

The 18th Asia-Pacific Seminar on Climate Change

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Viet Nam-Climate Change Adaptation: Challenges and Opportunities

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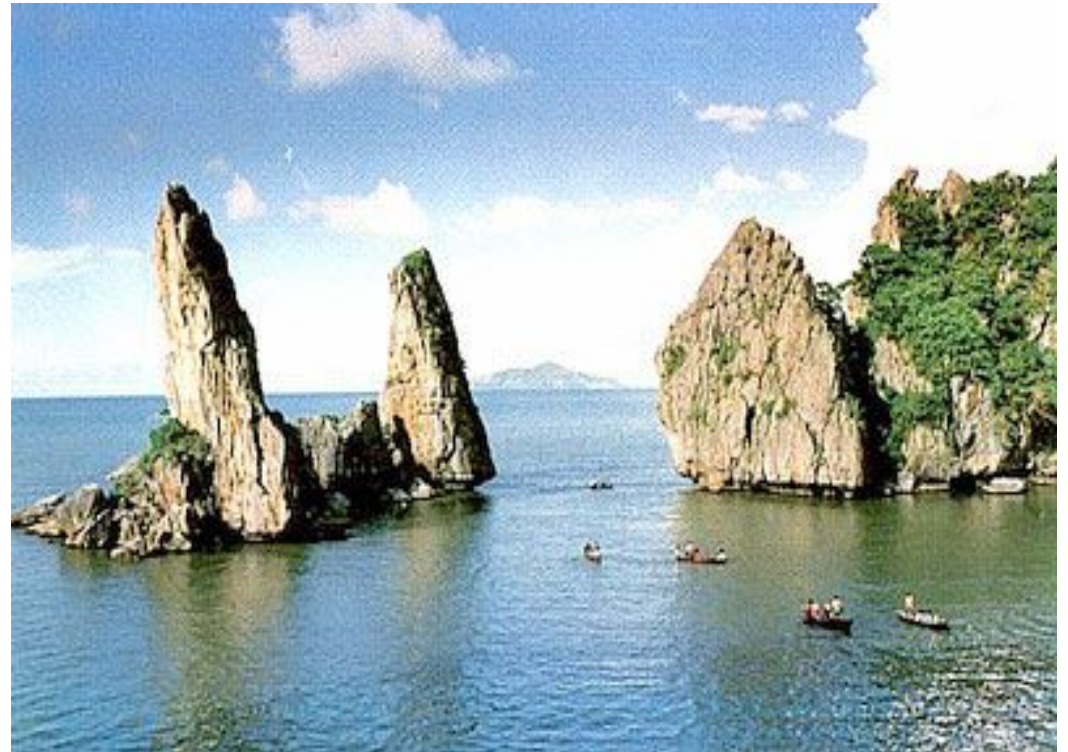
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Under UNEP/GEF/MONRE

Project: “ Vietnam-Second National Communication”

Outlines

1. Basic information
2. Key projected CC Impacts and Vulnerability
3. Main Adaptation and Current challenges
4. Major Policy Responses
5. Key gaps/constrains faced
and how addressed
Needs and concern

