

FACILITATIVE SHARING OF VIEWS

LEBANON

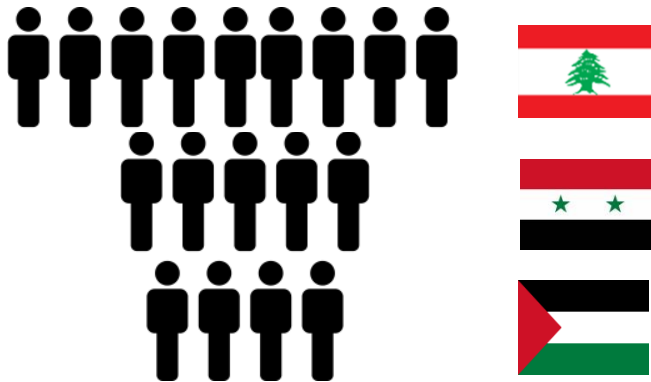
December 7, 2018



Part I: Summary of BUR and recent development

1. National context

Population in 2013
Around 6.2 million

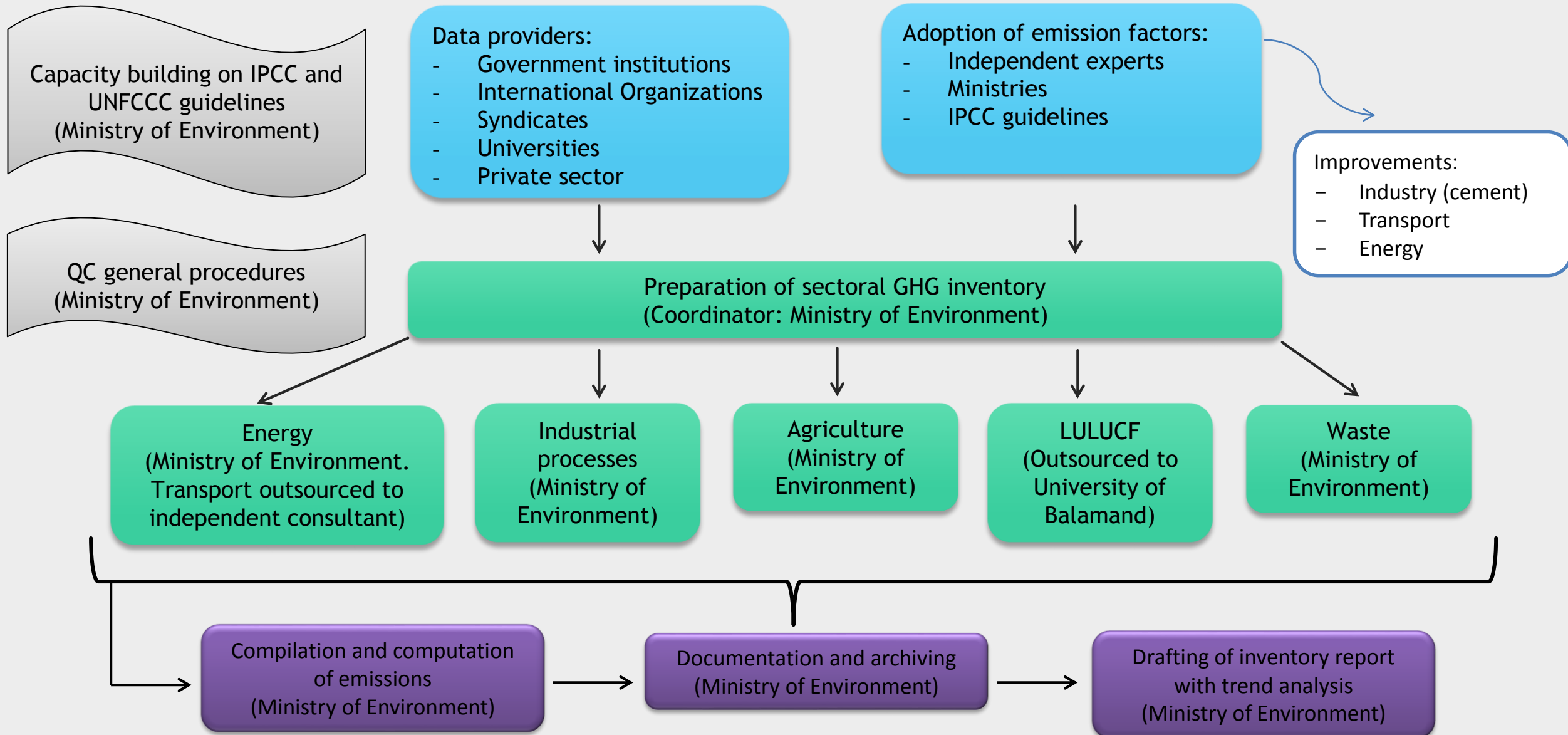


2006-2010 > 7.7%
2011-2015 > 1.9%

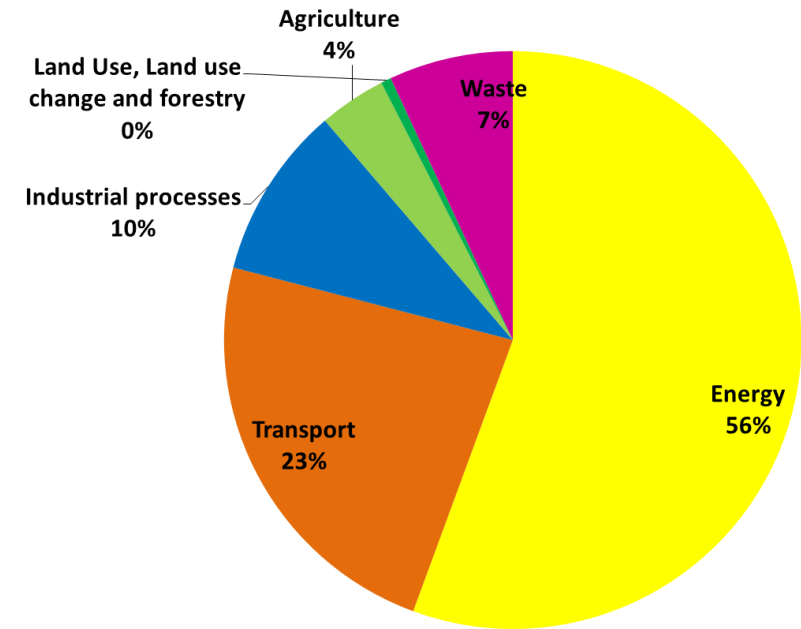


**GROSS DOMESTIC
PRODUCT**

National GHG Inventory System



2.GHG inventory (using 1996 IPCC GL and GPG)

