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REPUBLIC OF LEBANON
MINISTRY OF ENVIRONMENT

Lebanon's First Biennial Update Report to the UNFCCC

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Facilitative Sharing of Views
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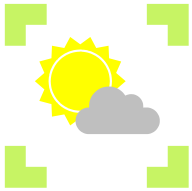
1.

National circumstances

A quick overview

Population
5,102,830 in 2011 including foreign workers and Palestinian refugees

Surface area
10,452 km^2
Population density
488 person/km^2



Mediterranean-type climate
Hot and dry summers (June to Sep)
Cool and rainy winters (Dec to March)
The average annual temperature: 15˚C

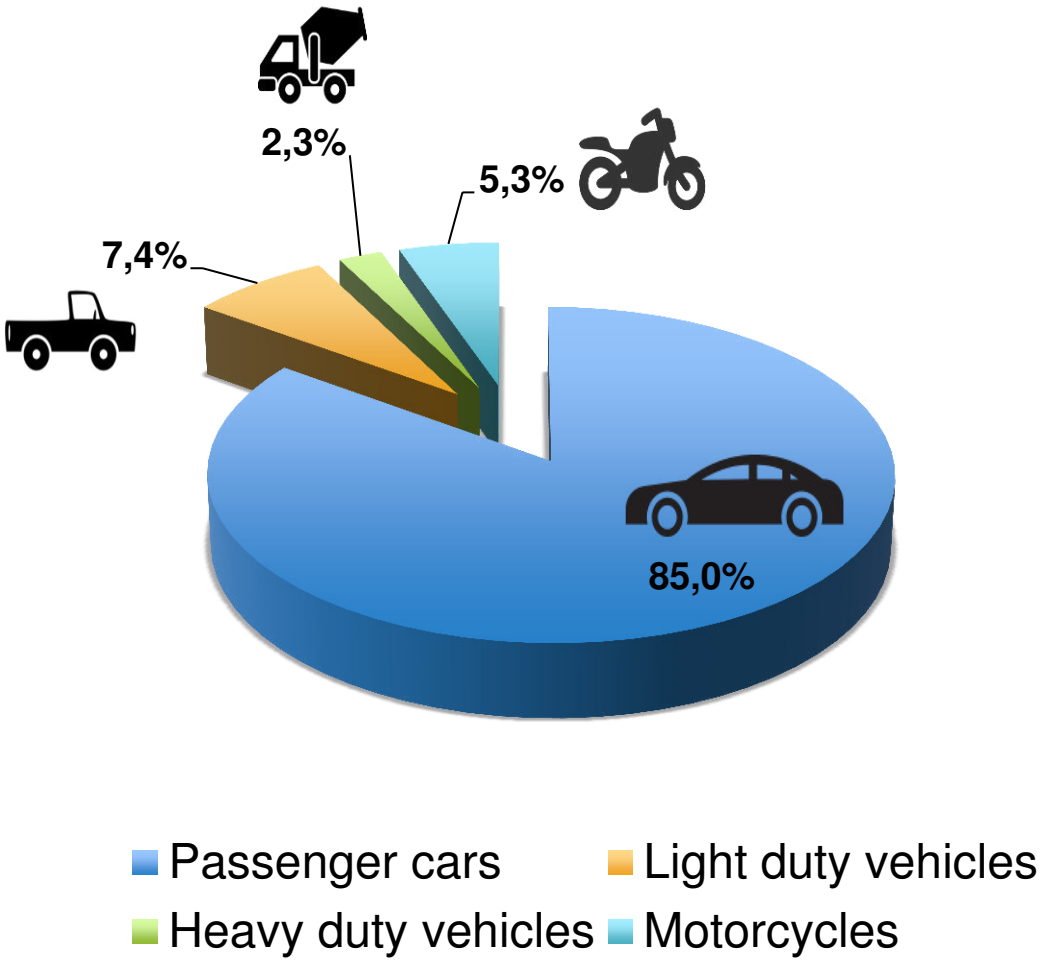
Economic profile
GDP USD 47.1 Billion in 2015
The largest sectors are commercial trade (16%), and real estate (14%).
The sector with the lowest share is agriculture, forestry and fishing sector (4%)

Energy

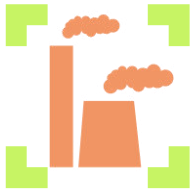
1	Power utility: Electricite du Liban
7	Thermal power plants. 3 operate on HFO, 4 on GDO
2	of the 7 plants use CCGT
3.5–4.5%	of electricity generated through hydropower
2,670	MW available capacity
8,715	GWh difference between supply and demand
33-37%	Self generation

Transport

- 1.58 million registered vehicles
- 71% older than 10 years
- Mass transport consists of public and private buses, minivans and taxis, all operating on an ad-hoc basis without coordination, resulting in poor occupancy rates



