Egypt Low Emissions Development Strategy (LEDS)

Objectives, Pillars & Main Features

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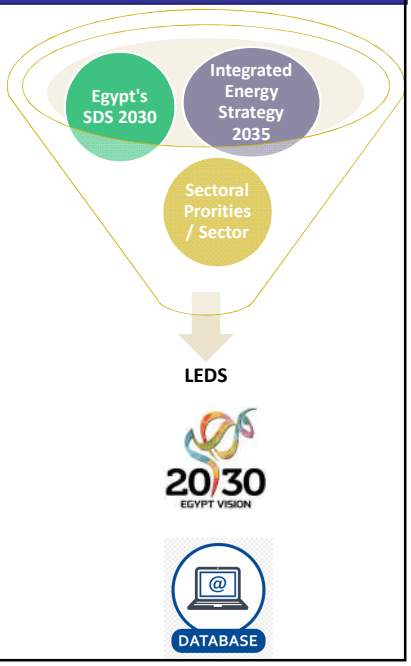
Objectives of National LEDS Development

Objectives of LEDS

National Context

- To have a national strategy gathering all the national efforts and strategies in the field of climate change mitigation, and boost the dissemination of climate change in the country's developmental goals in a more integrated, systematic and strategic approach.
- To set a framework for estimating and updating key performance indicators for the relevant targets in the national SDS 2030.
- Quantifying the investment cost required to implement the mitigation actions listed in SDS 2030 (and other national documents)
- Providing quantitative emission reduction mitigation scenarios in all sectors, together with their economic feasibility.



Objectives of LEDS (cont'd)

International Context

- Egypt has shown its commitments towards climate change and sustainable development starting from ratifying the United Nations Framework Convention on Climate Change (UNFCCC) in 1994, and ratifying Paris Agreement in June 2017.
- According to Article 4, paragraph 19 of the Paris Agreement *"All Parties should strive to formulate and communicate long-term Low greenhouse gas emission development strategies (LEDS), ……."*.
- Guide the national decision makers to identify the type of the Nationally Determined Contributions (NDC) which is one of the mandatory requirements as per Paris Agreement.
- Utilizing Paris Agreement as a tool that can be used to implement the mitigation actions listed in SDS 2030 through finance from developed countries.

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Main Pillars of National LEDS

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Main Pillars of LEDS

Country owned and country driven

Analytically sound

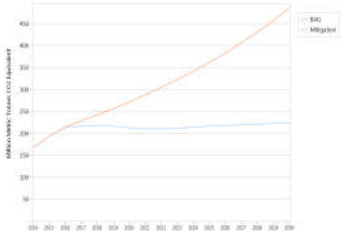
LEAP

Comprehensive

Forward looking and long term

Actionable

Transf



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Pillar 1: Country Owned and Country Driven

LEDS Kick off in March 2018

Meeting with NCCC in June 2018 to explain the scope and approach for LEDS Development

1st Draft of LEDS issued in September 2018

Strategy adopted by NCCC in February 2019

1st Stakeholders Scoping Meeting in June 2018

Meetings with Relevant Ministries and LEDS Preparation from June 2018 till September 2018

2nd Draft of LEDS issued in November 2018

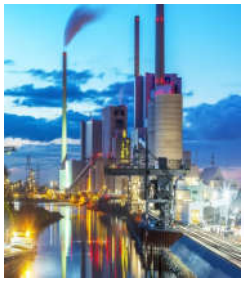
LEDS

Pillar 2: Comprehensive

Electric Power Generation Sector

Petroleum Sector

Industrial Sector



Waste Sector

Transport Sector

Agriculture Sector

Tourism Sector

Buildings Sector

Pillar 3: Analytically Sound

1. Scoping and Planning:

- Desk review for the analysis of the national situation in the different sectors
- Meetings with the relevant ministries and entities to confirm the results of the desk review and know more about the strategies and action plans in each sector

Pillar 3: Analytically Sound (cont'd)

