LEBANON

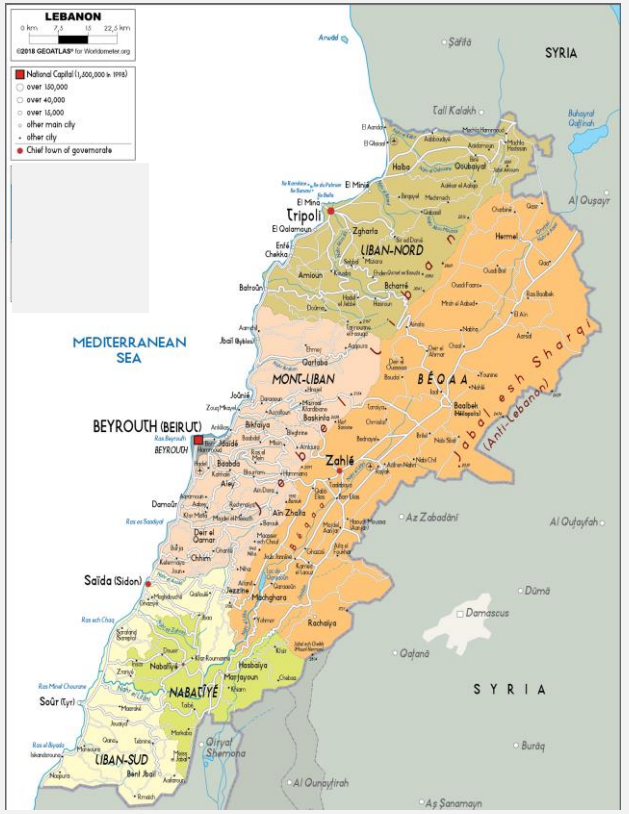
Third Biennial Update Report on CLIMATE CHANGE 2019

