

**Overview of the effects of climate
change to biodiversity in Vietnam,
The Governance institutions, laws to
response and needs related to
biodiversity in Vietnam**

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Negative effects of climate change on biodiversity in Vietnam

Causes of effects of climate change

- Monsoon tropical weather on 15 attitude that cause Vietnam effected severely by the sea
- There are 5 groups of main terrain: mountains, karst, valley, hollow, plain and coastal areas. The dense river system with 9 big river system to South China sea with area basin of 10.000km²
- Radiation from sun is very high in total territory, the time of sunshine is 12hours everyday, and total time of sunshine is 4300 – 4500 hours per year
- The average temperature is from 12,8C to 27,7 C
- The average rainfall is 700 – 5000 mm, in some special regions are about 1400 – 2400 mm
- There are some special weather: hoarfrost, drizzling rain, fog, storm, dry and hot westerly winds, tropical low pressure,

State of effects of climate change

Green House gas forecasting (million tons)

- **Temperature's change: the popular increase is 1-2 degree Celsius**
- **Rainfall change: The quantity of annual rainfall change 20% in Central, central highland. The rainy season change from 3-4 month**

Areas	1994	1998	2010	2020
Energy	25,64	45,92	105,17	196,98
Forestry and land use	19,38	4,2	21,70	28,4
Agriculture	52,45	52,50	57,20	64,70
Total	97,47	102,60	140,67	233,28

State of effects of climate change

The scenario of climate change in Vietnam

Following the experts of project of Climate change in Asia propose to 2070, there will have changes

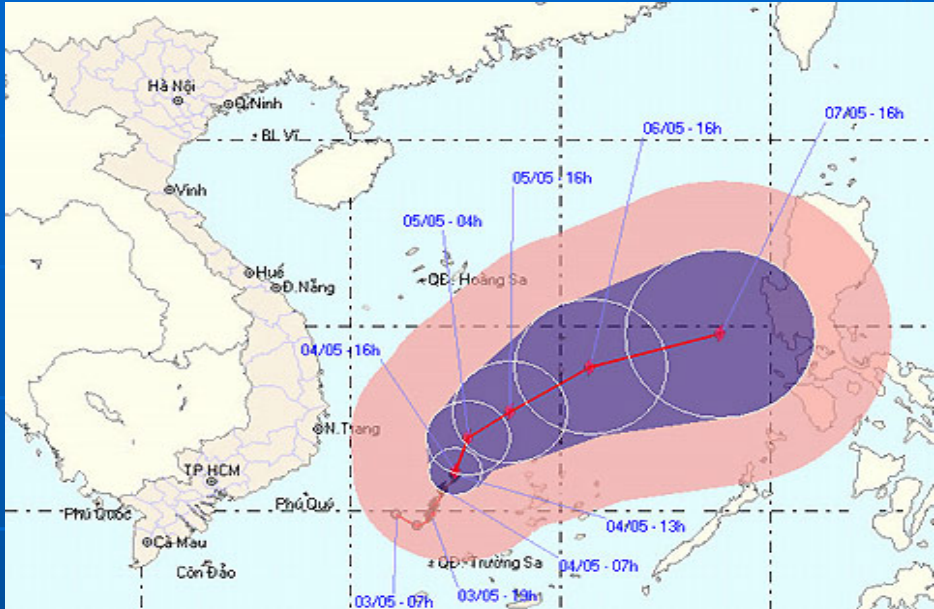
- Temperature increase from 1,2 – 4,5 C in the North and 0,5 – 3,0 C in the south
- The rainfall increase 0-10% in rainy season and decrease from 5-10% in dry season
- The sea level rise up to 15 – 90 cm

State of effects of climate change to biodiversity in Vietnam



Up to 2070 the annual flow change from +5,8 - -19% (Red river), +4,2 - -14,5% (Mekong river);

Flood and storms happen with high rate



Fishing on the streets of Hanoi

Sea water invade to interior land and cause lost of habitat of fresh aquatic species

The area of mangrove forest will be narrow, negative effects to indigo forest, planted forest and lost of shelter and reproduction of fresh aquatic species



The scope of tropical plant location arrangement will be broaden and subtropical plants is narrowed and move to the high mountain area