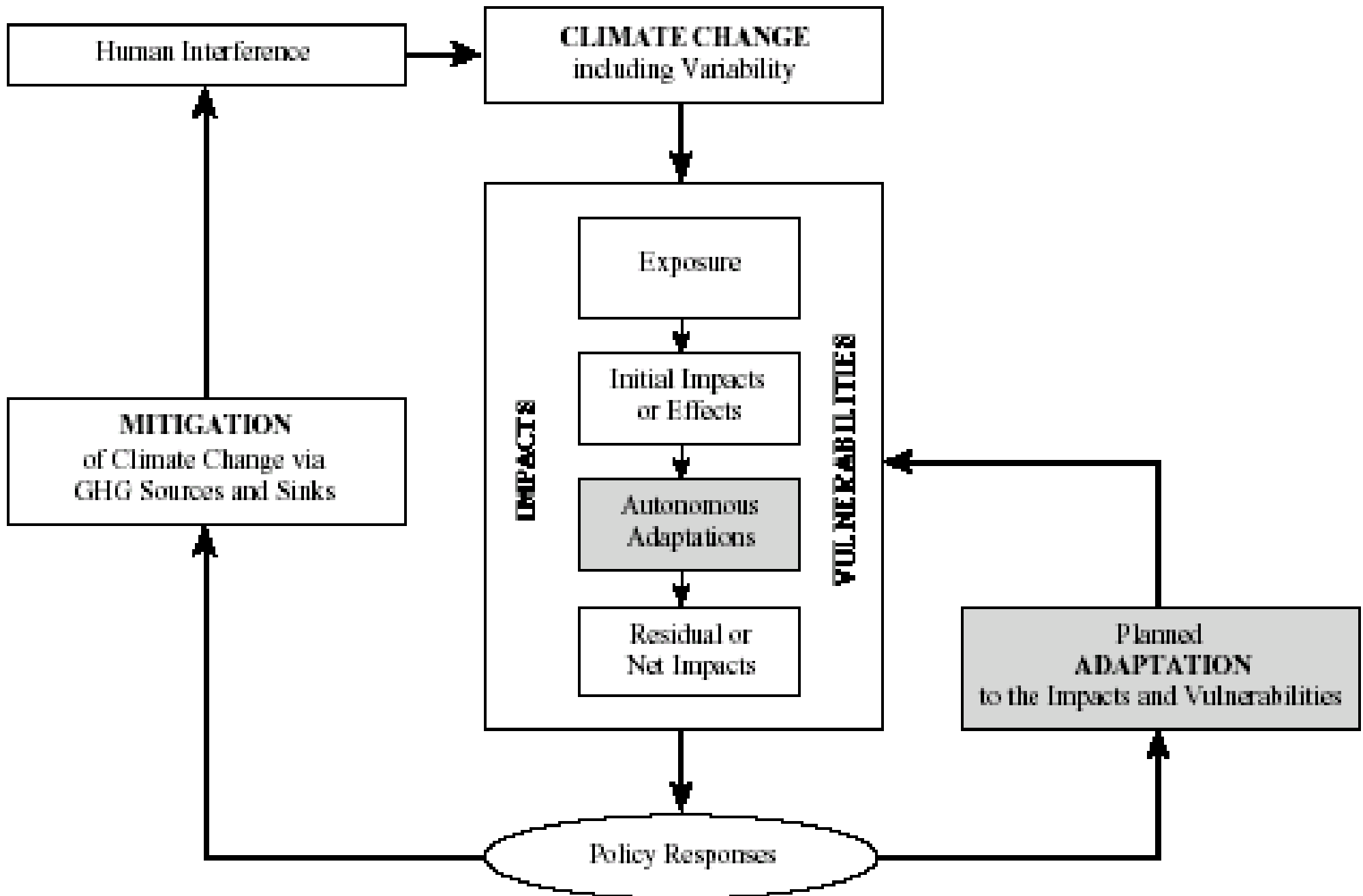


1. Basic information

- Area: 330,990 km²
- The coastline length: 3,260 km
- Climate: Tropical monsoon suffering from natural disasters such as typhoons, floods, drought, seawater intrusions... which affected regularly to socio-economic development
- GDP growth rate: 7.5% (1990-2004).
- GDP per capita (2004) 560 USD
- Sectoral contribution to GDP:

Industry:	36.7%
Services:	38.7%
Agriculture, Forestry, Fishing:	24.5%
- Population: 77,6 million, rural 75.8%, urban 24.2% (2000)
- Forestry area: 11.6 Mha (2000), 12.3 Mha (2004)
- Total energy consumption 17,730 KTOE in 2004
- GHG emission: 144,996 Gg Co₂ equiv. (2000)





