For the period of 2009-2015 and not includes implementation budget of Action plans of ministries/sectors and localities)</i>	471	607	1296	2374