Facilitative sharing of views
June 14, 2021

1. National context

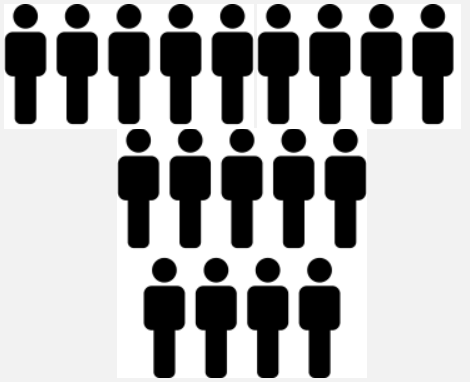
Geography

10,452 Km^2



Population in 2015

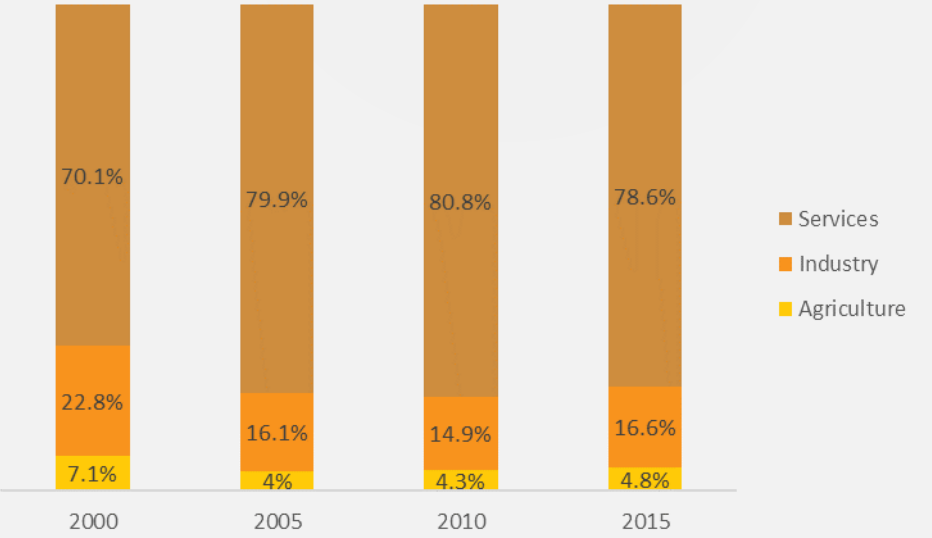
Around 5.9 million



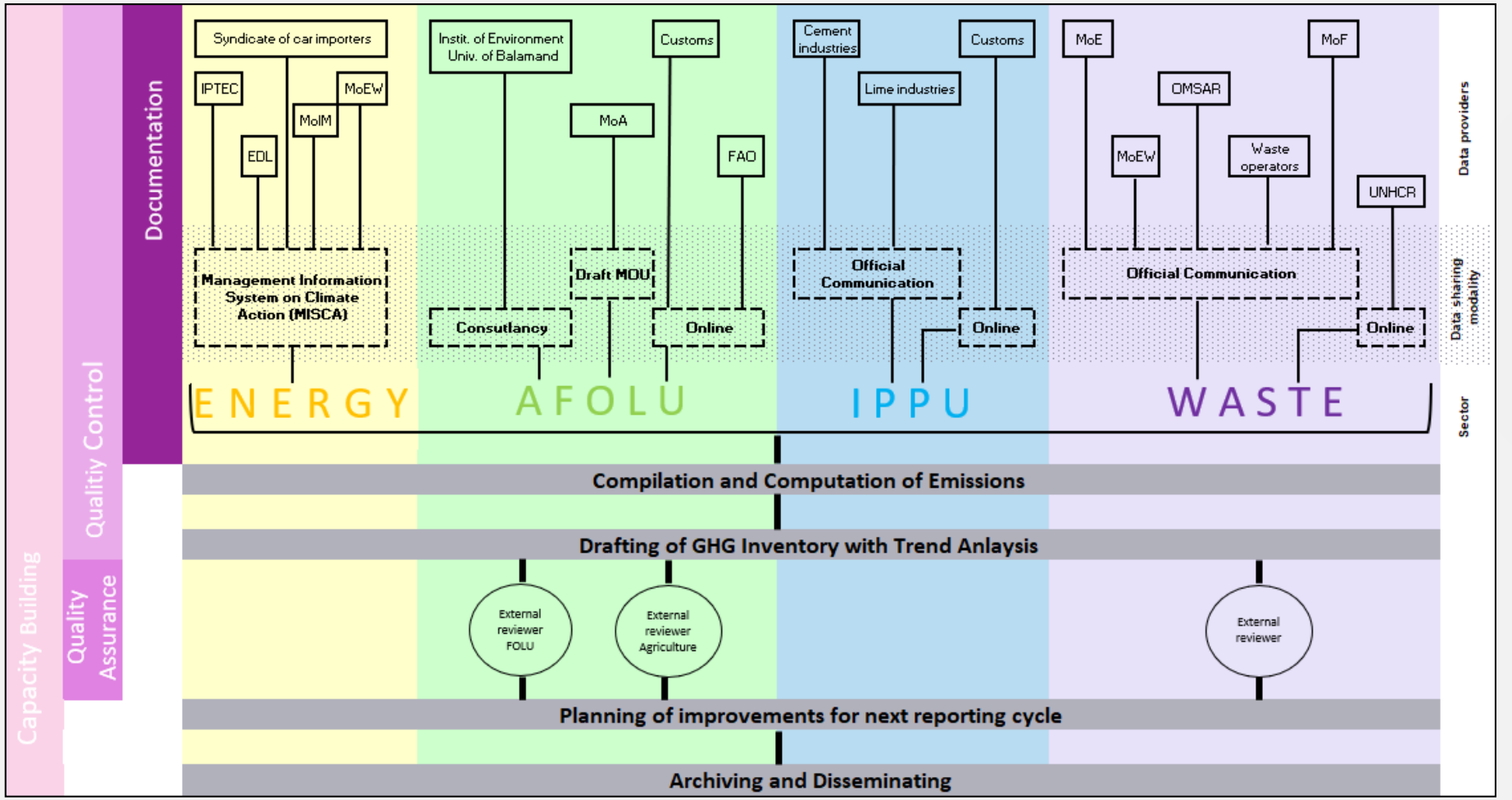
Real GDP growth

9.2% for the 2006-2009

1.3% for the 2010-2017 period.