Places of adaptation in the CC issues *(Smit et al, 1999)*⁴

2. Key projected CC Impacts and Vulnerability

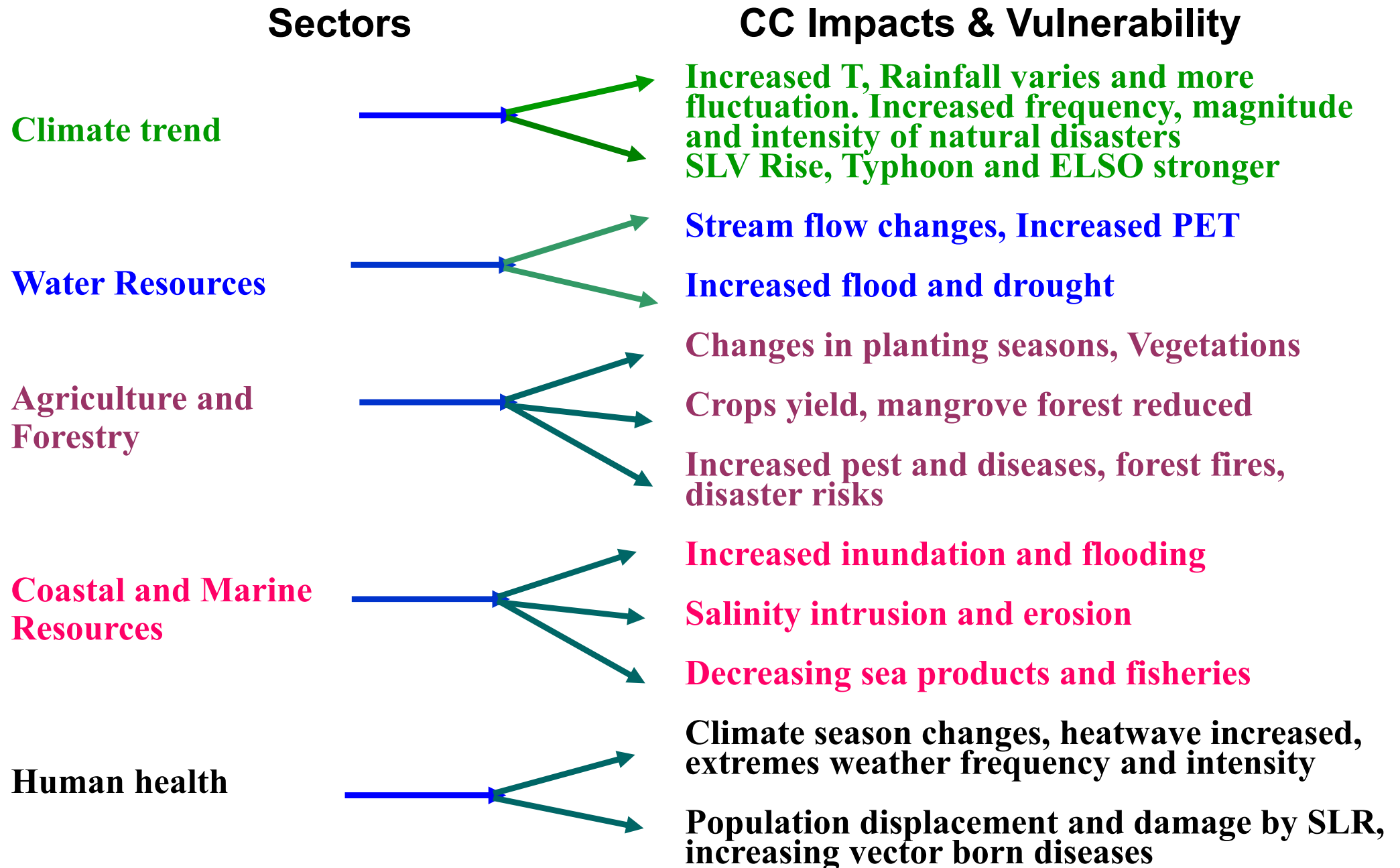


Table: Main climate related Natural Hazards by Regions in Vietnam

Region of Vietnam	Disaster Zone	Principle Disaster Hazards
North	<ul style="list-style-type: none"> • Northern Uplands • Red River Delta 	<ul style="list-style-type: none"> • Flash floods, landslides, drought • Monsoon river floods, typhoons, coastal storm surges, inundation
Centre	<ul style="list-style-type: none"> • Coast provinces • Central highlands 	<ul style="list-style-type: none"> • Typhoons, storm surges, flash floods, drought, saline water intrusion • Flash floods, landslides, drought
South	<ul style="list-style-type: none"> • Mekong River Delta 	<ul style="list-style-type: none"> • River flooding, typhoons, high tides and storm surges, salt water intrusion

Typhoon frequently hit Vietnam



Hanoi City living with floods ! (November 2008)



3a. Adaptation: Water Resource

Reactive Adaptation

(...Respond to changed conditions, what people and system do as impacts of CC become apparent)

