



MÉXICO

GOBIERNO DE LA REPÚBLICA

First Biennial Update Report

Workshop for the facilitative sharing of views (FVS) under the international consultation and analysis process (ICA)

November 10th 2016
Marrakesh, Morocco

1. National circumstances
2. Institutional arrangements
3. National GHG inventory
4. Mitigation actions
5. Constrains and gaps related financial, technical and capacity building needs, including support needed and received
6. Information on domestic measurement reporting and verification

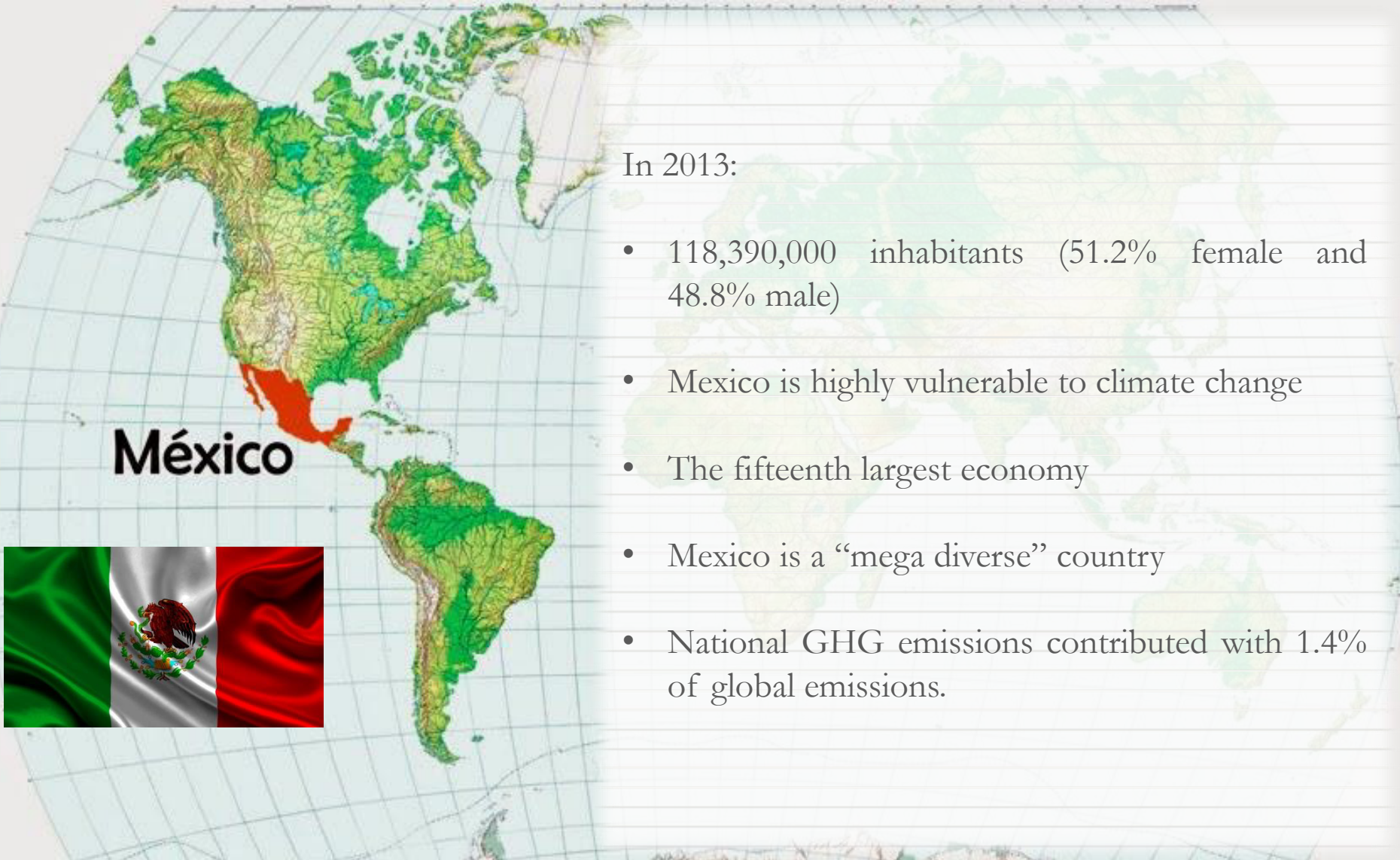


MÉXICO

GOBIERNO DE LA REPÚBLICA

1. National circumstances

1. NATIONAL CIRCUMSTANCES



In 2013:

- 118,390,000 inhabitants (51.2% female and 48.8% male)
- Mexico is highly vulnerable to climate change
- The fifteenth largest economy
- Mexico is a “mega diverse” country
- National GHG emissions contributed with 1.4% of global emissions.