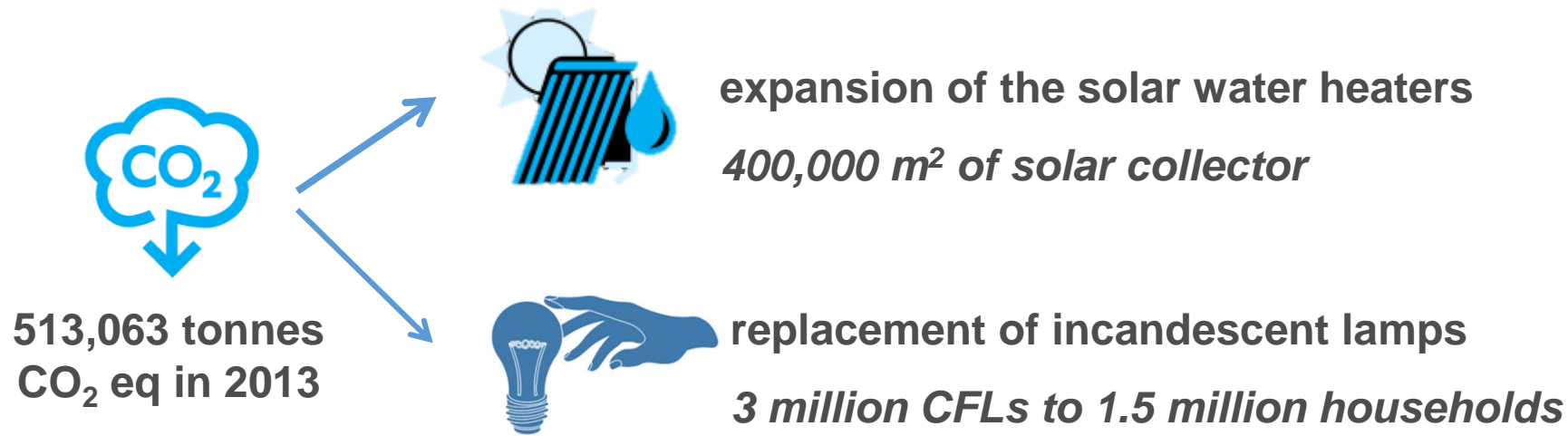


Total emissions in 2013 :
26,285 Gg CO₂eq.

Key category analysis 2013

| Sector | Source categories | GHG | Emission estimate (Gg CO ₂ eq.) | Level assessment (%) | Cumulative total (%) |
|----------------------|--|------------------|---|-------------------------|-------------------------|
| Energy | CO ₂ mobile combustion: energy industries | CO ₂ | 7,367.39 | 28.05% | 28.05% |
| Energy | CO ₂ mobile combustion: road vehicles | CO ₂ | 5,977.51 | 22.76% | 50.80% |
| Energy | CO ₂ emissions from manufacturing industries and construction | CO ₂ | 4,403.84 | 16.76% | 67.57% |
| Industrial processes | CO ₂ emissions from cement production | CO ₂ | 2,539.54 | 9.67% | 77.23% |
| Energy | Other sectors: commercial CO ₂ | CO ₂ | 2,234.11 | 8.50% | 85.74% |
| Waste | CH ₄ emissions from solid waste disposal sites | CH ₄ | 1,279.14 | 4.87% | 90.61% |
| Energy | Other sectors: residential CO ₂ | CO ₂ | 546.20 | 2.08% | 92.69% |
| Agriculture | N ₂ O (direct and indirect) emissions from agricultural soils | N ₂ O | 511.50 | 1.95% | 94.63% |

3. Mitigation actions and effects – Power sector



Decentralized
PV

Solar-Powered
Water Pumping

Solar-Powered
Street Lighting

Energy-Efficient
Street Lighting

Solar Water
Heating

Certified Green
Buildings

Energy
Conservation
Measures

Biomass Space
Heating

Other
Renewables

Other Energy
Efficiency

Energy
efficiency in
power plants

Estimated yearly reduction
1,312,996 tonnes of CO₂

Mitigation actions and effects – Transport sector

Master plan to revitalize the land public transport: shifting the passenger transport demand to mass transit systems



Short

Implementation of phase 1 of rail transportation plan, 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 GBA.
Improvement of the pedestrian infrastructure.



Long

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.

Mitigation actions and effects – Forestry sector

Protecting existing carbon reservoirs from losses associated with deforestation, forest and land degradation, urbanization, and other land management practices.

