

CLIMATE CHANGE ADAPTATION AND EXPERIENCE IN VIETNAM

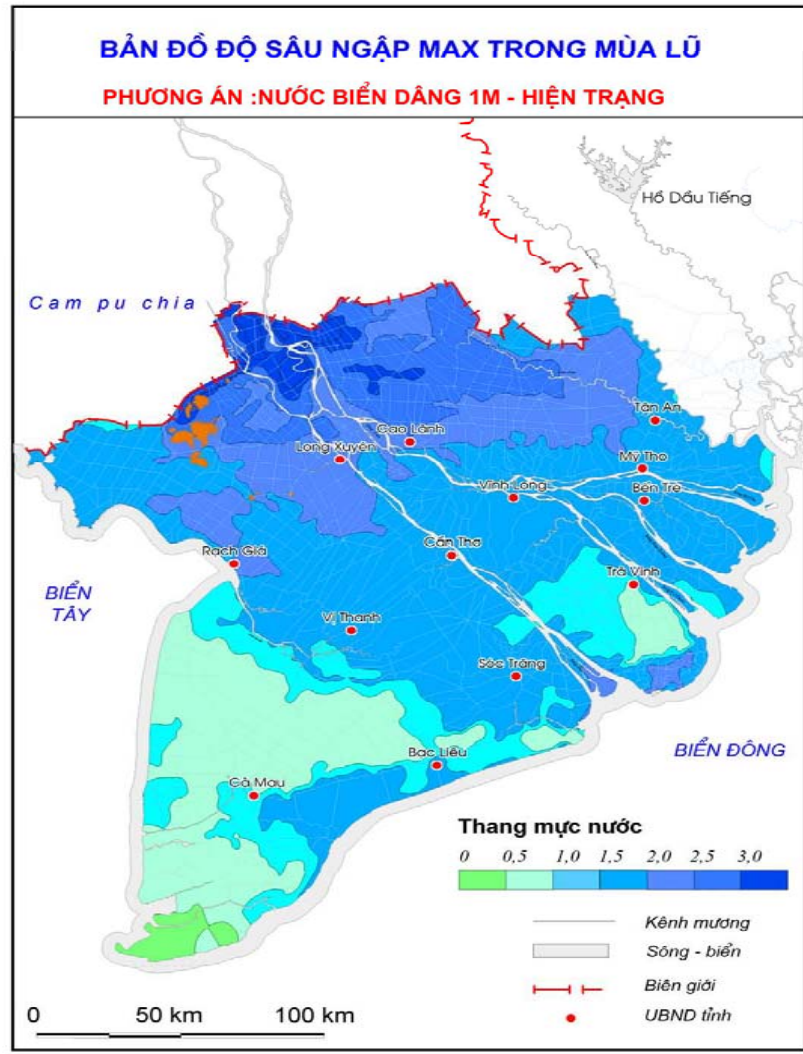
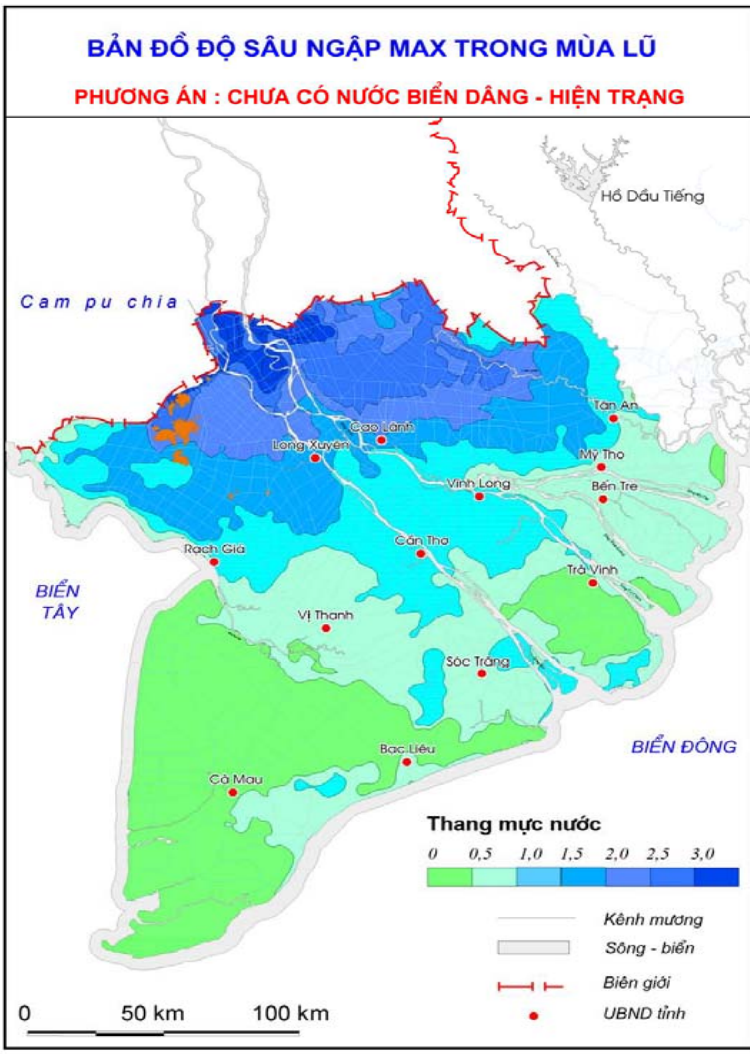
Nguyen Lanh