2. Scenarios Design:

- LEAP software was used to develop a business as usual (BAU) scenario, and various mitigation scenarios for the different targeted sectors
- Inputs to LEAP software were based on the data obtained from Step 1 in addition expert judgements
- The total national potential emission reduction values and estimated cost of the different mitigation actions were calculated to determine the weight of the different sectors and identify the sectors with the highest mitigation potential
- Optimization study has been developed where 10 different reduction targets have been simulated

Pillar 3: Analytically Sound (cont'd)

3. Prioritization of Mitigation Actions:

Second Stakeholder Consultation

- Key LEAP Model Results
- Receiving comments from the stakeholders
- Define Short-listed mitigation actions

Re-Running LEAP Model

- Re-run the LEAP model to address the comments received
- Re-perform optimization calculations

Pillar 3: Analytically Sound (cont'd)

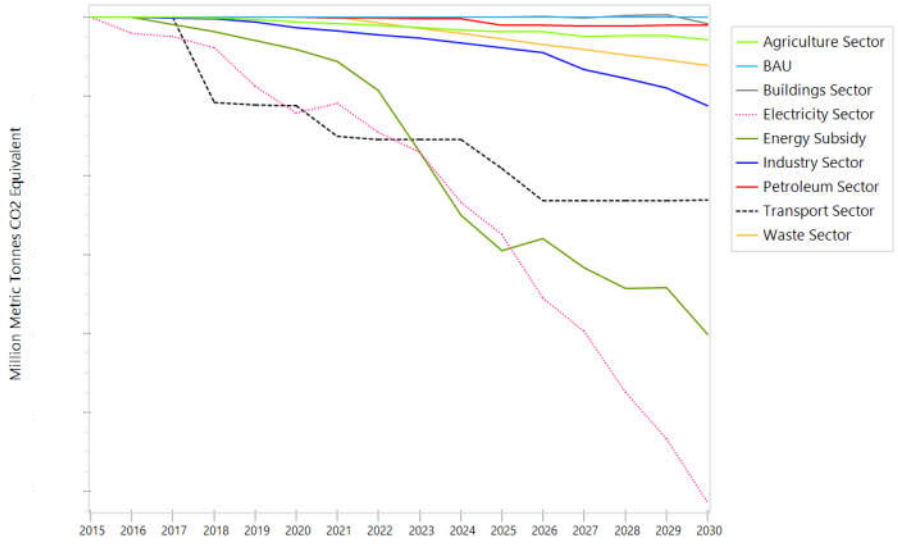
4. Financial Options:

Evaluating financial needs of the selected mitigation actions

Assessing the impacts of the different mitigation actions on the overall economy

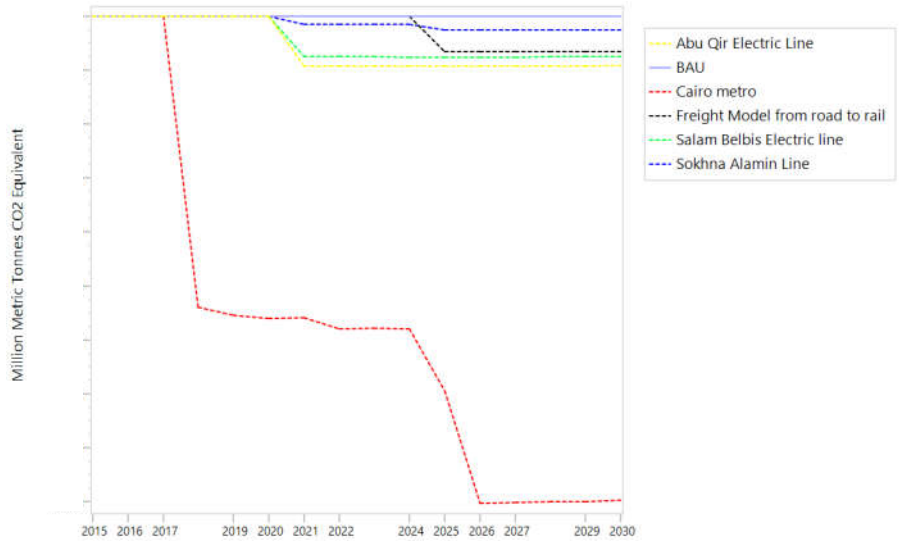
Recommending enhanced country-level financing to promote the implementation of the mitigation actions

