Enabling Low Carbon Transition of Agriculture, Energy and Transport Sectors in the Context of Nationally Determined Contributions in the GMS

Southeast Asia Department
Asian Development Bank (ADB)
Paris Agreement and Nationally Determined Contributions (NDCs)

Paris Agreement

• Aims to limit global warming to 1.5°C - 2°C above pre-industrial levels and to increase capabilities to adapt to adverse impacts of climate change, and foster climate resilience.

• Largely anchored on 2020-2030 implementation of NDCs, a process which provides an overarching framework and political mandate for climate action.

NDCs

• DMC NDCs outline pledges to contribute to global GHG emission reduction, and national adaptation priorities. Include financial, technical and capacity-building support requirements for NDC implementation.

• NDC process commits DMCs to increasingly ambitious NDCs over time. Planned global NDC Stock-take of NDCs in 2023 will review and adjust NDCs.

• NDCs likely to be influential on direction and volume of global and national climate investment flows.
ADB is committed to NDC process

Climate Change Operational Framework 2017-2030 (CCOF2030)

• Based on principle of supporting ambitious climate objectives in NDCs and other DMC climate and development plans

CCOF2030 phased approach aligns with major NDC milestones


• Phase 2 (2024-2030) - Apply Phase 1 lessons and respond to scaled up and differentiated needs of DMCs. Aligns with 2nd generation NDCs, ratcheting up DMC commitments.
CCOF2030 outlines ADB priorities for supporting DMCs in the implementation of NDCs and other climate and development plans and projects:

- **Support DMCs in refining and translating NDCs** and other relevant national and regional plans, generating national climate investment plans that clearly articulate the DMCs’ need for financial, technical, and capacity-building support, as well as possible sources of support, including ADB;

- **Embed NDCs and climate considerations in all new country partnership strategies (CPS) and country operations business plans (COBP), operational plans, sector strategies, projects, and technical assistance (TA), ensuring consistency with regional GHG reduction trajectories**;

- **Incorporate climate mitigation and adaptation components into projects in the pipeline**, where practicable, and develop stand-alone mitigation and adaptation projects;

- **Facilitate improved access to external public and private climate finance**, including through support for innovative financing mechanisms, and

- **Assist DMCs in developing and implementing suitable monitoring, reporting, and verification (MRV) frameworks for measuring performance against NDC objectives.**
“NDC Advance for GMS” - a new ADB platform to support GMS Countries

Vision
• To serve as ADB’s principal mechanism for external NDC support, while contributing to internal NDC mainstreaming.

Objectives
• Support DMCs in the implementation of their NDCs, including through development of climate investment plans and identification and direct support to priority projects
• Support mainstreaming of NDCs into ADB country programming, plans, strategies, projects, and knowledge work.
GMS Context

- **Agriculture, forestry and land use (AFOLU), energy and transport sectors** contribute most to the GMS emissions in the GMS. These sectors also contribute most to job creation.

- Many GMS countries are still largely following “grow-now clean-up later” approach, leading to massive increases in GHG emissions. However, all GMS countries have committed to reduce GHG emissions as part of their NDCs.

- None of the NDCs would match a “sector investment plan” in terms of technical, spatial, temporal, and financial details which ADB operational departments are accustomed to relying on for country operational planning.

- **Energy efficiency has been largely ignored**, despite the economic gains from relatively simple measures to curb energy waste. There are very limited measures to decarbonize energy supply beyond the power sector such as in transport, building, and industry.

- Strategies for low carbon transition will generate **technology innovation, business development and job creation**, contributing to broader socioeconomic development of GMS.

- GMS countries have a golden opportunity to leapfrog policies and technologies necessary for low carbon transition through refining and implementing their NDCs.
<table>
<thead>
<tr>
<th>Issue for low carbon transition</th>
<th>Cambodia</th>
<th>PRC (Guanxi and Yunnan)</th>
<th>LAO PDR</th>
<th>MYANMAR</th>
<th>Thailand</th>
<th>Viet Nam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable agriculture</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Forest management</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>TBD</td>
<td>YES</td>
</tr>
<tr>
<td>Sustainable land use</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>TBD</td>
<td>NO</td>
</tr>
<tr>
<td>Energy efficiency</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Renewable energy</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Sustainable transport</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>
NDC Targets by 2030 for Low Carbon Transition in GMS

<table>
<thead>
<tr>
<th>Country</th>
<th>Overall target</th>
<th>AFOLU</th>
<th>Energy</th>
<th>Transport</th>
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<tbody>
<tr>
<td>Cambodia</td>
<td>Reduce GHG emissions by 27% from BAU levels in 2030 in energy, manufacturing, and transportation sectors. <strong>Conditional:</strong> Additional LULUCF contribution of 4.7 tCO2e/ha/year</td>
<td>Increase forest cover to 60% of land area by implementation of the National Forest Program (2010-2029) and Forest Law Enforcement, Governance and Trade program.</td>
<td>16% reduction in emissions (1.8 MtCO2e) through renewable energy and energy efficiency; 7% reduction in manufacturing emissions (0.727 MtCO2e); and 1% reduction from (0.155 MtCO2e). Includes energy efficient buildings, cook stoves, and biodigesters.</td>
<td>3% reduction in transportation emissions (0.39 MtCO2e). Includes mass transit and motor vehicle inspections.</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>N/A</td>
<td>Increase forest cover to 70% of land area by 2020;</td>
<td>Increasing share of renewable energy to 30% of total energy consumption by 2025</td>
<td>Increasing road network and use of public transport</td>
</tr>
<tr>
<td>Myanmar</td>
<td>N/A</td>
<td>Increasing permanent forest target to 30% of land for reserved and protected forest and 10% as protected area systems by 2030;</td>
<td>Increasing rural electrification with a goal of 30% renewable energy; Realizing a 20% savings in electric consumption, with a focus on energy efficiency in industry; energy-efficient cookstoves</td>
<td>N/A</td>
</tr>
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</table>
## NDC Targets by 2030 for Low Carbon Transition in GMS