Sectors overview



Indsutry
7.2% of GDP

Main productions: Food products and beverages, cement and lime manufacturing

Forestry
Forests : 13% of surface area
Other wooded lands : 10%

Threats: Quarries, urbanization, fires

Agriculture
Livestock dominated by dairy cattle and poultry

Main productions: fruits, vegetables, cereals

Overuse of fertlizers

Waste and wastewater
55% of waste disposed in 3 landfills – the rest in open dumpsites

Wastewater mostly discharged in surface water without prior treatment. Septic tanks still widely adopted in rural areas

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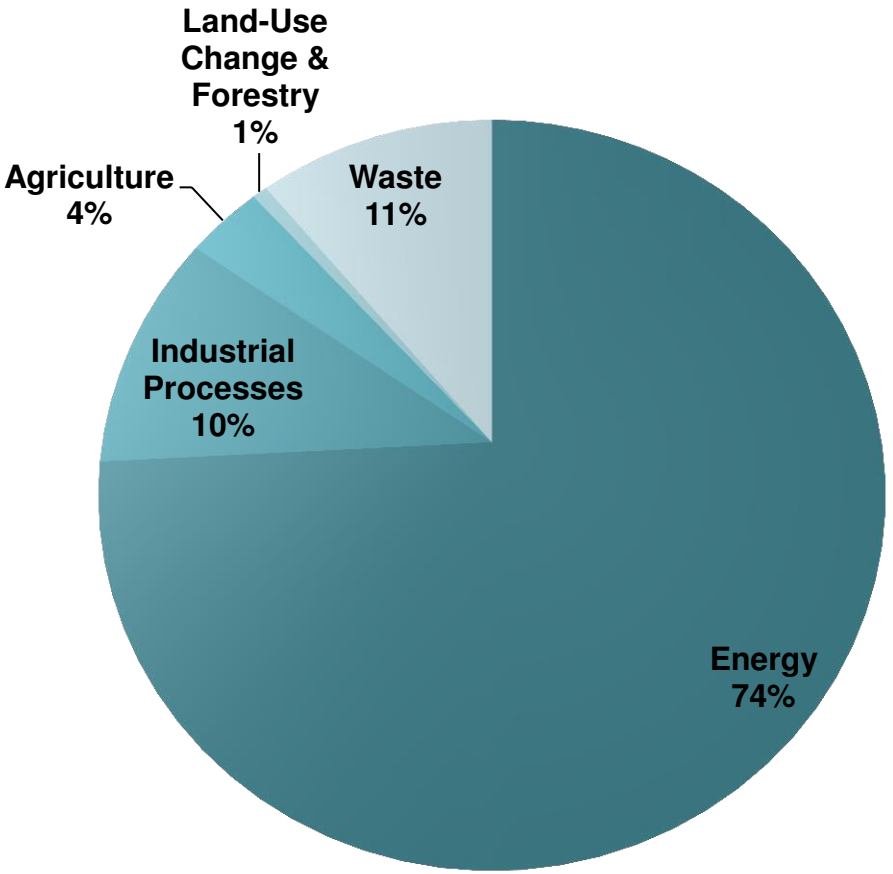
2.