Pillar 4: Transformative



Mitigation Potential of Different Sectors

Pillar 4: Transformative (cont'd)



Mitigation Potential of of Each Programme (e.g. Transport Sector)

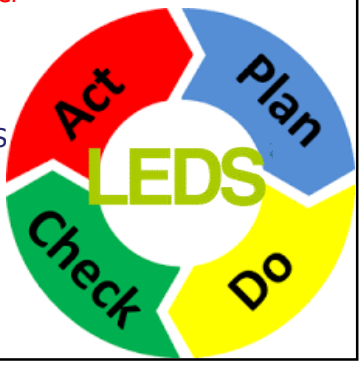
Pillar 5: Forward looking and long term (Target Year: 2030)

Option 1 (NPV: X1 B$, Cost: Y1 B$)				Z% Red. Target	Option 2 (NPV: X2 B$, Cost: Y2 B$)			
Action	**Selected?**	**Action**	**Selected?**		**Action**	**Selected?**	**Action**	**Selected?**
Clinker		Electricity	✓		Clinker		Electricity	✓
AG Flaring		Metro	✓		AG Flaring		Metro	✓
EE Petroleum		EE Govern.	✓		EE Petroleum		EE Govern.	✓
Charcoal	✓	Abu Qir			Charcoal	✓	Abu Qir	✓
EE Irrigation		Salam			EE Irrigation	✓	Salam	
Solar Pumping		Sokhna			Solar Pumping		Sokhna	
EE Industry	✓	WTE Agr.			EE Industry		WTE Agr.	
Regulatory Motors	✓	Freight Shift	✓		Regulatory Motors	✓	Freight Shift	✓
Subsidy reform		AFR Cement			Subsidy reform		AFR Cement	
EE Hotels		EE Cement			EE Hotels	✓	EE Cement	
RE Hotels		MSW Conversion			RE Hotels		MSW Conversion	
WTE MSW	✓				WTE MSW			

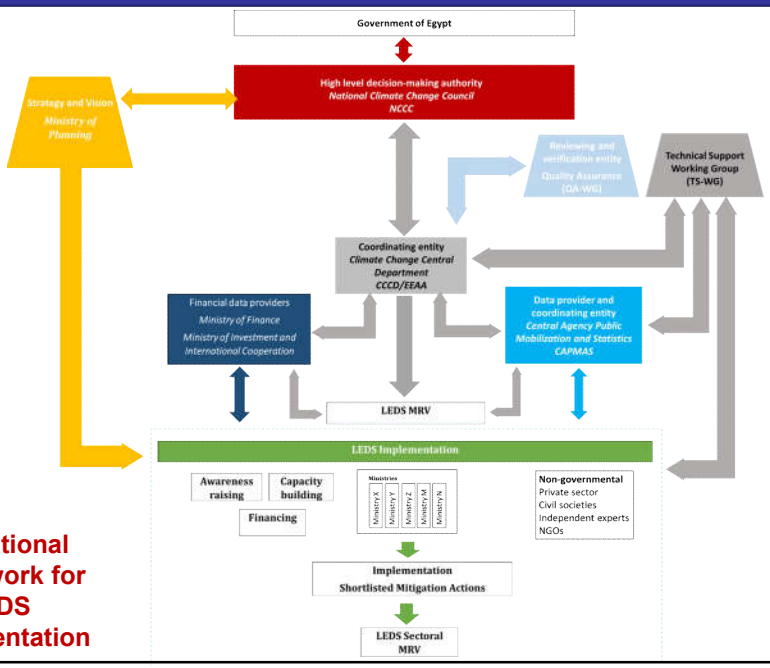
Pillar 6: Actionable

MRV Strategy

- **Level 1: MRV on programme level**
  - Exact parameters to be monitored and monitoring frequency for every programme have been identified
  - Institutional set-up for data flow on sector level has been identified.
- **Level 2: MRV of LEDS**
  - Institutional framework for national-level LEDS implementation has been identified
  - Key elements and required resources for effective LEDS implementation and update have been defined.