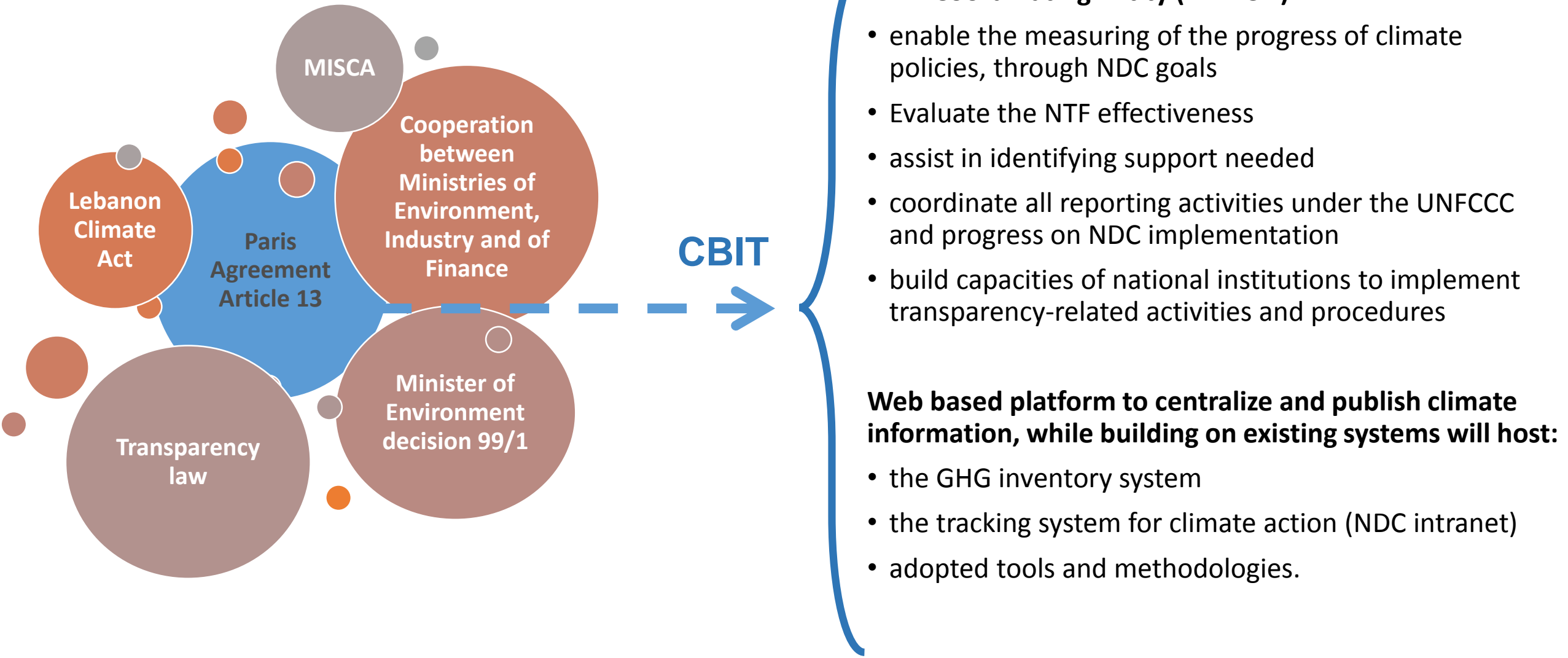
Enhancing carbon sequestration and expanding carbon stores in forests, other biomass, soils, and wood products

Reducing emissions primarily CH₄ and N₂O, from land use interventions on fire management



18.996 Gg CO₂eq. removed in 2013

Transparency framework, institutional arrangements and MRV system



Obstacles and barriers

BUR preparation

- Human resources
- Funding cycles
- Institutional arrangements
- National ownership

Inventory preparation

- IPCC Guidelines
- Underdeveloped institutional arrangements for data monitoring and collection
- Unavailability of specific data and/or the inaccessibility of existing data for adopting tier 2

Reporting mitigation actions

- Limited data available on progress of policy implementation
- Absence of policy workplans and indicators
- Difficulty in identifying climate related components in sectoral policies