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<td>Thailand</td>
<td>Reduce GHG emissions by 20% from BAU levels (555 MtCO2e) by 2030. Conditional: 25% from BAU levels by 2030</td>
<td>Inclusion of LULUCF will be decided upon later</td>
<td>Feed-in tariffs and tax incentives and access to investment grants/venture capital to promote renewable energy;</td>
<td>Not specified</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Reduce GHG emissions by 8% from BAU levels (787.4 MtCO2e) by 2030; Reduce emission intensity per unit of GDP by 20% by 2030 relative to 2010.</td>
<td>Sustainable agriculture and sustainable forest management</td>
<td>energy efficiency, and renewable energy</td>
<td>Increasing efficiency of fuel use in transportation</td>
</tr>
</tbody>
</table>
Sector wise Interventions in NDCs

- **Agriculture and natural resources**
  - The increase of forest cover is a specified target for Cambodia, the Lao PDR, and Myanmar. Aligned with this target, sustainable forest management and the restoration and rehabilitation of the forests (afforestation/reforestation) are common prioritized activities.
  - The promotion of sustainable agriculture and agriculture infrastructure are also priority actions.

- **Energy**
  - The development and promotion of renewable energy (e.g., solar, hydropower, biomass, biogas, and wind) is a common priority.
  - The promotion of end-use energy efficiency was specified in the INDCs of Cambodia (in particular, in buildings and households), Myanmar (energy-efficient cookstoves), Thailand, and Viet Nam (in residential, trade, and services).
  - Key to these energy priorities is the enhancement of the policy and regulatory environment (Viet Nam and Myanmar) and the creation of incentive mechanisms for technology development (Thailand).

- **Transport**
  - The promotion of low-carbon/energy-efficient road transport system such as through mass public transport (rail-based, bus); increased use of hybrid cars, e-vehicles, and bicycles; modal shift for freight and passenger transport; and use of compressed natural gas and liquefied petroleum gas are priority actions in the INDCs, notably for Cambodia, the Lao PDR, Thailand, and Viet Nam.
NEEDS, GAPS AND BEST PRACTICES

- Low carbon transition is already mainstreamed into NDCs of GMS countries and is not a separate strategy from economic development.
- Low carbon transition strategies can accommodate the services needed to meet countries’ economic growth targets and social priorities. However, low-carbon technologies must be affordable and sector planning must take social priorities into account.
- Further work is necessary to provide right enabling environment (policies and institutions).

What type of support is needed/can be provided for advancing the ambition in NDCs in GMS countries?

- Analysis of best practices for GHG mitigation to achieve NDC objectives
- Capacity strengthening on translating NDCs into climate investment plans
- Support for monitoring, reporting and verification of mitigation actions in NDCs under enhanced transparency framework
- Support for piloting green freight based on experiences in CEP Phase II, and low carbon agriculture investments
Priorities for Action over next 5 years

- Provide policy support for implementation of Nationally Determined Contributions (NDCs) focusing on AFOLU, energy and transport sectors
- Prepare climate investment plans for priority sectors or subsectors based on analysis of NDCs
- Develop results framework indicators to monitor progress towards NDC commitments by selected GMS countries
- Strengthen institutional and technical capacity to catalyze public-private partnerships in low carbon transition
- Develop concept papers and implement pilot projects to promote greater uptake of low carbon technologies
- Piloting and scaling up green freight options, including preparation of national road maps for green freight and investments on low carbon agriculture and green freight
Proposed Transport and Green Freight related Activities

- **Capacity strengthening to implement NDCs: MRV and access to climate finance**
  - Build MRV capacity in transport sector through GMS-wide platform for low carbon transition
  - Conduct pre-feasibility, assess the viability of blended financing, assess the viability of new lending products in partnership with commercial bank/s, **develop bankable green freight investments**

- **Scaling up Green Freight Technology (GFT) use and Eco-Driving**
  - Enabling policy environment for uptake of GFT and eco-driving
  - GMS Green Freight Road Map

- **Testing viability of e-vehicles for fuel switch and fleet replacement, with the focus on the last mile of supply chain**
  - Pre-feasibility studies on e-vehicle performance and charging models and infrastructure, market studies and business plans, business models (leasing and renting)

- **Logistics Management**
  - Assess various logistics software (better routing, scheduling and lower empty backhauls) for Fuel Reduction & GHG emission
Thank you.

Southeast Asia Department
Asian Development Bank (ADB)