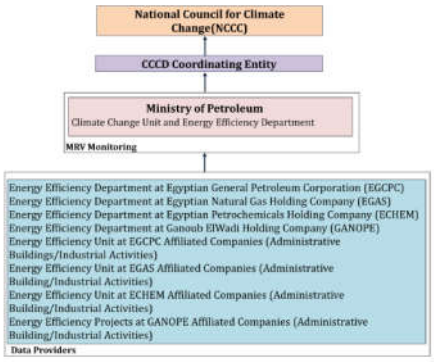
Pillar 6: Actionable (cont'd)

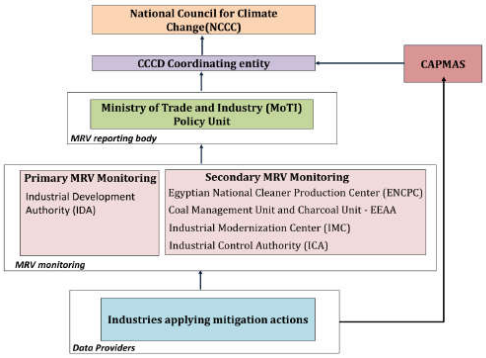


Institutional Framework for LEDS Implementation

Pillar 6: Actionable (cont'd)

Institutional Arrangements for Sectoral MRV





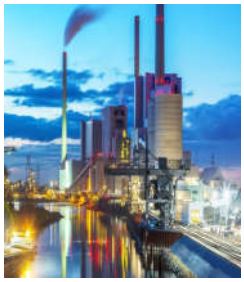
Programmes Included in LEDS

Sectors Covered under the LEDS

Electric Power Generation Sector

Petroleum Sector

Industrial Sector



Waste Sector

Transport Sector

AFOLU Sector

Tourism Sector

Buildings Sector

Electric Power Generation Sector

Electric Power Generation — Scenario 4B" of the Energy Strategy 2035; where the share of renewables will reach 37%.

Petroleum Sector

- **Petroleum**
  - Recovery and utilization of associated gases that are currently flared
  - Energy Efficiency Actions in Petroleum Companies

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Industrial Sector

- **Industry**
  - Alternative Fuel substitution in cement sector
  - Reduction of Clinker Percentage in cement sector
  - Energy Efficiency in the Cement Sector
  - Energy Efficiency in the Main Industrial Sectors
  - Motor Efficiency Improvement
  - Solar Heat for Industrial Process (SHIP)
  - Efficient Mechanized Charcoal manufacture

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Transport Sector

Transport

- Expansion and Development of Cairo Metro Lines
- Abu Qir- Alexandria Railways Line
- Al Salam – New Administrative Capital – 10th of Ramadan Electric Railway Line
- Ain Sokhna - Alamin Electric Train
- Freight Model Shift from Roads to Rail

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Agriculture Sector

Agriculture

- Four million acres development
- Reduction of rice cultivated areas
- Reduce GHGs emissions from livestock
- Electricity from agriculture wastes
- Replacement/Rehabilitation of inefficient irrigation Pumps
- Solar PV pumping to replace field diesel pumps
- Composting of agricultural waste

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Tourism Sector

- Tourism
  - Implementing energy efficient actions in hotels
  - Implementing renewable energy systems in hotels

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Buildings Sector

- Buildings
  - Implementing energy efficient lighting in governmental buildings

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Waste Sector

- Waste
  - Municipal waste to energy
  - Municipal waste conversion

Key Outcomes

Conclusions

- **Emission reduction benefits of applying the mitigation actions listed in SDS 2030 and other national documents have been quantified.**
- **Quantitative mitigation scenarios covering the various sectors, together with their economic feasibility have been developed.**
- **LEDS results provide an important support tool to the decision makers regarding the selection of the NDC type.**
- **Paris Agreement is a tool that maybe used to implement the mitigation actions listed in SDS 2030 through finance from developed countries.**
- **The LEAP model will be handed over to CCCD, and the model can be continuously updated.**



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Thank you

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