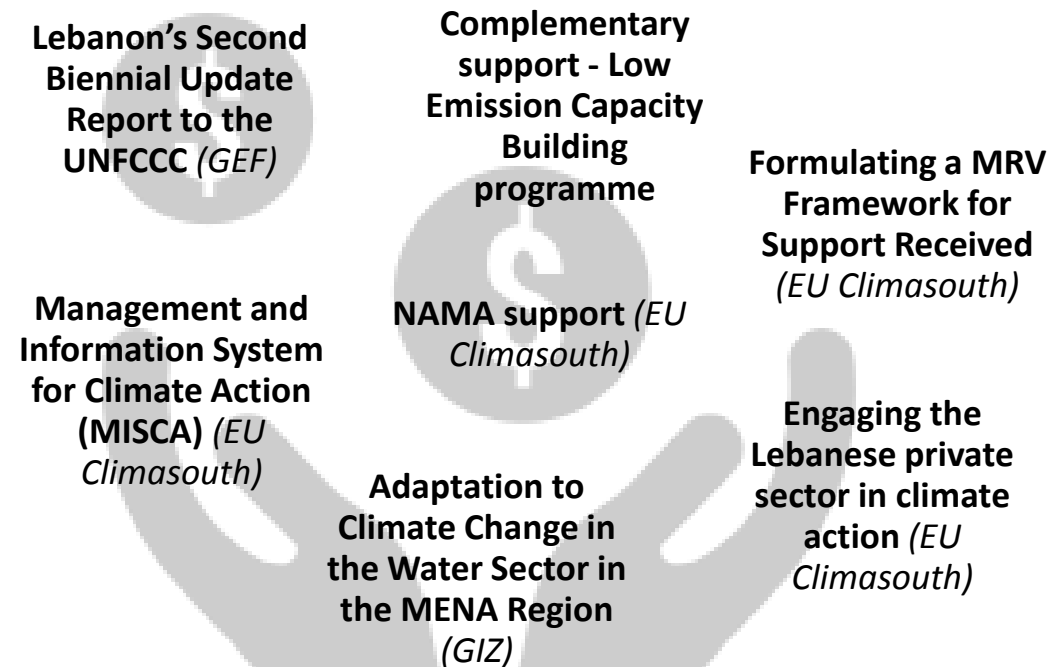
Reporting needs and support received

- Data collection
- Institutional arrangements
- Definition and methodology synchronization
- Progress tracking

Support received and needed (finance, technology, capacity building)

Financial support

Only information on climate related projects that have been approved by donors and whose beneficiary is the Ministry of Environment since the submission of BURI has been considered in BUR II



Part II: Experience and lessons learned in participating in the ICA process

Preparing for the ICA process

- Answers were easy to find
- Video-conference facilitated communication
- Technical analysis revealed to be participatory, with the main aim to identify country specific needs

Lessons learned from ICA for BUR I and BUR II

IMPACT

Nominate the
right person

Improve
documentation

Prepare
QA/QC plan

Improved
internal
planning

Engage stakeholders and data
holders early in the process

Prepare
sectoral
experts

Prioritizing
improvement
plans

Include methodology and other details in
the BUR

Frame capacity
building and
other needs

Identification of capacity-building needs

ICA – BUR1

| | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | (a) Enhancing the capacity of experts in the different ministries and agencies involved to prepare the BUR in accordance with the relevant guidelines |
| <input checked="" type="checkbox"/> | (b) Enhancing national capacity to formalize processes and protocols to ensure the continuous involvement of relevant national institutions in the systematic collection, compilation and verification of the AD and information required to be included in the BUR; |
| <input checked="" type="checkbox"/> | (c) Designing and implementing a complete national GHG inventory system; |
| <input checked="" type="checkbox"/> | (d) Enhancing the capacity of the relevant institutions involved in the planning, preparation and analysis of the GHG inventory; |
| <input checked="" type="checkbox"/> | (e) Developing an online AD and EF database and enabling its use by those providing data for the GHG inventory; |
| <input checked="" type="checkbox"/> | (f) Establishing and operationalizing a database to systematically collect information for the GHG inventory and on mitigation actions; |
| <input checked="" type="checkbox"/> | (g) Developing processes and incentives to facilitate the collaboration of the private sector on data collection for the GHG inventory; |
| | (h) Undertaking an uncertainty assessment of the national GHG inventory, providing information on the level of uncertainty of inventory data and underlying assumptions and describing the methodologies used for estimating those uncertainties; |
| | (i) Improving the key category analysis, taking into account the aforementioned uncertainty assessment; |
| | (j) Collecting key data needed for the calculation of emissions from key sectors (LULUCF, waste, energy, fluorinated gases, etc.) and assistance in developing country-specific EFs where possible for a greater number of key emission categories, especially agriculture, transport, energy and waste; |
| <input checked="" type="checkbox"/> | (k) Enhancing the capacity of the inventory team and mentoring additional experts by means of customized training; |
| | (l) Enhancing the capacity of sectoral experts and the project management team to analyse and report on mitigation actions; |
| <input checked="" type="checkbox"/> | (m) Developing progress indicators to calculate emission reductions resulting from incomplete projects; |
| <input checked="" type="checkbox"/> | (n) Supporting the quantification of emission reductions resulting from: |
| <input checked="" type="checkbox"/> | (o) Supporting the linkage of mitigation actions with the intended nationally determined contribution; |
| <input checked="" type="checkbox"/> | (p) Enhancing the capacity of experts working in the different ministries and agencies involved in the preparation, development and monitoring of NAMAs; |
| | (q) Supporting the identification of gaps and constraints in a more institutional manner and better translating them into concrete financial, technology and capacity-building needs; |
| <input checked="" type="checkbox"/> | (r) Developing and implementing clear criteria to differentiate climate from non-climate funding of projects; |
| | (s) Identifying and characterizing climate change projects at the national level in order to improve knowledge on the tracking of climate change financial resources; |
| <input checked="" type="checkbox"/> | (t) Quantifying the support aimed at climate change within projects that have only one component relevant to climate change; |
| | (u) Tracking the technology transfer carried out within the country; |
| | (v) Identifying and quantifying support needed. |

Taking the capacity-building needs forward....

