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Laos Strategies and Policies to Address Climate Change



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Outline

- Background
- National response
- Challenge.

Climate Change impact on Laos

- **Temperature increase:** impacts on human health and ecosystems (e.g., forests)
- **Sea-level rise:** threatening coastal areas in Vietnam and Cambodia that will affect Laos (e.g., food security; migration of climate refugees?)
- **Changes in spatial and temporal rainfall patterns:** implications for water resources, which, in turn, will have profound integrated impacts on agricultural, industrial and other socio-economic sectors (e.g., Mekong River).
- **Groundwater:** an important source of water for domestic use across the country, including upland and urban areas. Need to know about either the quantity or quality of the resources.

Climate change impact on Laos

Flood and drought particularly on 4 sectors:

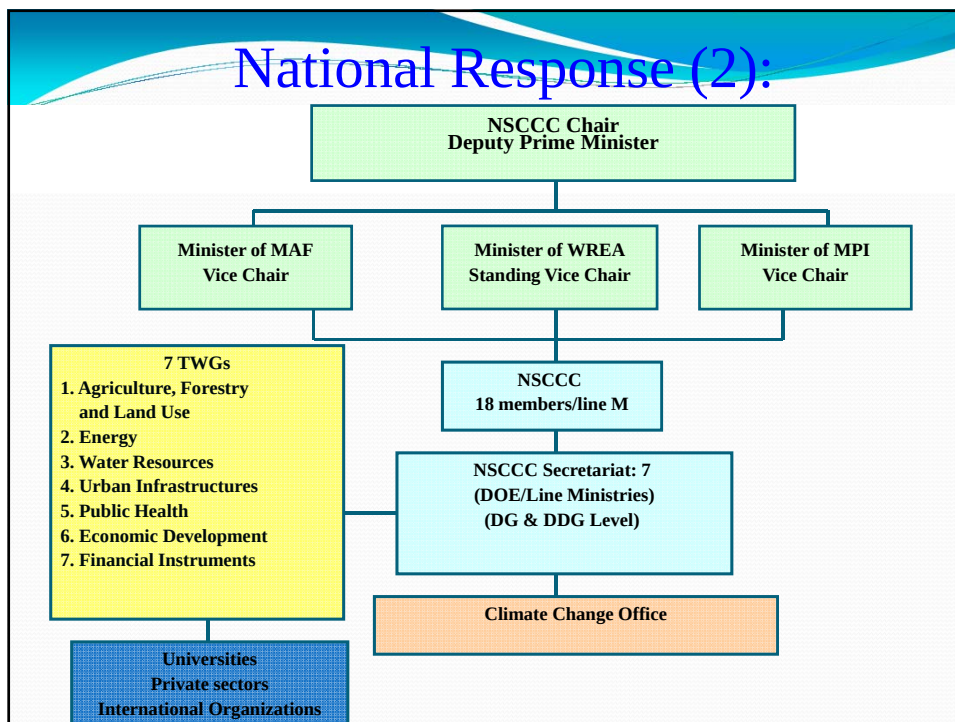
1. Agriculture
2. Water
3. Forestry
4. Health



National Response (1):

- Lao PDR ratified :UNFCCC in 1995 and Kyoto Protocol in 2003
- Established National Steering committee under the leadership of the Deputy Prime Minister
- Eight cross sectoral working groups established
- Climate Change Office established
- National Strategy on Climate Change approved by the government on 12 March, 2010
- Climate Change mainstreamed in National Social-Economic Development Plan(NSEDP7)

National Response (2):



Initiatives and Programs(1):

- Initial National Communication (INC) in collaboration with UNDP/GEF, 2000
- National Adaptation Plan of Action (NAPA),) in collaboration with UNDP/GEF May 2009
- National Strategy on Climate Change (NSCC) in collaboration with ADB/WB/UNDP 2010.
- Second National Communication on Climate Change (SNC) in collaboration with UNDP/GEF, (ongoing)
- Capacity Enhancement for coping with Climate Change (ABD TA)(ongoing)

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Initiatives and Programs (2) :

- Capacity Building CDM for DNA(ongoing)
 - CDMs- Ten projects covering hydro (6) energy (2) forest (1) biogas (1)
- Awareness and education on Environment and Climate Change (GIZ) (pipeline)
- Technology Need Assessment for mitigation and adaptation (UNEP) (pipeline)

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Initiatives and Programs (3) :

- REDD+ 3 ongoing pilot projects
- National Appropriate Mitigation Action (NAMA) for Transport Sector- case study on bus rapid transit (BRT)
- NAPA follow-up: one approved on agriculture another on water sector identified and being formulated

Key sectors Strategic Priorities

1. Agriculture & Food security (A/M)
2. Forestry & Land use change (A/M)
3. Water Resources (A)
4. Energy & Transport (A/M)
5. Industry (A/M)
6. Urban Development (A/M)
7. Public Health (A)

I. Food Security and Climate Resilient Agriculture:

Adaptation Options:

1. Planning and designing of future investment programmes that take into account climate abnormalities;
2. Development of climate-resilient, disease-resilient crop varieties
3. Strengthen adaptive capacity of the agricultural agencies
4. Build financial capacity and human capital for farmers
5. Integration of local knowledge in adaptation plans at local and national levels
6. Undertaking a country-specific, sector-based research
7. Enhancing information dissemination and extension support to farmers in regard to climate change preparedness and responses.