Institutional arrangements for BUR and GHG inventory preparation



Main Improvements:

2006 IPCC GL

Recalculations of time-series 1994-2015

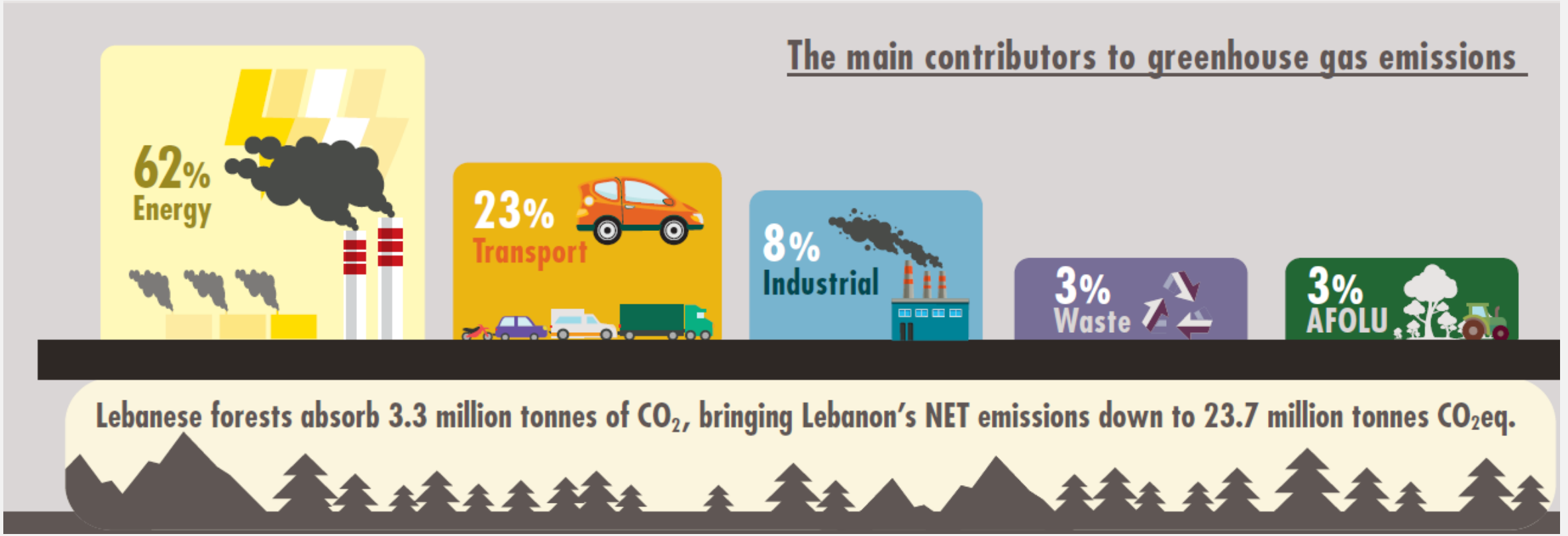
New QA/QC procedures

Improved data collection and validation

IPTEC: IPT Energy Center; EDL: Electricite du Liban; MoIM : Ministry of Interior and Municipalities; MoEW: Ministry of Energy and Water; MoA: Ministry of Agriculture ; MoU: Memorandum of Understanding; FAO: Food and Agriculture Organization; MoE: Ministry of Environment; OMSAR: Office of the Minister of State for Administrative Reform; MoF: Ministry of Finance; UNHCR: United Nations High Commissioner for Refugees.