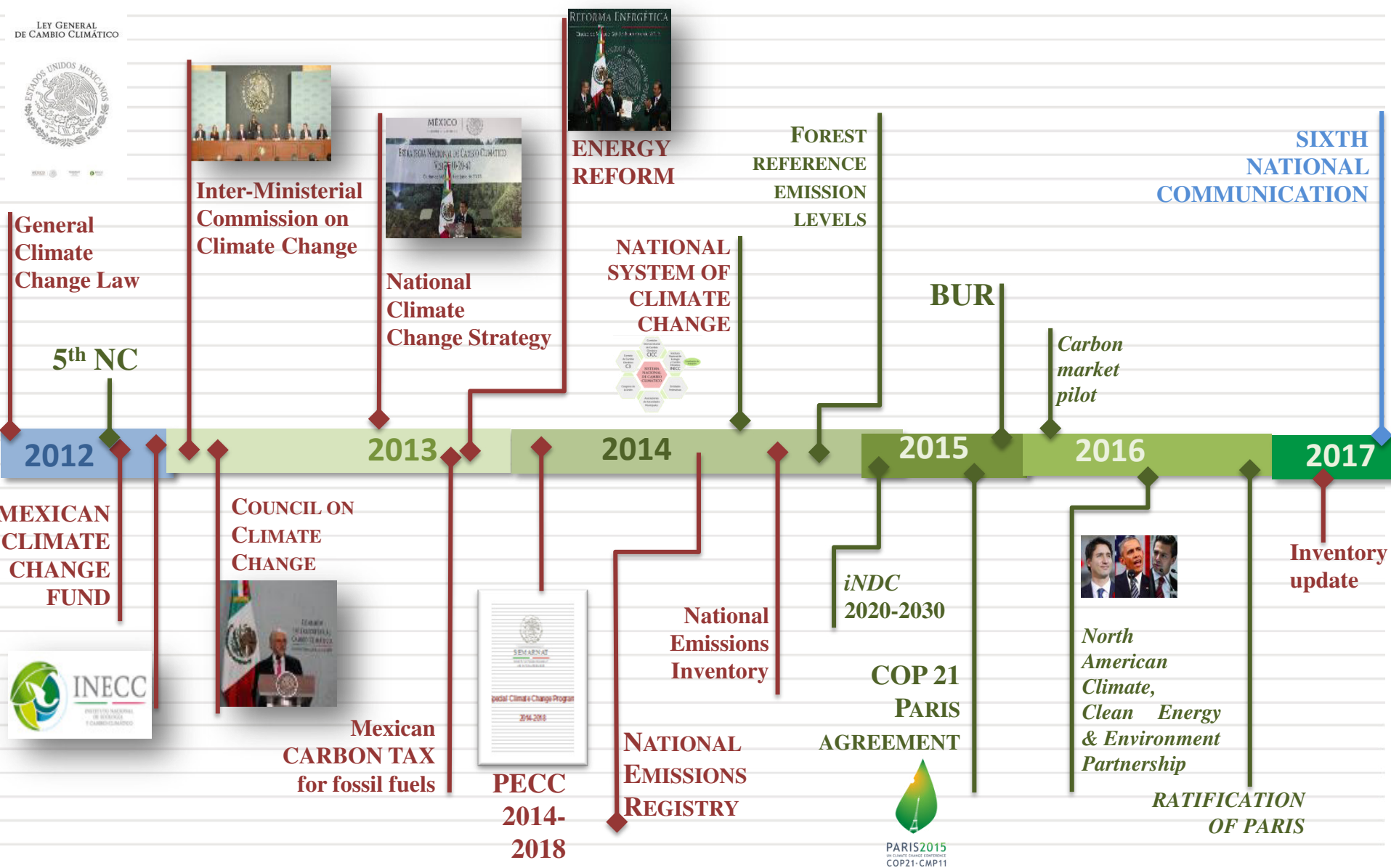


MÉXICO

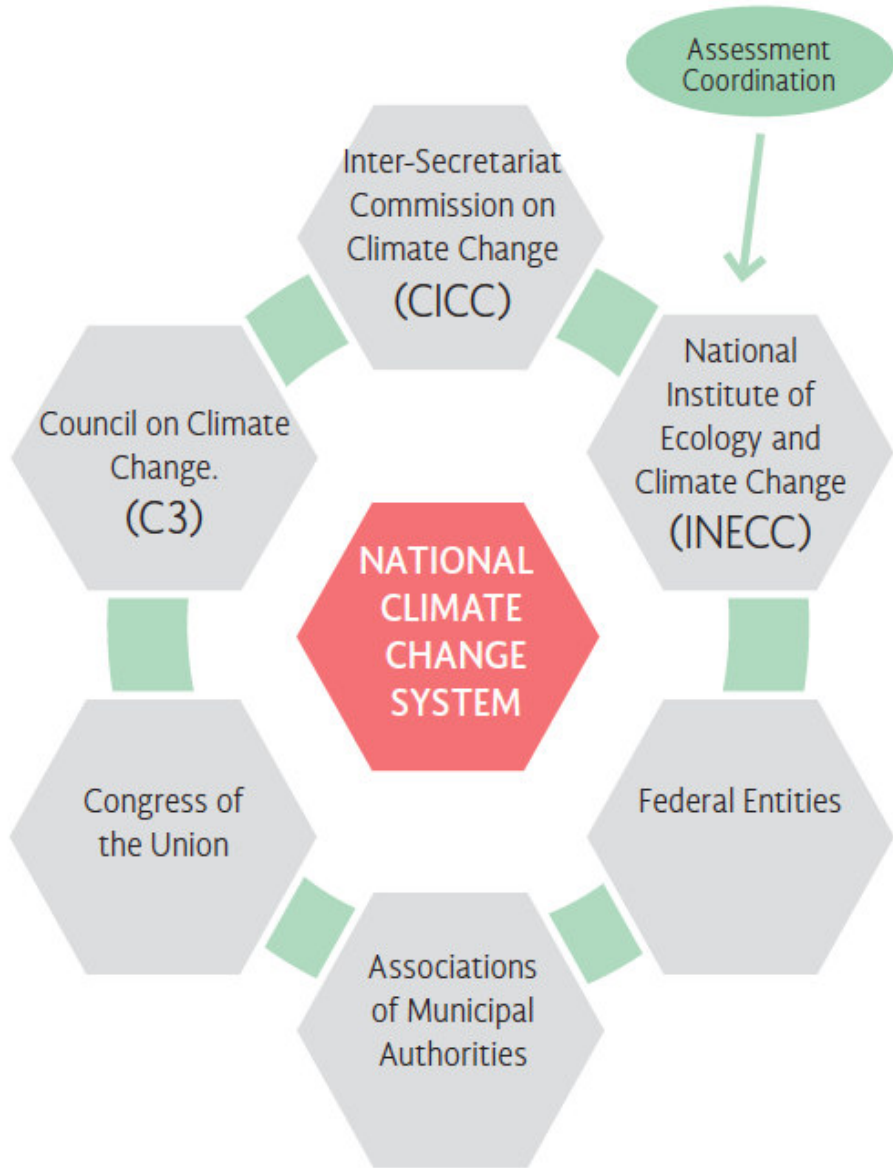
GOBIERNO DE LA REPÚBLICA

2. Institutional arrangements

2. INSTITUTIONAL ARRANGEMENTS



2. INSTITUTIONAL ARRANGEMENTS



**General Law on Climate Change
(2012)**



**National Climate Change Strategy
(2013)**



**Special Program for Climate Change
(2014)**

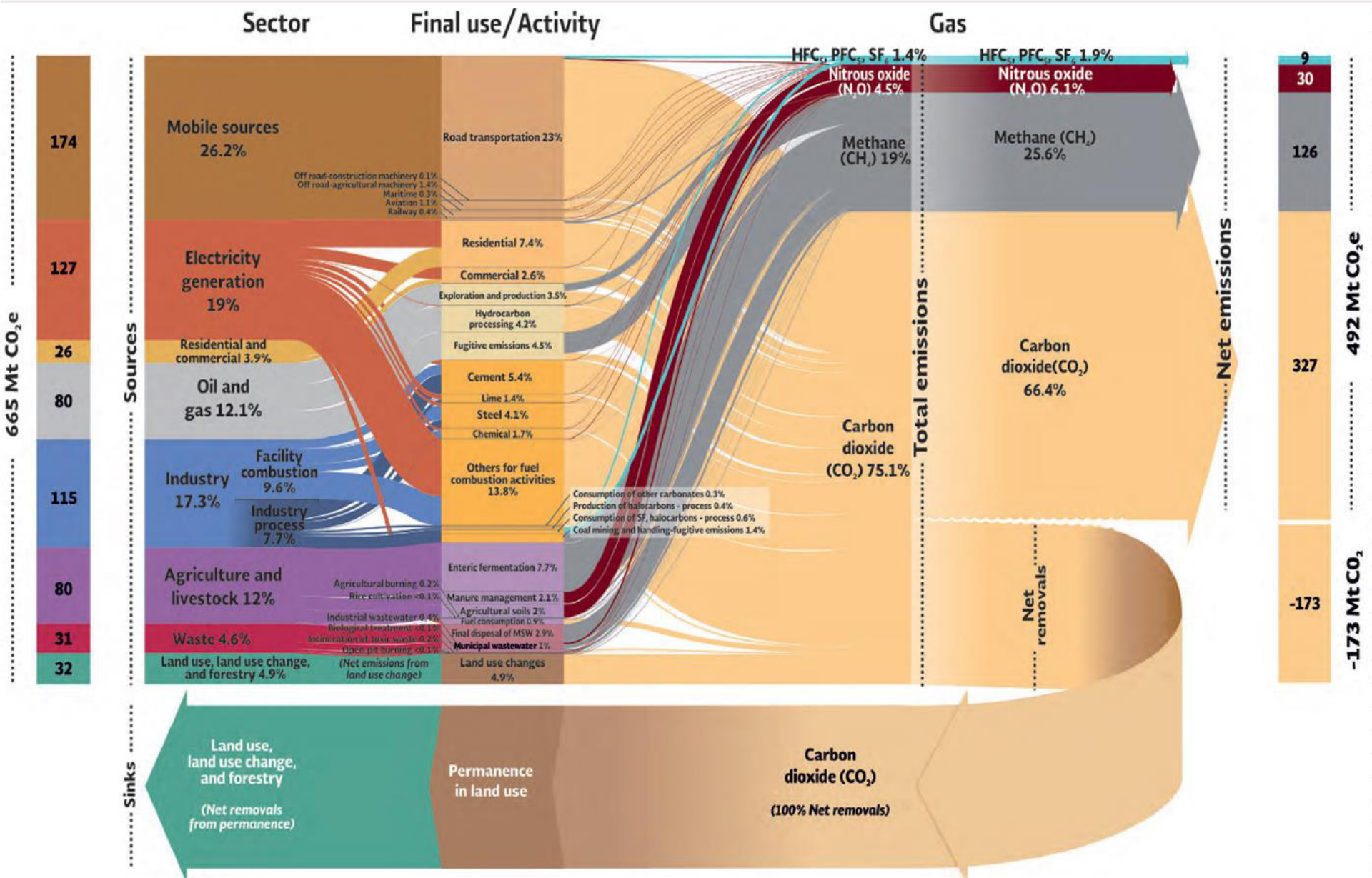


MÉXICO

GOBIERNO DE LA REPÚBLICA

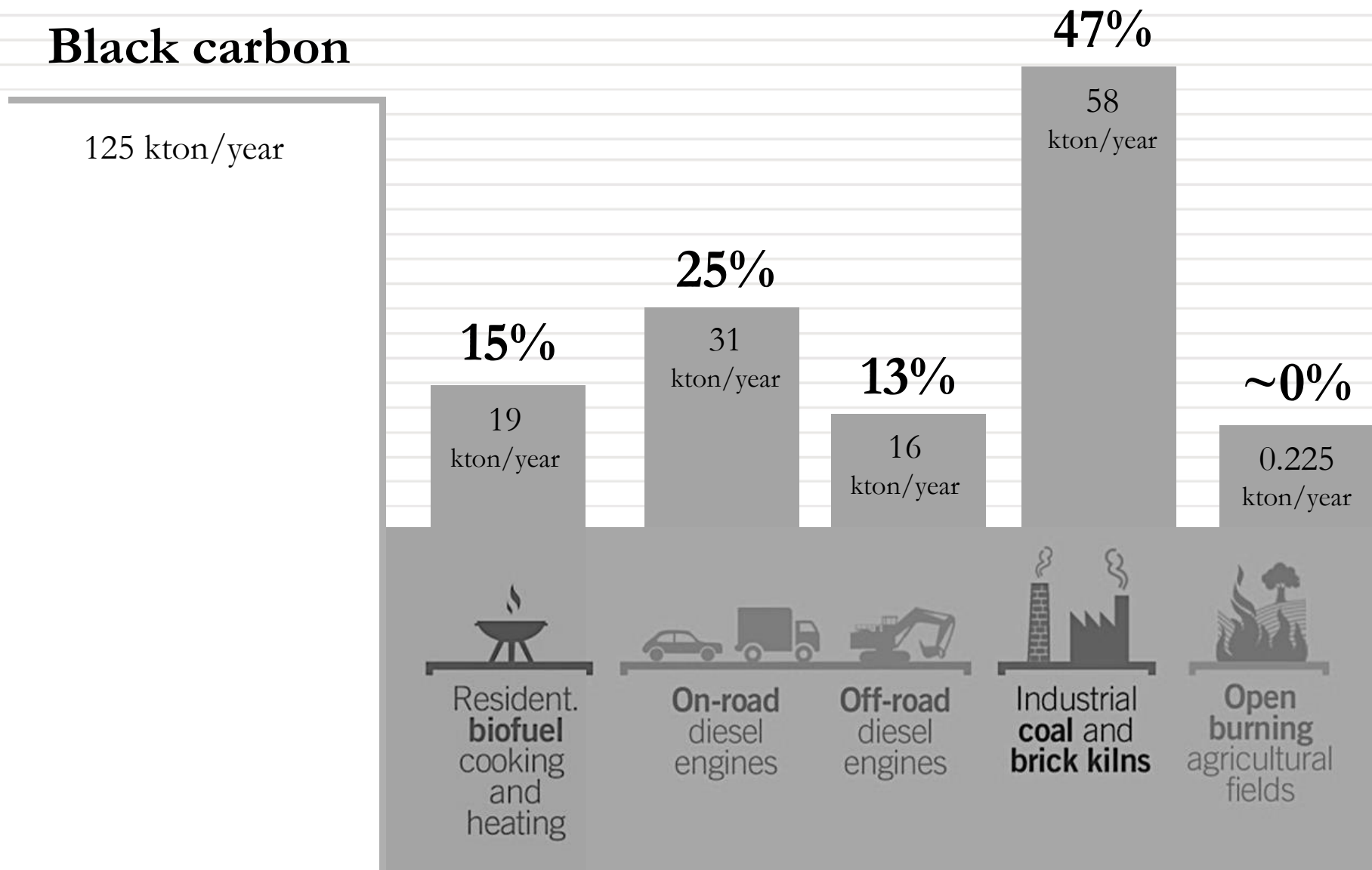