I. Food Security and Climate Resilient Agriculture.

Mitigation Options:

1. Reducing methane emissions from rice paddies
2. Reducing methane emissions from enteric fermentation
3. Reducing emissions from livestock manure
4. Promoting new technology transfers



II. Forestry and Land Use Change

Adaptation Options :

- 1) Mainstreaming climate change to Forestry sector development plans and programs
- 2) Seeking and developing plant species resilient to the increasing pest and climate change impacts;
- 3) Strengthening information gathering, modeling of climate change-forest dynamics, and vulnerability assessment.
- 4) Improving forest management system to support rural economies;
- 5) Providing options and opportunities for villagers to adapt to climate change;
- 6) Enhancing biodiversity conservation and management to ensure sustainability by adapting to climate change;



II. Forestry and Land Use Change

Mitigation Options:

1. Reducing “slash and burn” agriculture :
2. Reducing off-site burning
3. Reducing forest fires:
4. Integrating forest management
5. Effectively mapping and planning
6. Pursuing carbon market opportunities



III. Water Resources

Adaptation Options (N/A for Mit.):

- 1) Assess the industry's vulnerability to climate change effects;
- 2) Develop climate change scenarios for the river basins
- 3) Develop reliable early warning systems to reduce disaster impacts
- 4) Downscaling climate and hydrological models to a watershed level;
- 5) Integrating climate change measures into current risk management strategies and planning processes
- 6) Planning and design criteria for



IV. Energy and Transport

Adaptation Options (3):

- 1) Incorporating a range of possible climate change effects into the transportation investment decisions and management strategies;
- 2) Developing long-range transportation plans and investment strategies that are sufficiently robust to accommodate unanticipated future events;
- 3) Identification of the at-risk critical infrastructure, monitoring of conditions.



IV. Energy and Transport

Mitigation Options (7):

- 1) Electrification: reaching the target of 70% by 2010 and 90% by 2020, as set in the National Growth and Poverty Reduction Strategy (NGPES);
- 2) Renewable energy: accelerating the development of solar and wind as well as hydropower including mini-hydro
- 3) Cleaner energy: by making use of the coal-bed methane and coalmine methane, and seeking cleaner technologies for the development of the country's abundant lignite resources;



IV. Energy and Transport

Mitigation Options:

- 4) Energy efficiency and savings: by introducing energy-efficient lighting and appliances, and energy-efficient buildings;
- 5) **Low-carbon transport: by promoting the use of alternate energy operated motor vehicles, pursuing environmental sustainable transport strategy;**
- 6) Generating public awareness on energy saving by implementing initiatives such as car free day, marking Earth Day and World Environment Day;
- 7) Seeking the opportunities under CDM or other flexible, pragmatic financing mechanisms to undertake the development of climate-friendly renewable resources,



V. Industry

Adaptation Options:

- Access to clean energy technology and clean production technology with emphasis on SME.



Mitigation Options:

- 1) Improve energy efficiency during the production process;
- 2) *Reduce wood waste through improvement of furniture manufacturing techniques and methods*
- 3) Promoting the use of waste biomass or agricultural residues to produce renewable energy or thermal energy for drying and heating products through combustion, gasification;



VII. Urban Development

Adaptation Options:

- 1) Develop climate proofed urban environmental development plans;
- 2) Formulate climate proofing to climate change policies and action plans
- 3) Conduct climate change risk audits for each of key infrastructure services and identify climate vulnerability.
- 4) Climate-proofing the most vulnerable existing infrastructure to protect the current asset
- 5) Building storm surge barriers for wastewater treatment plants and landfills; and
- 6) Developing new design criteria for infrastructure that reflect non-stationary hydrologic processes;



VII. Urban Development

Mitigation Options:

- 1) Reduction of GHG emissions from the solid waste sector in Laos through applying the 3Rs (reduces, reuse and recycle);
- 2) Upgrading solid waste collection services
- 3) Building recycling facilities
- 4) Composting organic contents to manufacture organic fertilizers;
- 5) Effectively managing sewage sludge
- 6) Constructing new landfill facilities that can capture methane; if financially viable, retrofitting the existing landfill;
- 7) Promote environmental sustainable urban development,
- 8) Encourage the participation of the private sector and international partners in GHG emission reduction from wastes under the CDM and other financing mechanisms.

VIII. Public Health

Adaptation Options:

- 1) Providing access to safe water and improved sanitation to reduce diarrhoeal diseases and other infectious diseases;
- 2) Incorporating current climate change concerns into ongoing programmes and measures
- 3) Regular evaluation and monitoring of climate proofed programs
- 4) Raising public awareness, effectively using local resources, appropriate governance arrangements and community participation;
- 5) Strengthening existing capacity and applying new approaches

Challenges

There are 8 main challenges:

1. Need to strengthen cross cutting multi sector awareness generating programs on Climate Change to policy planners and decision makers
2. Need for program approach rather than time bound project approach
3. Need for continued and co-ordinated support from development partner
4. Need for major capacity building within the government, the private sector and the academic



Challenges (cont...)

6. Need for more resource mobilization and capacity enhancement
7. Need also for developing more absorptive capacity
8. Need for further strengthening South-South co-operation

Next Steps....

- Develop National Strategy on National Appropriate Mitigation Action

Thank You