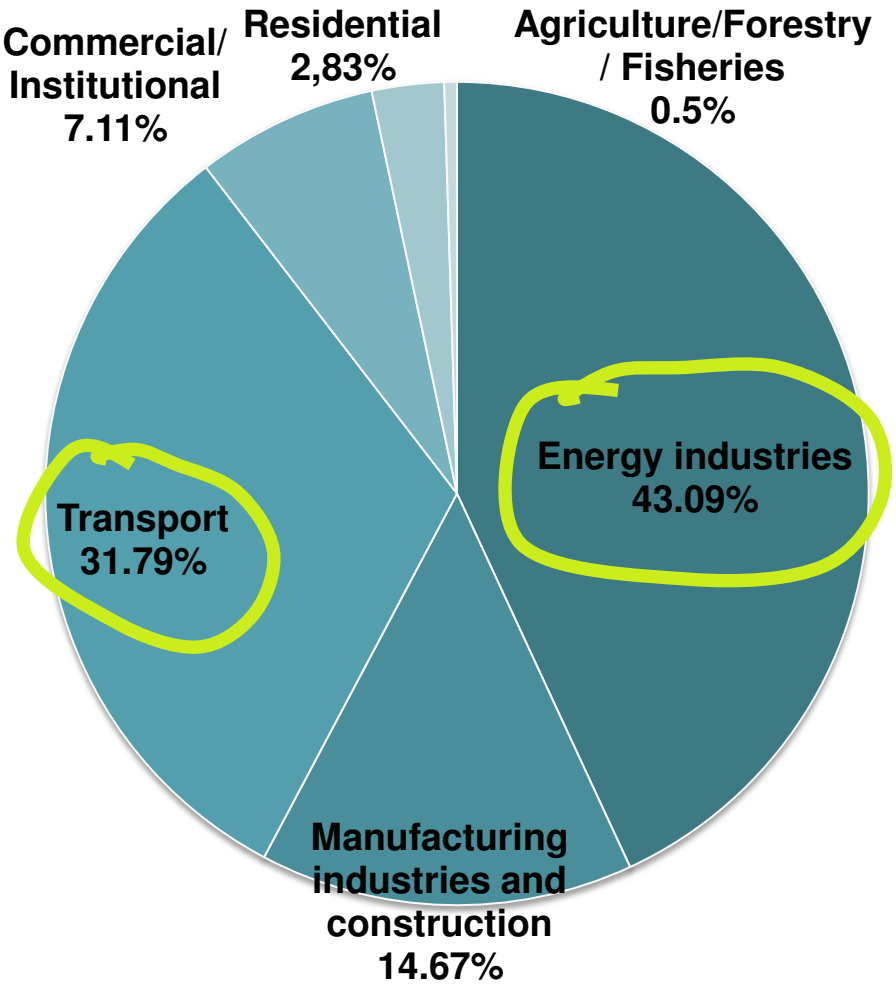
National greehouse gas inventory

Results of GHG inventory

- Total emissions in 2011: 24,652 Gg CO_2 eq.
- Removals from LULUCF: 3,369.85 Gg CO_2
- Net emissions: 21,283 Gg CO_2eq.



Breakdown of emissions from energy



Key category analysis 2011

Sector	Source categories	Greenhouse gas	Emission estimate (Gg CO_2eq)	Level assessment (%)	Cumulative total (%)
Energy	CO_2 mobile combustion: road vehicles	CO_2	5,635.0	33.9%	33.9%
Energy	CO_2 emissions from manufacturing industries and construction	CO_2	2,675.1	16.1%	50.0%
Industrial processes	CO_2 emissions from cement production	CO_2	2,577.6	15.5%	65.5%
Waste	CH_4 emissions from solid waste disposal sites	CH_4	2,194.4	13.2%	78.7%
Energy	Other sectors: commercial CO_2	CO_2	1,293.7	7.8%	86.5%
Energy	Other sectors: residential CO_2	CO_2	513.7	3.1%	89.6%
Agriculture	N_2O (direct and indirect) emissions from agricultural soils	N_2O	479.8	2.9%	92.5%
Waste	CH_4 emissions from wastewater handling	CH_4	400.5	2.4%	94.9%

Time series

BUR does not present a time series analysis.

What are the steps taken to ensure a consistent time series for TNC and BUR? Any good practices to share?

-EU

F-gases

BUR does not report F-gases emissions.

What are the constraints in measuring consumption of, and emissions from, HFCs, PFCs and SF6? Any capacity-building needs?

- New Zealand

What are the steps taken to include F-gases in BUR2?

- EU

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3.

Mitigation policies and actions

Summary of mitigation activities for the period 2005-2012

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Sector	Activity	Estimated emission reduction (t CO_2 eq.)	Yearly emission reduction (t CO_2 eq./year)
Energy	Installation of PV	5,046 for 2010 - 2012	1,682
Energy	Installation of Solar Water Heaters (SWH)	7,960 for t2005-2012	995
Energy	Light Emitting Diode (LED) street lighting	7,434 for 2012	7,434
Energy	Mircowind and microwind-PV	36 for 2010-2012	12
Energy	Replacement of incandescent lamps with CFL	90,036 per year for 2012	90,036
Energy	Energy saving measures implemented -self-financed by the private sector	152,200 for 2005-2012	19,025
Agriculture	Applying Conservation Agriculture (CA)	-	-
Agriculture	Improvement of cattle production	577.5 for 2009-2011	192.5
Agriculture	Recovery and rehabilitation of the dairy sector in Bekaa and Hermel	12,389 for 2009-2012	3,097.25
Agriculture	Composting of dairy manure	3,060 for 2010-2012	1,020
Agriculture	Organic agriculture	-	-
LULUCF	Reforestation activities	19,640 for 2009-2012	4,910
LULUCF	Forest fire management	786,450 for 2005-2012	98,306.25
Total known GHG emissions reduced during 2005-2012		**1,084,829**	
Yearly GHG emissions expected from sustaining the implementation of these activities			**226,710**

Tracking mitigation progress

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- Plans to improve the quantification of emission reductions in the future? Specific challenges?

  - USA

- Further information on the MRV system to enhance the assessment of mitigation activities?

  - Japan