3. National GHG inventory

3. NATIONAL GHG INVENTORY



Mexico's black carbon emissions 2013 (SLCP)

Black carbon



#	Country	Category	Question title
3	European Union	c	Black carbon in GHG inventory



Question

Since black carbon is not part of the IPCC Guidelines for GHG inventories, could you please explain which methodologies did you use for this estimation?

Black carbon methodology

Metodología	Sector / Actividad	Valor	Dato de actividad / unidad
Fracción de PM _{2.5}	GEE Residencial y comercial	20% ¹	combustión de combustóleo
		20% ¹	combustión de diésel
		20% ¹	combustión de gas natural
		14% ¹	combustión de carbón
		7% ¹	combustión de gas L.P.
	Leña residencial	17% ¹	combustión de leña
	Industria	3% ²	industria cementera
		5% ²	industria de caleras, siderúrgica, química
		30% ²	combustión de bagazo
	USCUSS (incendios)	7.2 - 12% ³	incendios forestales
Maquinaria de la construcción y agrícola	60% ¹	combustión de diésel	
Incineración de residuos peligrosos	2.4% ¹	combustión de residuos peligrosos	
Agricultura	7% ¹	combustión de gas L.P.	
Factor de emisión	P&G	E = 447,055 ⁴	kg CN / Tg CO ₂
	Quema a cielo abierto de residuos	E = 0.646 ⁵	g CN / Kg de residuos quemados
	Quemas agrícolas	E = 0.73 ²	t CN / Gg de biomasa agrícola quemada base seca
	Ferrocarril	E = 1.53 ²	g CN / kg combustible
	Marítimo	E = 1.02 ²	kg CN / ton diésel
	Aviación	E = 0.1 ²	g CN / kg combustible
MOVES	Autotransporte		