- Training of BUR compilation team on 2006 GL and software – UNFCCC August 2018
- Training on Mainstreaming Gender in reporting – UNDP-GSP 2017-2018
- Trainings on IPCC guidelines for national stakeholders- GIZ Information matters Jan-Feb 2018
- Drafting 2 MOUs for sharing of information – GIZ Information matters – Jan-Feb 2018
- Management Information System on Climate Action (MISCA)- EU Climasouth 2016-2017
- Nama development for Forestry sector - EU Climasouth 2016-2017
- Tracking climate change funding - EU Climasouth 2016-2017
- Lebanon Climate Act – established in 2016 for the engagement of the private sector in climate action- supported by EU Climasouth 2016-2017
- Developing of progress indicators for mitigation actions- CBIT GEF- Jan 2019



GLOBAL SUPPORT
PROGRAMME



Empowered lives.
Resilient nations.

UN
environment



giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Information Matters
Transparency through Reporting



A project funded by
the European Union

Data collection and documentation templates

The screenshot displays an Excel spreadsheet titled "Waste_template_external_v7 - Excel" with the user name "Lea Kai". The ribbon includes "File", "Home", "Insert", "Page Layout", "Formulas", "Data", "Review", "View", and "Tell me what you want to do". The "Home" ribbon is active, showing options for "Paste", "Font", "Alignment", "Number", "Styles", "Cells", and "Editing".

The spreadsheet content is a data collection template for incineration, structured as follows:

- Row 1:** "Please provide data for the year 2016."
- Row 2:** "C Incineration"
- Row 3:** "C.1 Waste quantity received" (tonnes)
- Row 4:** "Waste incinerated" (tonnes) and "Waste sent to other destination" (tonnes)
- Row 5:** "Identified by source" (If available, break down into space)
- Row 6:** "Municipal" (tonnes), "Industrial Waste" (tonnes), "Sewage Sludge" (tonnes), "Hazardous Waste" (tonnes), "Clinical Waste" (tonnes), "Other" (tonnes)
- Row 7:** "Energy / Heat / Both produced?" (No/Yes)
- Row 8:** "Energy generation" (kWh), "Heat generation" (kWh)
- Row 9:** "Bottom ash" (tonnes), "Fly ash" (m3)
- Row 10:** "C.2 Fossil liquid incineration?" (No/Yes)
- Row 11:** "Lubricants" (tonnes), "Solvents" (tonnes), "Waste oil" (tonnes), "Other (please specify)" (tonnes)
- Row 12:** "Fuel used for incineration" (type of fuel, tonnes)
- Row 13:** "Please indicate where the waste was sent to:" (Type of facility, Name of facility, Quantity sent)
- Row 14:** "Please indicate where the waste was sent to:" (Type of facility, Name of facility, Quantity sent)
- Row 15:** "Please indicate where the waste was sent to:" (Type of facility, Name of facility, Quantity sent)
- Row 16:** "Assumption box:"
- Row 17:** "Comment box:"

The spreadsheet also includes a navigation bar at the bottom with tabs for "QA", "tree", "Intro", "Overview", "A_Sort_Recycle", "B_Biological treatment", "C_Incineration" (selected), and "D_Landfills".