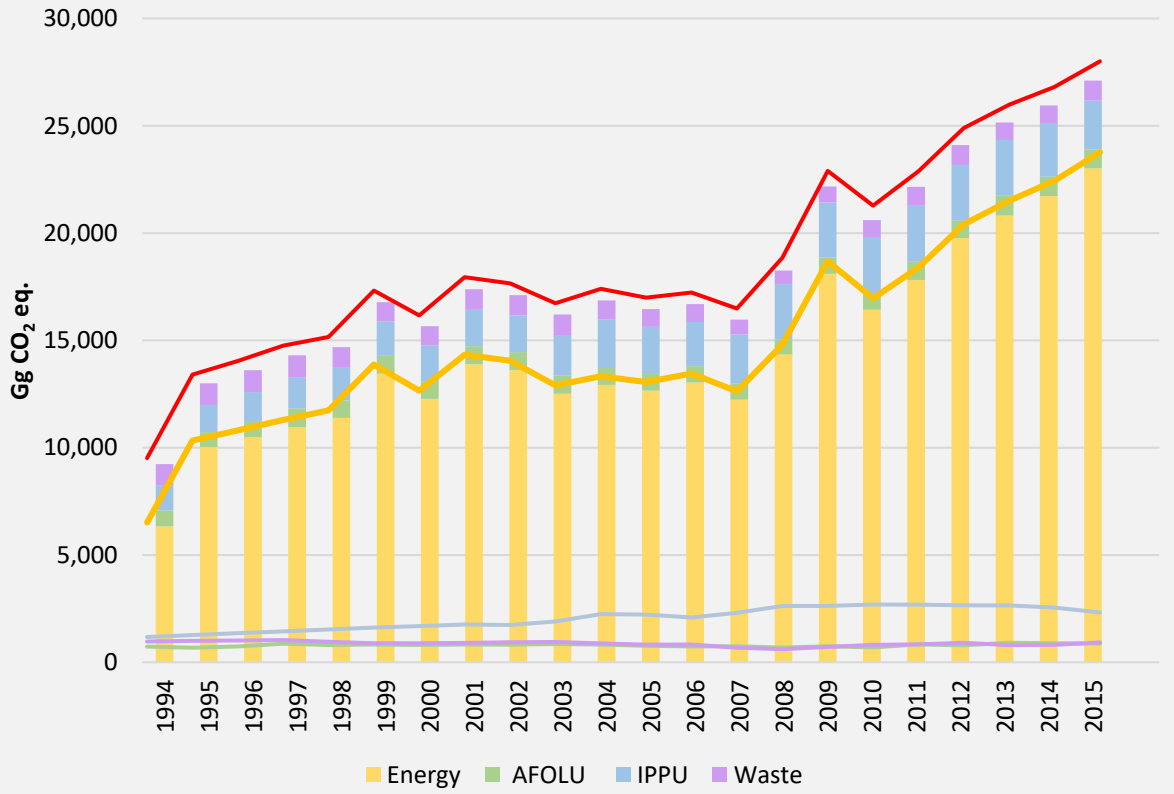
2. Greenhouse Gas emissions

27,107 Gg CO_{2eq}

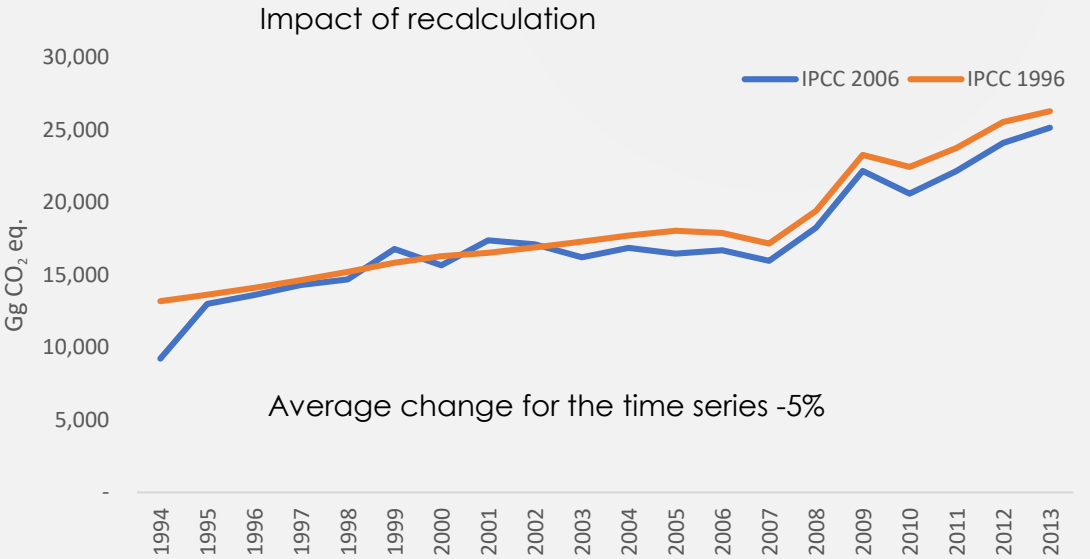


Adapted from MoE/UNDP/GEF, 2019

Trend analysis 1994-2015



- GHG emissions increased by 3-fold
- Average 7% increase per year
- GHG emissions trend closely follows trend of energy sector (69% to 85%)