1. Carb, Speciation Profiles Used in ARB Modeling

2. Atmospheric Brown Clouds (ABC), Emission Inventory Manual.

3. http://www.ine.gob.mx/descargas/cclimatico/2010_cca_mce2_temas_emergentes.pdf

4. McEwen, J y M. Johnson (2012). "Black carbon particulate matter emission factors for buoyancy-driven associated gas flares", Journal of the Air & Waste Management Association.

5. Christian, T., R. Yokelson, B. Cárdenas, L. Molina, G. Engling y S. Hsu. (2010). "Trace gas and particle emissions from domestic and industrial biofuel use and garbage burning in central Mexico", Atmospheric Chemistry and Physics.

6. UNEP 2011. Near-term Climate Protection and Clean Air Benefits: Actions for Controlling Short-Lived Climate Forcers, United Nations Environment Programme (UNEP), Nairobi, Kenya, 78p]

3. NATIONAL GHG INVENTORY



Data by industrial facility

- Unit level data of strategic sectors such as electricity, cement, steel and chemical industries (new electronic system *COAweb*) to gather industrial and utilities activity data and Ministry of Energy's utilities data).

Fugitive emissions

- IPCC 2006 methodology with new national study for Emissions Factors

More accurate vehicle fleet data

- Improved fleet data and implementation of EPA's MOVES model adapted to Mexico for the estimation of black carbon and criteria pollutants.

Better data and models of waste and agriculture

- Implementation of the Mexico's Biogas Model with more detailed databases for MSW municipal level disposal sites, technology and emissions.
- Activity data was improved for excreta in agriculture sector, for nitrogen estimation.

3. NATIONAL GHG INVENTORY

LULUCF estimates of areas with no change

- Used of the most recent National Forest and Soil Inventory to estimate the absorption by forestland that remains forestland and other unchanged areas. Net absorption was estimated in - 173 MtCO₂ constituting an important sink (24% of total emissions).



GWP AR5

- Used of Global Warming Potential published in the IPCC's 5th Assessment Report.

Country-specific emission factors

- Emission factors were revised and updated to use the most relevant to national circumstances

BLACK CARBON

- Inclusion of carbon black expands the scope of the Inventory.



#	Country	Category	Question title
2	European Union	c	LULUCF



Question

In the GHG inventory (LULUCF sector) Mexico only included emissions and removals from land use conversions in the national total. Net removals from forest lands remaining forest lands are calculated, but not included in the national total.

Could you please provide more information regarding the reasons for this decision?

Mexico response

We found that guidelines regarding accounting removals by the LULUCF sector **are not very clear**.

For example, Decision 2/CP17 Annex III, states that for the national inventory of emissions, Non-Annex I Parties should submit updates of national GHG inventories according to decision 17/CP.8. This decision refers to a national inventory of **anthropogenic emissions**, including sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol. It also encourages reporting of these emissions and absorptions according to Tables 1 and 2, we found that **these tables are not fully consistent with Good Practice Guidelines 2003 on LULUCF**.

For transparency purposes we left them separated. We included the emissions reporting of anthropogenic emissions of LUCUCF with total emissions and permanences are clearly reported in a separate line. The BUR does include a net emissions line.

We believe that guidance from the Convention could be valuable to clarify this issue.

Ongoing activities and studies for the emissions inventory:

1. Capacity building on IPCC 2006 methodologies.
2. Tools for inventory uncertainty analysis
3. Black carbon monitoring network
4. Methane emission factors from enteric fermentation by species age, diet, function, production system and region in Mexico
5. CO₂, CH₄, PM₁₀ & PM_{2.5} emission factors from waste agriculture burning
6. Subnational forestry emissions inventory and elements to improve state level MRV systems at the subnational
7. Vehicle fleet at municipal level