26 2 2005

The boundary of primeval forest will be changed because deciduous forest will be broaden



Living mass ratio of the forest decrease



26 2 2005

The threat of extinction of endangered wildlife will be increased, some species will weakened





The risk of forest fire and epidemic increased

Response to climate change in Vietnam

- Monitoring to the climate change
- Developing methods to adapt with climate change:
 - Increase the areas of reservoirs, upgrade dykes and develop sea dykes in coastal areas, control population increase in coastal areas
 - *Plant forest and protect natural forests, fight and prevent forest fires, conserve plant varieties and breeds, limit the change of land of cultivation in coastal areas*
 - *Improve capacity to prevent and fight again floods and storms*
 - *Increase the areas and number of protected area, pay attention to manage the marine ecosystem, especially reefs, sea grass*
 - *Improve the system and network of biodiversity conservation bases, genetic banks,*
 - *Improve the capacity to prevent and fight against invasion of alien species*
 - *Improve to protect coastal ecosystem as scoping with the temperature increases and sea level rise*
 - *Adaptation to live with sea level rise or find the way to avoid the negative sudden effect of climate change*



Mitigate the cause and effects of climate change to biodiversity

- *Increase the areas of forest cover up to 43%, to protect and develop the GHGs absorb and containing*
- Protect plant forest and prevent forest fire
- Pushing up forest allocation, forest plant
- Recovering to declined forest, especially mangrove forest

GOVERNMENT INSTITUTIONS INVOLVED IN BIODIVERSITY CONSERVATION

CENTRAL LEVEL

GOVERNMENT

**OTHER RELATED
MINISTRIES**
.....

MARD

MONRE

SFP

FPD-FDD

ARA

CD-BA

VEPA/BCA

LMA

ISA

H CA

storms and
flood
preventions

Forest

Fisherie
s

cultivating and
breeding

biodiversity

land

islands and
seas

hydrometeorolo
gy & climate
change

PROVINCIAL LEVEL

PEOPLE COMMITTEE

**OTHER RELATED
DEPARTMENTS.....**

DARD

DONRE

DFP

FPD-FDD

ARA

CD-BA

EPD

LMD

ISD

H CD

storms and
flood
preventions

Forest

Fisherie
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islands and
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hydrometeorolo
gy & climate
change

Complex institutional arrangement for biodiversity conservation

CURRENT STATE

MINISTRY OF NATURAL RESOURCES & ENVIRONMENT (MONRE)

Take responsibility to the Government for performing the state management of biodiversity

Land,

Wetland protected areas

Hydro meteorology

Sea and Island

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (MARD)

Perform the state management of biodiversity as assigned by the Government within their sectoral functions, tasks and powers

Forest ----> forest conservation and development

Terrestrial Protected areas

Plant varieties and breedings

Aquatic resources ----> Marine conservation

Marine protected areas

RECOMMENDATION OF INSTITUTIONS

Unifying the State management for protected areas: wetland, terrestrial and marine