GHG inventory and Mitigation Action MISCA



Home Data Management ▾ Output ▾ Reference Documents Mitigation Measures Administration Tool ▾

BERARDI Darío
[- Super Administrator]



OUTPUT

| Year | Grid | Typology | CO ₂ (in ton CO ₂) | CH ₄ (in ton CO ₂ eq) | NO ₂ (in ton CO ₂ eq) | GHG (in ton CO ₂ eq) | CO (in Kg) | NO _x (in Kg) | NM VOC (in Kg) | SO ₂ (in Kg) | Action |
|------|--|------------------|--|--|--|------------------------------------|---------------|----------------------------|-------------------|----------------------------|--------------------|
| 2013 | Source | produced/avoided | | | | | | | | | GO Q C |
| 2013 | Reference Approach | produced | 21,284,622 | 0 | 0 | 21,284,622 | 0 | 0 | 0 | 0 | [grid] [X] [trash] |
| 2013 | Power Plants | produced | 7,680,827 | 5,753 | 16,985 | 7,703,564 | 1,370 | 18,263 | 457 | 60,043 | [grid] [X] [trash] |
| 2013 | Industries | produced | 4,246,908 | 2,178 | 9,646 | 4,258,732 | 519 | 10,372 | 259 | 28,276 | [grid] [X] [trash] |
| 2013 | Private Generators | produced | 4,318,313 | 7,540 | 10,954 | 4,336,806 | 890 | 8,763 | 294 | 26,643 | [grid] [X] [trash] |
| 2013 | Residential, Commercial, Institutional | produced | 657,936 | 221 | 1,954 | 660,111 | 210 | 1,051 | 53 | 80 | [grid] [X] [trash] |
| 2013 | International Bunkers | produced | 909,484 | 0 | 0 | 909,484 | 0 | 0 | 0 | 0 | [grid] [X] [trash] |
| 2013 | Agriculture/Forestry/Fisheries | produced | 12,073 | 35 | 31 | 12,139 | 3 | 16 | 1 | 74 | [grid] [X] [trash] |
| 2013 | Transport | produced | 6,603,197 | 32,466 | 17,606 | 6,653,269 | 595,267 | 61,421 | 111,902 | 6,504 | [grid] [X] [trash] |



10 ▾

GHG inventory and Mitigation Action MISCA

The screenshot shows the MISCA web application interface. At the top, there is a navigation menu with options: Home, Data Management, Output, Reference Documents, Mitigation Measures, and Administration Tool. The user is logged in as BERARDI Dario, LCEC - Super Administrator. The main content area displays a data grid for power plants in 2012, with a 'REFERENCES' section above it. The data grid has columns for Break, Fuel, Actual Capacity (MW), Electricity per Year (GWh), and Amount of fuel (1000 tonnes). Three power plants are listed: Zouk Thermal Power Plant (Heavy Fuel Oil, 607 MW, 1748.62 GWh, 457.11 tonnes), Zouk ICE (Heavy Fuel Oil, 0 MW, 0 GWh, 0 tonnes), and Zouk ICE (Lubricants, 0 MW, 0 GWh, 0 tonnes). Each cell in the grid includes a 'Click to modify?' button and a 'Confidential?' checkbox.

REFERENCES

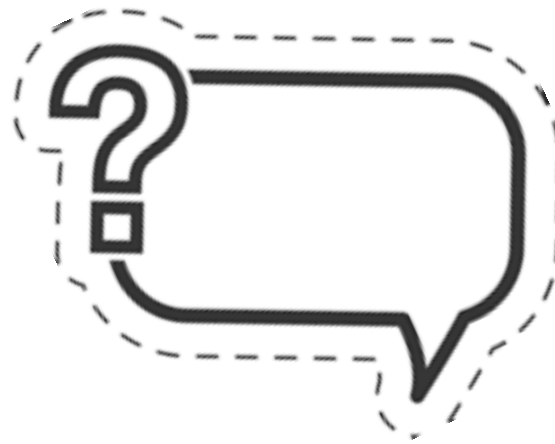
- Title: **Yearly Electricity Generation Data**
Year: **2016**
Author: **EDL-Z- RAMMAL**
- Title: **energy data for TNC**
Year: **2012**
Author: **lea aboujaoude**

| Break | Fuel | Actual Capacity (MW) | Electricity per Year (GWh) | Amount of fuel (1000 tonnes) |
|--------------------------|----------------------|----------------------|----------------------------|------------------------------|
| Zouk Thermal Power Plant | Heavy Fuel Oil (HFO) | 607 | 1748.62 | 457.11 |
| Zouk ICE | Heavy Fuel Oil (HFO) | 0 | 0 | 0 |
| Zouk ICE | Lubricants (LUBRI) | 0 | 0 | 0 |