- Building reservoirs, upgrading existing dykes**
- Effective use of water resources.**
- Enhancing residual soil moisture through land conservation techniques**

Anticipatory Adaptation

(It taken to reduce potential risks of future CC)

- Reforestation/afforestation to increase natural water storage**
- Conducting studies in long-term water resources prediction**
- Improving system of water management**
- Enhancement of flood controls and drought monitoring**

3b. Adaptation: Agriculture & Forestry

Reactive Adaptation	Anticipatory Adaptation
<ul style="list-style-type: none">-Increasing irrigation water use efficiency-Developing appropriate farming techniques: Change in planning and harvesting times, soil fertility maintenance, fertilizer use and application, erosion control....- Increasing quantity and quality of processed animal feedings as well as selecting high productive breeds-Use of different variety/species-Development/improvement of national forest fire management plans	<ul style="list-style-type: none">-Development of species resistant to drought, salt, flood, disease & pest.-Development of weather early warning system-Re-structure the agriculture production plan and cropping patterns-Protecting natural forest and enhancing reforestation / afforestation-Increasing the efficiency with forest raw materials are converted to forest products-Protecting and developing mangrove forests and natural forests.- Diversification and intensification of food and plantation crops

3c. Adaptation: Coastal zone & Marine ecosystems

Reactive Adaptation	Anticipatory Adaptation
<ul style="list-style-type: none">- Upgrading of sea and river dyke systems, existing groynes.-Upgrading of Mekong delta embankments-Raised lands and houses, Upgrading pumping systems.-Public awareness to enhance protection of coastal and marine ecosystems-Developing the prediction of the movement of fishes population	<ul style="list-style-type: none">-Integrated coastal zone management with Three(3) strategic options: Full protection, accommodation and retreat.-Development of legislation for coastal protection-Research and monitoring of coasts and coastal ecosystems-Marine resources:<ul style="list-style-type: none">.Importing and developing valuable aquaculture varieties.Changing farming structures in some wetland areas

3d. Current challenges

- Scenarios (climatic & socio-economic)
- Tools and methodologies for VAA
- Cost of impacts (both direct and hidden cost)
- Costs and benefit of adaptation
- Integration CC into economic planning.
- Transfer of appropriate technologies and mobilization of adequate finances.

3e. Top 12 Knowledge Gaps in adaptation in SEA

Knowledge gap in adaptation	Indicator
1. <u>Economic costs</u> of adapting to sea level rise	1.1
2. Approaches to determine the best adaptation strategies and options	1.5
3. Decision making strategies by vulnerable groups in adaptation	1.5
4. Impacts of current policies and regulations on autonomous adaptation at the household level	1.6
5. <u>Impact of adaptation on other development goals</u> & identification of stakeholders for specific adaptations	1.7
6. Ways to involve the <u>private sector in adaptation</u>	1.8
7. Ways to integrate socioeconomic scenarios into analyses of adaptation impacts	2.0
8. Ways to improve adaptive capacity of vulnerable groups and their knowledge bases on adaptation	2.0
9. Ways to make <u>adaptation efforts sustainable</u>	2.0
10. Ways to communicate climate change to relevant sectors	2.2
11. <u>Cost-effective</u> adaptation options	2.3
12. Ways to <u>finance</u> adaptation	2.5

Scale: 1→7

Source: EEPSEA, Feb. 2008 modified by Dr. Ancha.S (IGES)

4a. Major Policy Responses : GHG mitigation

	Policies	Status
Energy	Raising the efficiency and saving in energy exploitation, conversion, transportation and end-use	On going, looking for funding
Energy	Switching the fuels from the high carbon content fuels to the low ones	Looking for funding
Energy	Developing renewable energy	Under negotiation and looking for funding
Energy	Establishing the standards of exhaust fumes; evaluate environmental cost and benefit of energy projects.	For implementation

4b. Major Policy Responses : Adaptation

1. **Adaptation framework** (Under negotiation)
2. **Natural Resources Management**
 - 2.1 Protecting natural forest and enhancing reforestation and afforestation with 5MHRP program (for implementation and looking for funding)
 - 2.2 Re-structure the agriculture production plan, cropping patterns, crop variety/species, calendar, farming techniques
 - 2.3 Water resources conservation and management
3. **Infrastructure management** (for implementation)
 - 3.1 Upgrading of sea and river mouth dykes
 - 3.2 Improved irrigation system
4. **Disaster risk management**: Integrated CC to DRM (Under negotiation)