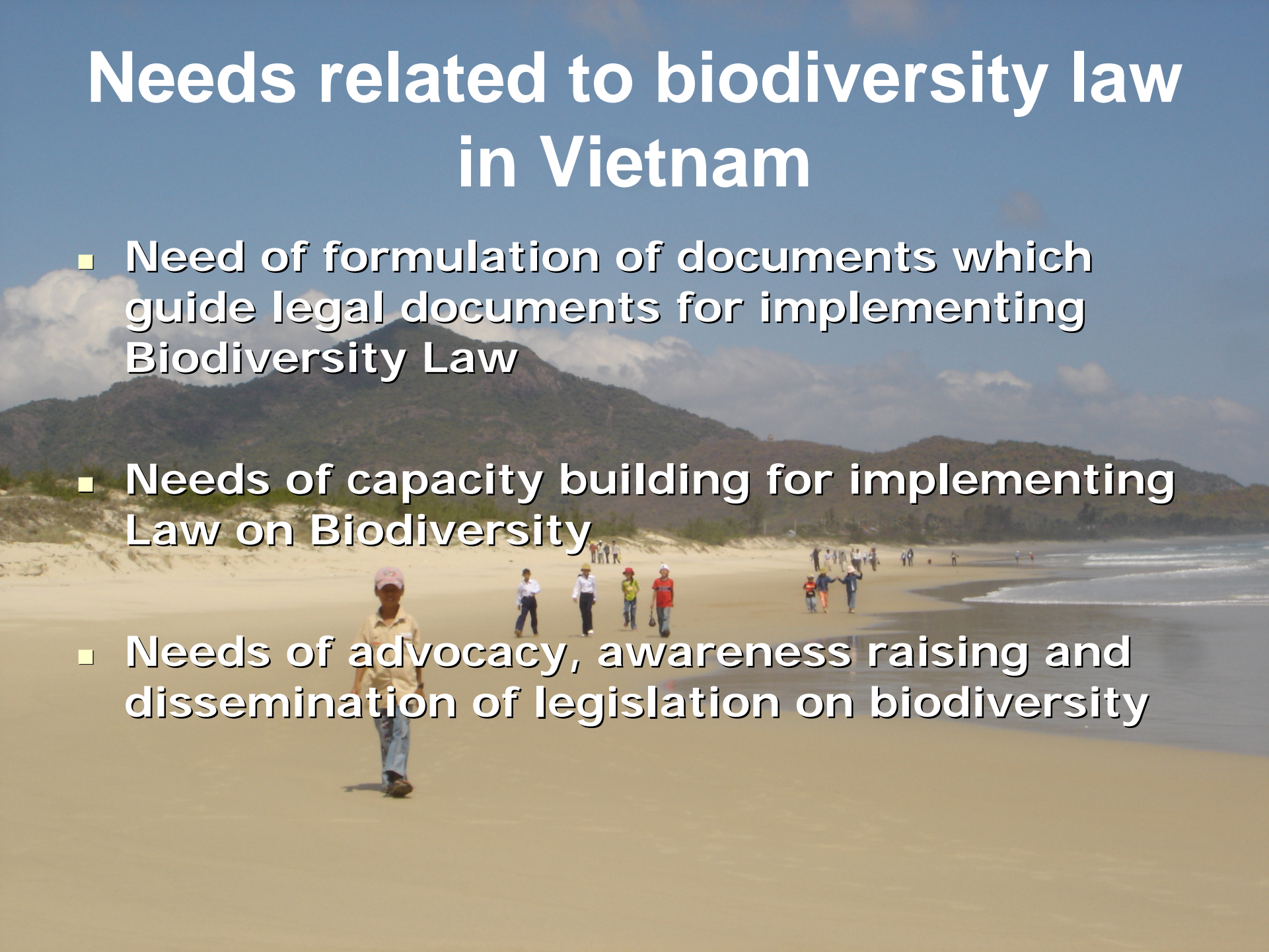
ONE FOCAL POINT

Some direct legal bases

- Law on biodiversity, 2008
- Law on environmental protection, 2005
- Law on forest protection and development, 2004
- Law on aquatic resources, 2003
- Decree 109/2003/ND-CP on wetland conservation and sustainable development

Needs related to biodiversity law in Vietnam

- Need of formulation of documents which guide legal documents for implementing Biodiversity Law
- Needs of capacity building for implementing Law on Biodiversity
- Needs of advocacy, awareness raising and dissemination of legislation on biodiversity



Needs of capacity building for implementing Law on Biodiversity

Needs 1 on institutionalize the LB implementation process,

Need 2: Institutionalize the content of the Biodiversity Law becoming function, mission for state authorities,

Need 3: Develop mechanism, regulation for cooperation among governmental agencies ,

Need 4 "Understand law on Biodiversity to obey the law" ,

Need 5: Strengthening capacity on management, coordination to carry out project relating to LB implementation

Needs of advocacy, awareness raising and dissemination of legislation on biodiversity

- For decision makers
- relevant civil servants
- PAs management Board
- Local people, communities in PAs and buffer zones



A white egret stands in shallow, rippling water. The bird is facing right, with its long neck curved downwards. A white callout box with a thin border is positioned to the right of the bird, with lines pointing to its beak and the back of its neck. The water is a dark, muted grey-blue color. The background is a solid dark blue horizontal bar at the top of the image.

Thank you very much!