General

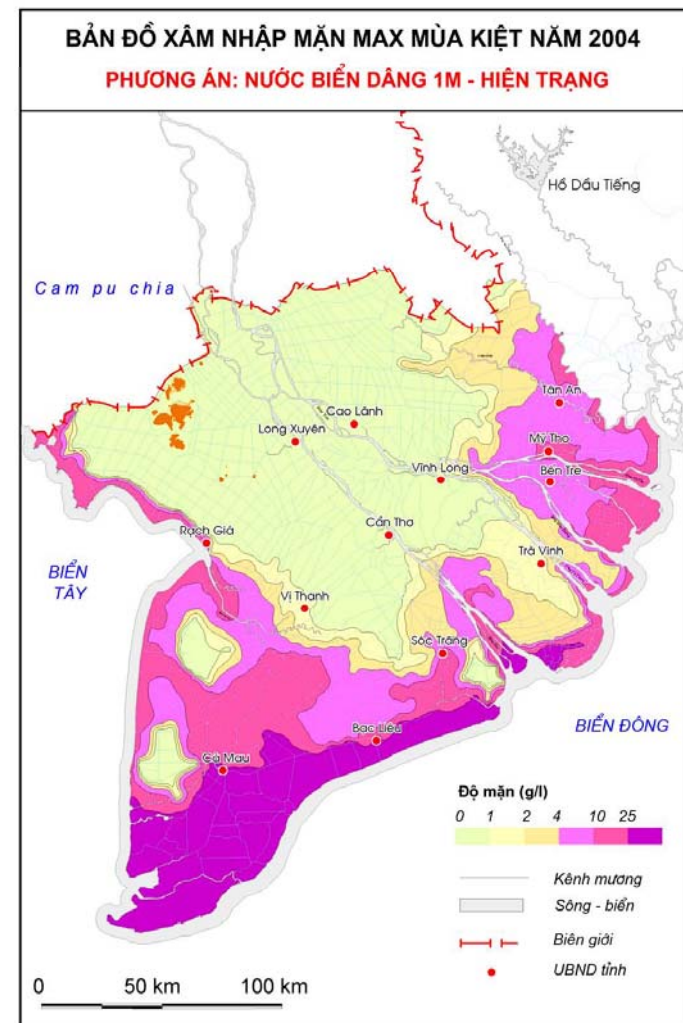
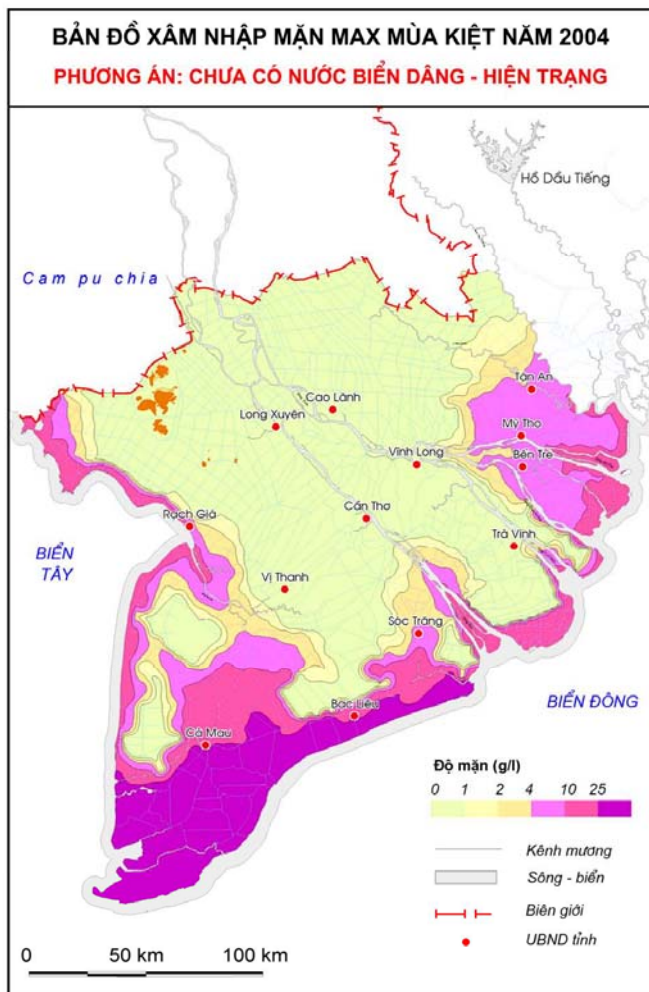
- Vietnam is among the countries which would be severely affected by climate change
- The Mekong and Red River delta regions are mostly at risk



