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Climate change in Viet Nam and its impacts

by

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I. Introduction

*Geography:* Viet Nam is located in the Eastern part of the Indochina peninsula, bordering China to the North, Laos and Cambodia to the West with a long land border of 4,550 km, and facing the Eastern Sea (South China Sea) and the Pacific to the East and the South. On the map, Viet Nam is an S-shaped long strip of land, stretching from 23°23’ to 8°27’ North latitude.

Viet Nam faces the Eastern Sea to the East and the Gulf of Thailand to the South and Southwest. The country has a long coastline of 3,260 km running from Mong Cai in the North to Ha Tien in the Southwest. Viet Nam’s territorial waters in the Eastern Sea extend to the East and Southeast, including the continental shelf and many islands and archipelagoes. Three quarters of Viet Nam’s territory are made up of low mountains and hilly regions. Only one fourth of the Vietnamese territory is covered by deltas separated in many regions by mountains and hills.

*Climate:* Viet Nam is located in the tropical and temperate zone. Viet Nam’s climate is characterized by high temperature and humidity all year round.

There are two major climate regions in Viet Nam. Northern Viet Nam (from Mong Cai to Hai Van pass) has a tropical monsoon climate with four distinguishable seasons (spring, summer, autumn and winter) and is influenced by the highly-humid Northwest monsoon from the Asian mainland and Southeast monsoon from Thailand and Laos and the Eastern Sea. Southern Viet Nam (from Hai Van pass to Ha Tien) has a rather moderate tropical climate given the weak influence of monsoons and is characterized by dry and rainy seasons and warm weather all year round.

II. Climate change in Viet Nam

The location and topography make Vietnam one of the most disaster-prone countries in the world, suffering from typhoons, tropical storms,
floods, drought, seawater intrusions, landslides, and forest fires (each year, Viet Nam suffers from 6 to 10 tropical storms).

Vietnam is now already suffering from climate change with the annual average temperature increasing about 0.1 degrees centigrade per decade and a rise in sea level of 20 cm over 50 years (1951-2000). Heavy rainfall now hits the country more frequently in some areas, causing more severe floods, while in almost all other areas rainfall has declined creating drought conditions.

It is expected that in the year 2100, the average temperature in Viet Nam will increase by 3 degrees centigrade, and sea level along the Vietnam coast line will increase by 1m.

In accordance with a recent report on climate change impacts made by the World Bank, which warned the impact of sea-level rise from global warming could be catastrophic for Viet Nam. Accordingly, Vietnam is one of countries expected to be most affected by rising sea levels. International experts also warned that if the sea level rises by an additional 1m, about 40,000 km2 coastal deltas in Viet Nam will be flooded every year and as many as 22 million Vietnamese people, especially those living in the central and southern regions, could be displaced.

Climate change has negative impacts on nearly all sectors of Vietnam’s economy, from agriculture, forestry, aquaculture as well as hydro-electricity power, oil and gas production and transport sector. The highest impact will be on the Red River Delta and the Mekong Delta.

**Impact of climate change to transport sector:**

Every mode of transportation in Viet Nam will also be affected as the climate change because natural disasters will occur more often as consequence of climate change. Natural disaster will cause damage or destroy ports, road, railways, airport, runway...In low-lying coastal areas, some airports, road, ports, railways may become casualties of sea-level rise, requiring relocations or expensive protective measures, such as sea walls and levees. Furthermore, to mitigate reasons of climate change, means of transport shall also be required to apply new technology to reduce greenhouse effect in accordance with new regulations, it leads to cost rising. However, apart from the aforesaid negative impacts, climate change may have a positive impact on maritime transport because sea level rise will create new and shorter shipping routes and reducing transport time and costs.
With a view to have a good understanding of climate change impacts to transport sector, in the coming time, the Ministry of Transport of Viet Nam will cooperate with relevant agencies to have further evaluation.

### III. Actions of the Government of Viet Nam to Climate change

Climate change is becoming a global issue that should be addressed urgently by all countries and Viet Nam has taken a number of measures on adapting to climate change.

Being aware of the serious impact of climate change, Viet Nam signed the United Nations Framework Convention on Climate Change in June 1992 and ratified it on November 16, 1994, and ratified the Kyoto protocol on September 25, 2002.

The Ministry of Natural Resources and Environment of Viet Nam has carried out many projects on how to mitigate and adapt to climate change. Recently, the Ministry has submitted the draft National Objective Program on Response to Climate Change to the Prime Minister for consideration. And on 2nd December 2008, The Prime Minister of Viet Nam signed the Decision No 158/2008/QD - TTg to approve the National Objective Program on Response to Climate Change.

The main contents of this program are as follows: point of view, guiding principle, general objective, specific goals, scope of works, main measures and how to implement these measures.

The strategic objective of this program is to evaluate the impact of climate change to all sectors, provinces and make action plans to cope with climate change impacts.

The program will be implemented in 3 phases.

*The first phase (2009 -2010):* This preparation stage will include the following activities:
- To prepare institution, organization; to make evaluation of the impact of climate change; make plans, management mechanism; identify necessary resources and carry out pilot implementation. Please find following expected outputs of this phase:
  - Promulgating necessary legal documents and set up a working mechanism between ministries, sectors and provinces.
- Establishing a steering committee, program management committee with specific tasks and functions.
- Forecasting climate change cases and sea level rise cases.
- Estimating impacts of climate change to sectors, provinces.
- Developing action plans of Ministries, sectors and provinces.
- Developing a management and monitoring system.
- Raising awareness of community on climate change and develop human resources to implement this program.
- Coastal provinces and cities will develop their detailed action plans to cope with climate change.

*The second phase (2011 -2015):* During this implementing stage, the following activities will be carried out:

- To implement all activities set out by first phase to achieve the target of this program; all provinces and cities will implement its detailed action plans.
- Evaluating implementation result every year.
- Evaluating implementation result of second stage and develop plan for Development stage (third phase).

*The third phase - development stage (after 2015)*

- To expand and develop response activities to cope with climate change basing on results and experiences of the second phase.

Total estimated cost for two phases from 2009 – 2015 is about 2,374 billion VND (equal to about USD 139 million), they will be allocated as follows:

- 34.2% of total funding will be allocated for science and technology activities.
- 6.9% of total funding will be used for capacity building, making institution and policy on climate change.
- 2.6% of total funding for enhancing international cooperation.
- 7.2% of total funding for integrating climate change consideration and adaptation into national strategy, plan and development master plan.
- 37.1% of total funding will be used to develop action plan of Ministries, sectors, and provinces to cope with climate change.

Structure of mobilizing fund for the two stages (2009-2015) is as follows: 50% from domestic funding (central budget, local budget, special credit and contribution by people), and 50% from foreign funding (loans and grants).
By promulgating the National Objective Program on Response to Climate Change, Viet Nam has shown its great determination to adapt to climate change. However, Viet Nam is still facing many difficulties such as lack of funding, human resources and knowledge to implement the aforesaid program.

Therefore, we look forward to closer cooperation with international community in the fight against climate change in order to overcome its adverse impact.

Finally, I would like to take this opportunity to express my sincere thanks to UNCTAD for organizing and inviting me to this important meeting. I do believe that the meeting will bring updated knowledge to participants in dealing with climate change and its implications for maritime transport.