3. Emission reduction activities- by 2015

Nationally Determined Contribution

-15% Unconditional Emission Reduction Target of compared to the Business-As-Usual (BAU) scenario in 2030.

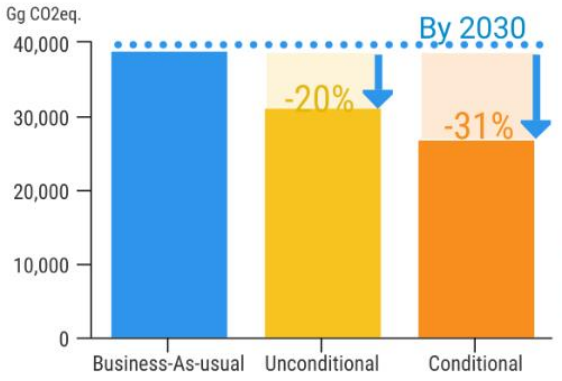
-30% Unconditional Emission Reduction Target of compared to the Business-As-Usual (BAU) scenario in 2030.

NDC Updated in 2021

Lebanon's Nationally Determined Contribution - update

Mitigation targets

Lebanon's priority for the next decade is to spur sustainable economic growth through the creation of decent jobs and improve the well-being of its population through welfare programmes and protection of natural resources



In the 2020 update, Lebanon commits to **increase its unconditional target** from 15% to 20%.

The unconditional mitigation scenario includes actions which Lebanon can nationally implement, and through international support in the form of loans or other repayable instruments.

The conditional mitigation scenario includes further mitigation actions which can be implemented upon the provision of additional international support in the form of grants.

UNCONDITIONAL	CONDITIONAL
18% of the **power** demand generated by **renewable energy** sources by 2030	30% of the **power** demand generated by **renewable energy** sources by 2030
11% of the **heat** demand (in the building sector)	16.5% of the **heat** demand (in the building sector)
-3% reduction in **power demand** through **energy efficiency** by 2030	-10% reduction in **power demand** through **energy efficiency** by 2030

Adaptation priorities

Preserve and restore the natural capital and enhance and protect the built capital, as well as livelihoods, to ensure sustainable growth and resilience to climate change

Adaptation Priorities

- Strengthen the agricultural sector's resilience to enhance Lebanon's agricultural output in a climate-smart manner
- Promote the sustainable use of natural resources, restore degraded landscapes, and increase Lebanon's forest cover
- Structure and develop sustainable water services, including irrigation, in order to improve people's living conditions
- Value and sustainably manage terrestrial and marine biodiversity for the preservation and conservation of its ecosystems and habitats and the species
- Reduce the vulnerability of climate change impacts on coastal zones, especially in cities
- Ensure overall public health and safety through climate-resilient health systems
- Reduce disaster risk and minimize damages by mitigating and adapting to climate related natural hazards and extreme weather

Guiding Principles

1. Achieve **food security** through the sustainable management of resources
2. Enhance the resilience of the **infrastructure,** urban and rural areas to subsist climate-related disasters
3. Ensure and protect **public health**, well-being and safety of all communities through climate-resilient systems
4. Incorporate **Nature-Based Solutions (NBS)** as a first line of defense from adverse impacts of climate change
5. Combat desertification and land degradation by achieving L**and Degradation Neutrality (LDN)**
6. Substantially reduce the risk of climate and non-**climate related disasters** to protect lives, the economy and physical/natural assets

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NDC Updated in 2020

Long-Term Strategy for Low Emission Resilient Development

- LTS-LERD is being drafted to tackle sustainable development and socio-economic issues, through climate action.
- LTS-LERD aims to decouple economic growth from GHG emissions and achieve resilience against all types of shocks.
- LTS-LERD can help improve national objectives for fiscal, macroeconomic, investment, energy security, environmental sustainability, and equity gains