4c. Policy actions relevance to Climate change

- 1. National Target Program to respond to Climate change**
- 2. National Program for Energy Efficiency and Conservation**
- 3. Five Million Hectare reforestation program**
- 4. Integrated Coastal Zone Management**
- 5. National Strategy and Action Plan for Disaster Mitigation and Management**

4d. National Target Program to respond to Climate Change (1/4)

- The Prime Minister approved the National Target Program to respond to Climate change (NTP) on 2 December 2008 (Decision No. 158/QD-TTg dated 2 December 2008);
- **Strategic objectives of the NTP**
 - To assess climate change's impacts on sectors and regions in specific periods; and
 - To develop feasible action plans to effectively respond to climate change in ensuring sustainable development of Viet Nam, taking opportunities to develop towards a low-carbon economy, and jointing international community's effort of protecting climatic system;

National Target Program to respond to Climate Change (2/4)

Specific Objectives

- 1/ Identify the extend of climate change and assess it's impacts;
- 2/ Identify adaptation measures, policies;
- 3/ Promote scientific and technological activities;
- 4/ Strengthen capacity building to respond to climate change;
- 5/ Raise public awareness;
- 6/ Promote international cooperation;
- 7/ Mainstream CC into socio-economic development strategies, plans and planning;
- 8/ Develop & Implement action plans, projects.

National Target Program to respond to Climate Change (3/4)

Scope:

**The NTP will implemented for the whole country
in three phases**

- First phase (2009-2010): Starting up**
- Second phase (2011-2015): Implementation**
- Third phase (after 2015): Development**

***The total budget* for NTP activities in 2009-
2015 is estimated at 1,965 Billion VND (~ USD
115 M)**

National Target Program to respond to Climate Change (4/4)

- Priorities program: Develop and implement science and technology (2009-2015) with the main tasks of:**
 - + Impact and Vulnerability assessment including cost-benefit analyzes**
 - + Adaptation measures and technologies.**
 - + Mainstreaming CC issues into development programs**

*For more information please go to Website
< <http://www.noccop.org.vn> >*

5a. Key gaps/constrains faced and how addressed

Constrains	Proposals
<p>Weak national capacity for comprehensive quantitative and qualitative VAA;</p>	<p>Enhance national capacity on VAA in the holistic and integrated manner. Invest in studies on VAA.</p> <p>Mobilize the technological and financial assistance from International Donors</p>
<p>Lack of comprehensive implementation plans for adaptation;</p>	<p>Formulate and develop the National Adaptation Framework in accordance with National Target Program to respond to CC (NTP)</p>
<p>Not fully complete management system with overlapping roles and responsibilities across sectors affected by climate change;</p>	<p>Amendment of existing laws, decisions, measures to strengthen coordinating institutions and taking up coordination of the integration of climate change adaptation into sectoral development.</p>

5b. Keys gaps/constrains faced and how addressed

Constrains	Proposals
Limited staff capacity, particularly the skills for the analyze, planning, monitoring and evaluation in assessing trade offs between development decisions;	Improving local expert knowledge and expertise thought VAA training (Integrated assessment approaching and modeling) and “Learning-by-doing”
Lack of realistic data for cost-effective analysis of adaptation options and technologies, lack of mechanisms for information sharing and management across sectors;	Improvement of data base and application of related models for VAA (e.g. SIMCLIM). Development of communication and sharing
Limited awareness of stakeholders and public on CC;	Enhancing awareness and knowledge on CC in general and on CC impacts and adaptation in particular at all levels

Needs and concerns

- Strengthening closely cooperation with countries especially countries in Asia and international organizations (UNEP, UNDP, UNESCAP, ADB, WB...) in order to respond to CC.
- Mobilizing maximum possible financing from domestic capital and foreign investment according to the policy of mainstreaming CC issues to development strategies.
- Developing and transferring appropriate adaptation technologies.
- Enhancing CC awareness and strengthening of institutional and human capacities.
- Priority on setting up a national strategy for adaptation to climate change and comprehensive implementation plans for adaptation which mainstreaming into National Development Planning.

Thanks for your kind attention!

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