Inundation in Mekong Delta with 1m SLR



Saline Intrusion in Mekong Delta with 1m SLR



Summary of Potential Impacts of Climate Change in Vietnam

Short-term

- Increased number and severity of typhoons striking Vietnam annually, which leads to large-scale damages in terms of life and agricultural, fisheries production in the coastal areas
- Floods and inundation flooding occurring more frequently, with higher severity, which also leads to large-scale negative impacts on people's production in mountainous and delta areas.

Summary of Potential Impacts of Climate Change in Vietnam

Medium-term

- Climate change and disasters can lead to outbreaks of old and new diseases, and also increase the expanding speed of these diseases
- Increased temperature, desertification, sea-level rise will lead to more salinity intrusion, which adds to the problem of surface and ground water running out, or being seriously contaminated

Summary of Potential Impacts of Climate Change in Vietnam

Long-term:

- Sea-level rise will cause several areas to “disappear” under the sea
- Large-scale desertification will lead to great losses of land for cultivation and aquaculture
- Increased temperature will lead to changes in the eco-systems and difficulties for agricultural and fisheries production

NATIONAL RESPONSES TO CLIMATE CHANGE

- The Vietnamese **National Target Program to Respond to Climate Change (NTP)** was approved by the Prime Minister on 2nd Dec. 2008 (Decision 158/2008/QĐ-TTg).



- Responding to CC on the principles, that
 - Support sustainable development & poverty reduction,
 - Concentrate on urgent issues,
 - Responding to CC is the responsibility of the whole society, all organizations,
 - The measures must be integrated in development programs
 - In line with international agreements to attract external supports for the sustainable development in Vietnam
- All ministries, sectors and localities have to develop and implement their action plans to respond to CC.

COUNTRY ADAPTATION ACTIVITIES

- **Action Plan Framework for Adaptation to Climate Change in the Agriculture and Rural Development Sector Period 2008-2020,**
The objectives of the Action Plan are to enhance the Government's capabilities to minimize adverse impacts and to ensure sustainable development of the agriculture and rural development sector
 - ensuring the stability and safety of residents in different zones and regions, especially the Mekong and Red River deltas and the central and mountainous areas
 - ensuring stable agriculture production and food security in an agricultural area of 3.8 million ha with two seasonal rice crops
 - ensuring the maintenance of dyke and infrastructure systems to meet disaster prevention and mitigation requirements

COUNTRY ADAPTATION ACTIVITIES

National Strategy on Climate Change has been approved by the PM on the 5th Dec. 2011 .

Basic Objectives:

- To ensure food security, energy security, water resources security, poverty reduction, gender equality, social security, protection of natural resources in context of CC;
- To convert the economy gradually to low-carbon economy, where green-growth becomes the major tendency of development; reduce GHG emission and step-by-step consider reduction of GHG emission as critical criteria in socio-economic development;
- etc.....

COUNTRY ADAPTATION ACTIVITIES

National Action Plan Responding to Climate Change: has been approved by the PM on the 5th Oct. 2012 with targets to 2020:

1. Enhance capacity of climate monitoring and early warning of natural disasters
2. Ensure securities of food and water resources
3. Actively respond to disaster for cities and urban areas; upgrade river and sea dykes and ensure safety of reservoirs
4. Reduce emission of GHG, develop the economy to low-carbon growth
5. Improve legal system of CC
6. Mobilize participation of all economic, scientific, social partners together with NGOs to build community resilient to CC
7. Awareness raising and capacity building
8. Development of science and technology
9. International cooperation
10. Mobilization of different financial resources for responding to CC

COUNTRY ADAPTATION ACTIVITIES

Strategic Task #1: Proactive disaster preparedness and climate monitoring: 1/ Early warning, 2/ Disaster risk reduction

Strategic Task #2: Food and water security

*** Food security:**

- Maintain reasonable and sustainable agricultural land resource in each area to ensure the food security in climate change context.
- Adjust crop and livestock pattern to adapt to the changing climate, sea-level rise and the local natural conditions, and help to take advantage of the sustainable agricultural development opportunities.
- Research, develop and apply biotechnology and advanced production processes toward a modern agriculture adaptive to climate change.
- Develop a pest and disease control system for crops and livestock in the changing climate context. By 2020: complete the basic system, with further development for the next periods.
- Formulate mechanisms, policies and increase insurance and risk sharing system.