3. Emission reduction activities- by 2015

ENERGY

SUPPORT RECEIVED TO CLIMATE CHANGE

PV Electricity
$9,617,797

Hydropower small scale
$4,627,000

PV PSI
$2,922,101

Biomass boilers
$909,774

Others
$751,000

- 728.27 Gg CO_2eq.
Installation of Solar Water Heaters (SWH)

- 14.93 Gg CO_2eq.
Certified green building

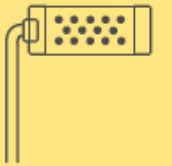
- 689.66 Gg CO_2eq.
Other Energy Efficiency measures

- 3.39 Gg CO_2eq.
Solar-powered public street lighting

- 19.99 Gg CO_2eq.
Biomass Space Heating

- 3.16 Gg CO_2eq.
Solar-powered water pumping

- 19.9 Gg CO_2eq.
Decentralized solar PV installations



- 0.56 Gg CO_2eq.
Energy-efficient public street lighting

3. Emission reduction activities

Transport

NATIONAL TRANSPORT POLICY 2014

Aim: shifting the passenger transport demand to mass transit systems.
The main actions with direct impact on reducing GHG emissions are:

On the short term:

- Implementation of phase 1 of the rail transportation plan, namely the lane connecting port of Tripoli to the Syrian border.
- Revitalization and restructuring of the operation of public buses inside cities.
- Continuing the development project of traffic management in Great Beirut Area (GBA).
- Improvement of the pedestrian infrastructure.

On the long term:

- Deployment of a Bus Rapid Transit (BRT) on Beirut north and south gates, commuting Jounieh to Jiyeh.
- Development of a mass transit system covering territories all over Lebanon and commuting cities.
- Restructuring the freight transport.

THE GREATER BEIRUT PUBLIC TRANSPORT PROJECT (2018)

The project cost **USD 345,000,000**
(between Government of Lebanon and the Word Bank)

- BRT infrastructure, fleet and systems: including the design, construction and management of BRT road infrastructure from Tabarja to Charles Helou (22 km) and Beirut Outer Ring road (15 km), widening of key sections of the highway, acquisition and operationalization of a BRT bus fleet and the installation of ITS and fare collection systems
- Feeder and regular bus services and integration in urban environment: including the design, construction and management of bus stops (30 stations) and control center, acquisition and operationalization of a feeder, park and ride facilities, development of non-motorized transport plan, road safety plan and urban transport master plan.
- Capacity building and project management: including the strengthening the capacity of the Project Implementing Entity and Railway and Public Transport Authority for project implementation, supervision and management.

EXPECTED GHG SAVINGS OVER 20 YEARS:

Euro V buses
1,200,000 tonnes of CO_2

in case of usage of

Hybrid and CNG buses
1,440,000 tonnes of CO_2

		Gasoline Car	Hybrid Car	Electric Car
		What you pay now	What you will pay	
Private passenger cars	Car Price	Full	Full	Full
	Customs and CIF fees	100%	20%	0%
Taxis	Customs and CIF fees	100%	10%	0%
	Registration & mecanique	100%	0%	0%

Emission reduction activities

Forestry

EMISSION REDUCTION

GHG emissions can be reduced through:

- Protecting against deforestation & land degradation
- Encouraging reforestation
- Preventing forest fires

Summary of achieved removals in forestry by 2015

	Cumulative CO_2eq. removals by 2015
Toumet Niha, Jezzine reforestation project	-0.1618
ARDAC project	-0.0647
Deir el Ahmar and Ainata reforestation / afforestation project	-0.0259
Development of pilot landscape restoration plans (Al Shouf Cedar Society)	-1.55
Hasbaya, Kawkaba, Baalbeck & Aramoun reforestation / afforestation project	-0.0741
AFDC afforestation / reforestation projects	-0.3886
The reforestation initiative of the MoE	-5.4
Jouzour Loubnan's reforestation and afforestation activities	-3.4628
Lebanon Reforestation Initiative	-13.4827
Managing wildfire risk in the Wildland-Urban Interface (Balamand)	-0.34

TOTAL GHG REMOVALS -25 Gg CO_2eq.

