Role of Market Instruments to mitigate climate change in Sri Lanka

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Sri Lanka has one of the lowest per capita CO\textsubscript{2} emissions

Sri Lanka’s GHG emission was approximately 1.44 tons of CO\textsubscript{2}eq per capita in 2012, far below the world average value of 7.58 and lower than most of its neighbouring countries.

Source: Emission Database for Global Atmospheric Research (EDGAR)
Sri Lanka’s CO₂ emission from Fossil Fuel

Source: http://data.worldbank.org/
Energy demand has grown rapidly with economic growth

Sri Lanka’s economy has grown rapidly over the last decade

Increasing energy demand has raised dependence on fossil fuel imports

GDP Growth Rate

Primary Energy Consumption and Demand

Source: Central Bank Reports 1998-2014

Source: Sri Lanka Sustainable Energy Authority
There is an urgent need for climate action

In the business as usual scenario, the share of coal in Sri Lanka’s generation mix is likely to grow significantly since it is the least cost option for power generation.

This will lead to increased air pollution, greenhouse gas emissions, and growing economic vulnerability to volatility in fossil fuel supplies.

- Coal share will increase from 34% in 2014 to 40% in 2020.
The government’s policy agenda for climate change proposes several strategies:

- Introducing Standard Power Purchase Agreement (SPPA) to promote NCRE
- The Sri Lankan government’s policy agenda to address climate change includes strategies such as:
  - Expanding the non-conventional renewable energy contribution to the national grid
  - Increasing forest cover
  - Implementing a Green Transport System
  - Implementing a Fuel Quality Road Map
  - Rehabilitating and restoring estuaries, lagoons, mangroves, salt marshes, sand dunes, beaches and grass-beds to safeguard the coastline
  - Multi-resource watershed management to improve water availability and retention
Aspirational energy goals have been announced

- Increase share of non-conventional renewable energy (NCRE) electricity generation to 20% by 2020
- Become energy self-sufficient by 2035
- Reduce technical & commercial losses of electricity transmission network from the current level of 11% to 8% by 2020
- Reduce annual energy demand growth by 2%
- Reduce carbon footprint of energy sector by 5% by 2025
Sri Lanka is developing a number of voluntary GHG mitigation programs

Voluntary GHG mitigation programs in Sri Lanka

**Domestic Carbon Offsetting**
- Sri Lanka Carbon Offset Scheme
  Registry of projects in energy, tourism, tea & services

**International Programs**
- Clean Development Mechanism (CDM)
  Energy, waste, industry and manufacturing
- Carbon Partnership Facility (CPF)
  Market instruments for energy sector

**Voluntary Commitments**
- Intended Nationally Determined Contributions (INDCs)
- Nationally Appropriate Mitigation Actions (NAMAs)
  Energy & transport
Domestic carbon standards have been instituted

Sri Lanka Carbon Offset Program

Regulation and registry of projects that provide carbon offsets

Objectives:

- Introduce an effective, user friendly, quality assurance system
- Create a transparent validation, verification, certification and registration system
- Facilitate responsible GHG emitters for voluntary offsets
- Innovate paths in carbon crediting to businesses, non-profits and government entities that engage in on the ground climate action
The government is preparing voluntary commitments through INDCs and NAMAs

- INDC - Reduce GHG emissions by 7% unconditionally by 2030 against 2010, and 23% with conditions

- Ministry of Power and Energy and SEA have prepared draft sub-sector NAMAs together with UNDP

Nationally Appropriate Mitigation Actions (NAMAs)

Transport
- Draft plan to establish Bus Rapid Transport System submitted for review
- Facilitated by Global Environment Facility (GEF)
- To be implemented by Ministry of Internal Transport

Energy
- Disseminate 1000 bio-digesters, 1300 high efficiency motors in tea industry & 205 solar PV net metering systems with battery storage
- To be implemented by SEA and Ministry of Environment in partnership with UNDP
Sri Lanka has initiated international programs to incentivize GHG mitigation

**Clean Development Mechanism (CDM)**
As Designated National Authority, the Climate Change Secretariat has awarded several national letters of approval to CDM projects that meet the criteria of sustainable development.

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<th>Number</th>
<th>MW/year</th>
<th>tCO2eq/year</th>
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<td>Registered projects</td>
<td>22</td>
<td>178</td>
<td>605,236</td>
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<tr>
<td>CERs issued</td>
<td>8</td>
<td>60</td>
<td>882,536</td>
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**Carbon Partnership Facility (CPF)**
With World Bank support, Sri Lanka is currently exploring the possibility of market instruments in the electricity sector (scale up crediting mechanism).
Sri Lanka requires additional support to make climate mitigation efforts a success

**Capacity Building**
Strengthen domestic institutions to design and implement programs that will enable achievement of Sri Lanka’s low carbon growth goals

**Develop Market Mechanisms**
Develop new financial instruments or improve the design of existing instruments to catalyze private investment in climate change mitigation projects

**Incorporate International Standards**
Improve design and enhance effectiveness of domestic GHG mitigation programs by incorporating international standards and practices
Market instruments can help Sri Lanka to achieve its climate change objectives using a sequenced approach

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<th>Step 1</th>
<th>Research green policy instruments to support government in achieving low carbon development path (e.g. green tax, levy)</th>
<th>Assess Sri Lanka's mitigation potential by sector</th>
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<td>Step 2</td>
<td>Develop potential policy mechanisms for government</td>
<td>Identify potential sectors and match with market instruments</td>
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<td>Step 3</td>
<td>Test green policy instruments (e.g. green bonds, SLCOS)</td>
<td>Implement/pilot market instruments in identified sector (e.g. scaled up crediting mechanism for transport, building)</td>
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Through continuous capacity building with domestic institutions
Readiness preparation for implementation and capacity enhancement

Implementation of Inter-Ministerial Working Group (IMWG) facilitated by Sri Lankan Climate Fund

Proposed composition of IMWG
- Ministry of Maheweli Development and Environment
- Ministry of Power and Energy
- Ministry of Finance
- Ministry of Industries

Activities to be undertaken by IMWG
- Determine the role of market-based instruments on climate change policy
- Sectoral analysis of the viability of market-based instruments
- National/sectoral MRV
- Selection of market-based instruments according to sectoral needs/preferences
- Pilot activities
Contact

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