COUNTRY ADAPTATION ACTIVITIES

- **Water Resources:**

- Develop a database on water resource variations and usage in relation to climate change; investigate, study, evaluate, forecast and observe water quality and quantity.
- Promote international cooperation in research, evaluation and control of water quality and quantity, and trans-boundary benefit sharing.
- Establish a completed set of regulations to enforce efficient, integrated, multi-purpose development and use of water resources to adapt to climate change and sea-level rise.
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Strategic Task #3: Suitable proactive response actions to sea-level rise in vulnerable areas.

Strategic Task #4: Protection and sustainable development of forest, increasing carbon removals and biodiversity conservation

COUNTRY ADAPTATION ACTIVITIES

Strategic Task #5: GHG emission reduction to protect global climate system:

- *Development of new and renewable energies*
- *Energy saving and efficiency*
- *Agriculture*
- *Solid waste management*

Strategic Task #6: Increase the role of Government in response to Climate change

- *Amendment and integration of climate change into other strategies and planning*
- *Strengthening institutional capacity*

COUNTRY ADAPTATION ACTIVITIES

Strategic Task #7: Community capacity development to respond to climate change

- *Communities responding to climate change*
- *Improving the public health system*
- *Raising awareness, education and training*

Strategic Task #8: Scientific and technological development for climate change response

Strategic Task #9: International cooperation and integration to enhance the country's status in climate change issues.

Strategic Task #10: Diversification of financial resources and higher effective investment

STRATEGIC ACTIVITIES

- **Adaptation Measures to Protect Water Resources:**
 - Upgrading and raising the level of drainage system
 - Actively limiting the population growth rate and redistributing residential areas to avoid the effects of sea level rise (especially in coastal area)
 - Cooperation in whole basin activities for efficient water use with special attention paid to increasing run-off during low-flow season, which is regulated by reservoirs upstream
 - Conducting studies in long-term water resources prediction, seasonal, inter-annual predictions of water sources for planning rational and safe use of surface water sources
 - Implementation of the strategy “Living with Flood” (Mekong delta)

STRATEGIC ACTIVITIES

- **Adaptation Measures for Agriculture:**
 - Development of crop patterns suitable to climate change
 - Effective use of irrigation water and enhancement of irrigation system for agriculture
 - Development of new crop varieties that can resist severe environmental conditions
 - Reserve and storage of local crop varieties, establishment of crop seed banks
 - Development of farming techniques appropriate to climate change

STRATEGIC ACTIVITIES

Adaptation Measures for Forestry:

- Enhancing afforestation, firstly in watershed, re-greening and protecting and developing mangrove forest. Re-classification/planning:
 - Production forest: 8.34 mill ha
 - Protection forest: 5.68 mill ha
 - Special-use forest: 2.16 mill ha
- Protecting natural forest and preventing forest fire
- Establishing seedbanks of natural forest trees in order to protect some valuable varieties.
- Selecting and developing plant varieties suitable to natural conditions taking into account climate change

STRATEGIC ACTIVITIES

- **Adaptation Measures for Aquaculture:**
 - Importing/developing valuable aquaculture varieties that could adapt to high temperature, and increasing the depth of fish lakes, and ponds to create suitable temperature and mitigate losses due to increased evaporation
 - Changing farming structure in some low-land areas from rice monoculture to fish-rice rotation system
 - Taking into account sea level rise and increase of temperature when building infrastructures (*quays, ports, warehouses, etc*)
 - Building storm shelter port systems along the coast as well as close to islands
 - Establishing natural ecological reserves, especially coral reefs and atolls

LIMITATIONS IN PRACTICE OF CCA IN VIETNAM

- Awareness is still limited on the part of decision makers (**more concentrated on economic development**), officials in sectors and localities in social mass organizations, and vulnerable communities
- Problem of coordination to respond to climate change in developing the policies, plans and programs in sectors/regions, even in highly sensitive sectors/regions.
- Lack of tools and methodologies to convince and advise decision makers → training and knowledge upgrading, developing tools/methodologies for analysis and adaptation with the climate change, are important activities
- Climate change is a long-term issue, the impact of the climate change are very complex, especially potential impacts in 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.



THANK YOU FOR YOUR ATTENTION