Project implemented by AGRICONSULTING CONSORTIUM
Project funded by the European Union
ClimaSouth
Developed by DEV4U

Part III: Response to questions received

Questions received



BUR2 experience and GHG Inventories



Question by **United States of America** at Thursday, 01 of November 2018

Category: National circumstances and institutional arrangements

We'd like to commend Lebanon on their 2nd BUR submission. What changes did you make in the compilation process with BUR2 from BUR1 for the GHG Inventory? Were there any efficiencies gained from BUR1? What advice do you have for other parties preparing plans for initial or next BURs? You may address this question in your presentation at the FSV session at SBI49.

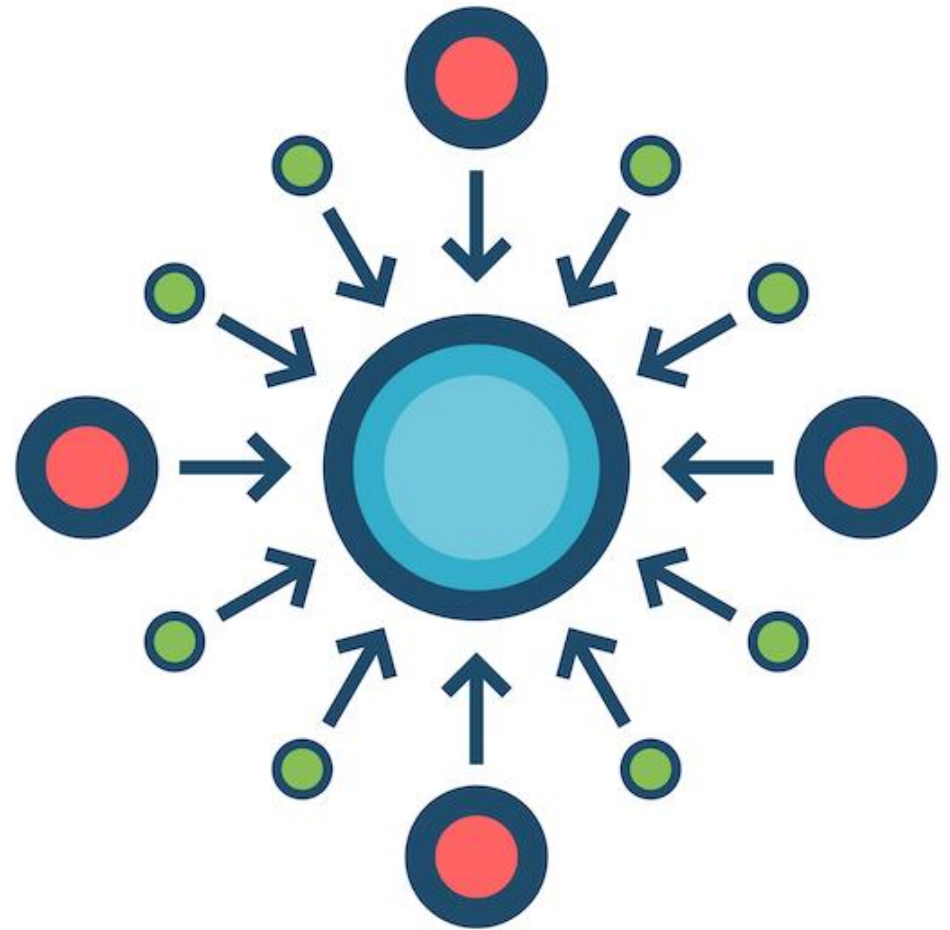
Answer by **Lebanon** at --- --, ---- --:--

Not answered...



Changes in the compilation process and efficiencies gained

- Centralized compilation process
- Replace batch process to continuous process
- Defined roles and responsibilities
- Clearer expectations of end product
- Systematic data collection and narration
- Systematic documentation





Advice to other parties for preparing BURs

- BUR should be viewed as a national document rather than only a reporting tool for the UNFCCC
- Documentation is crucial, not only for transparency but for improving data management and consistency of work across the years
- Sustainability of the BUR team plays a key role in sustainability of improvements
- Preparation should be a continuous process, no break allowed.



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