Obstacles and barriers

BUR preparation	Inventory preparation	Reporting mitigation actions	Reporting needs and support received
• Human resources • Funding cycles • Institutional arrangements • National ownership	• Underdeveloped institutional arrangements for data monitoring and collection • Unavailability of specific data and/or the inaccessibility of existing data for adopting tier 2	• Limited data available on progress of policy implementation • Absence of policy workplans and indicators • Difficulty in identifying climate related components in sectoral policies	• Data collection • Institutional arrangements • Definition and methodology synchronization • Progress tracking

Lebanon's transition to the Enhanced Transparency Framework (ETF)

Short Term (2021-2023)

- Request support for BTR1 in order to submit the report before 2024, planned by 2023
- Deploy CBIT support in order to work on the long-term needs for improved transparency and reporting, such as the MRV Coordinating Entity (MRVCE)
- Finalize NDC indicators with the relevant institutions to report on NDC progress in BTR1
- Finalize arrangements to report an at least x-3 inventory in BTR1
- Improve reporting on mitigation policies and measures
- Initiate a system to identify and report improvement needs for more transparent reporting in consequent BTRs
- Start capacity-building activities for stakeholders in order to ensure capacity retention and sustainability of efforts
- Work on making climate transparency a national priority through the adoption of a **long-term transparency strategy**

Medium Term (2024-2027)

- Continue improving the accuracy and quality of Lebanon's GHG inventory through national emission factors and enhanced activity data, as well as more robust QA/QC and uncertainty analysis
- Continue improving the transparency of mitigation information
- Optimize the MRVCE functions and arrangements through more targeted capacity-building of stakeholders
- Analyze options for reporting adaptation information required in the MPGs
- Improve on reporting for support received
- Enhance MRV arrangements, as well as climate coordination to constantly identify support needs for climate action and climate transparency to be reported in BTRs
- Assess Lebanon's performance compared to its long-term transparency strategy
- Request support for the new identified support and capacity-building needs for reporting

Long Term (2027 onwards)

- Periodically assess Lebanon's performance compared to its long-term transparency strategy and make amendments to fit the situation
- Considerably improve Lebanon's GHG inventory's accuracy and quality as a result of continuous improvement
- Optimize the systems which identify climate action and climate transparency needs to be reported in BTRs
- Ensure that climate mitigation and climate adaptation actions and priorities are consistently being reported in accordance with TACCC principles, while continuously improving
- Automize all aspects of BTR preparation through digitalization
- Ensure that capacities for climate reporting have been retained in institutions, and that reporting BTRs is an institutionalized process
- Report on the NDC achievement after 2030
- National reporting systems such as SDGs and DRR are synchronized with climate transparency

Questions from Parties

Institutional arrangements

- Involve private sector in data collection to have first-hand data
- With lack of data, rely on global databases (FAOSTAT) or use mathematical and analytical tools for time-series
- Target capacity building activities to specific experts and public employees that have accumulated climate change knowledge
- Preserving the pool of experts that participated trainings through engaging them regularly exercises, proposing additional training and certifications to improve their skills
- Learning from other countries through south-south experiences

Documentation and archiving

- Develop documentation sheets using MS Excel (or other similar tool) to facilitate calculation and import/export from other models
- Include as many details as possible with regards to source of information assumptions and expert opinions
- Keep copies of all references, official or unofficial communications, emails and meeting recordings
- Describe all changes in methodologies, data, EF or other parameters and impact of recalculations
- Involve sectoral experts and recruited consultants in completing the documentation sheets
- Include QA/QC steps systematically in the documentation sheets
- Include results of previous ICA exercises and recommendations of TTE

Transition to the 2006 IPCC Guidelines

- Start planning capacity building activities to the inventory team and local experts as early as possible
- Learn from countries that have already transitioned to plan effectively the shift.
- Choose the options that suits you best

Having transitioned to the 2006 IPCC Guidelines allowed Lebanon to reconcile its GHG inventory with the NDC 2015 and facilitated the update and the timely submission of the NDC in 2021.

thank you

http://climatechange.moe.gov.lb

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