



SDG Indicator training:
Amount of fossil-fuel subsidies
per unit of GDP and as a
proportion of total national
expenditure on fossil fuels
September 23-24, 2021

Statistical situation of the region in relation to environmental indicators

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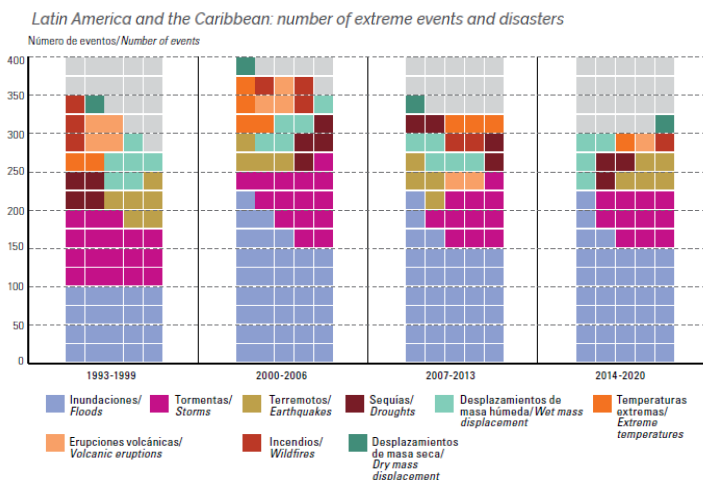
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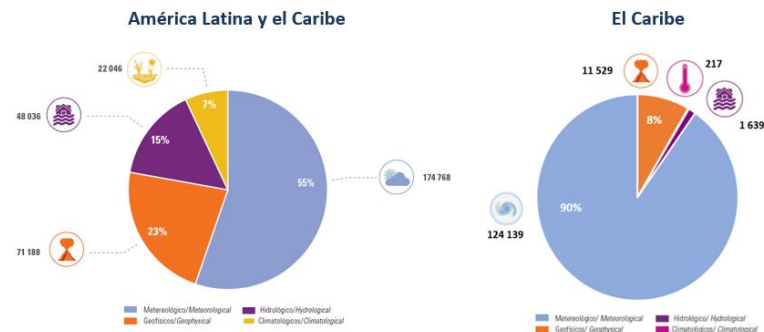
State of the art in the LAC region of environment statistics

- Indicators that require environment, climate change and disaster statistics to be compiled:
 - Of SDG targets and goals almost **70%**, and **50%** of SDG indicators
 - Of SENDAI FW: **100%** of indicators
 - Of Paris 2015 Agreement on Climate Change: **100%**
- There is an ever-growing **demand** for these metrics, both from **international and national agreements and development plans and policy targets**.
- Of the three pillars of sustainable development, the newer and weakest is monitoring/measuring **environment, climate change and disaster dynamics**

What is not measured, can not be properly managed or solved



Cumulative economic cost of disasters for the period 1970-2020, by type of disaster, millions of dollars and percentages



Regional challenges to produce environment statistics and indicators

Statistical challenges:



- Insufficient and/or irregular collection of environmental **data** within National Statistical Systems.
- **Newer sources** of statistical information underutilized (i.e., remote sensing, geospatial, monitoring stations and administrative records)
- **Methodologies** to measure fossil fuel subsidies - Use international statistical standards and recommendations

Institutional challenges:



- **Institutionalization** and regular **budget** allocation needed in both NSOs and line ministries and authorities in the context of National Statistical Systems
- **Inter-agency technical capacities and common language** is needed (hence this workshop) for all teams in all relevant institutions
- Insufficient **institutionalized regular statistical cooperation** among NSO - line Ministries, Central Bank and Academia

ECLAC regional capacity-building on environment statistics and indicators

1. Demand-driven inter-institutional **capacity building** to LAC countries
 - ✓ In-person workshops
 - ✓ **Online training course on ES**
 - ✓ **Remote TA/training on EA/EEA**
 - ✓ Quarterly webinars on environment on SDG/SENDAI indicators production
 - ✓ **Regional Network of ES**
 - ✓ **Assessment of Use of Geospatial Technology in NSOs**
2. **Methodological development**
 - ✓ **FDES in Spanish**
 - ✓ **Damage and Loss Assessment (DaLA)**
 - ✓ **Methodological Guidance Manual Environmental Indicators**
 - ✓ **Environment Statistics Biblioguide**
3. Production of **key regional environment indicators**
 - ✓ CEPALSTAT database and geoportal, Statistical Yearbook and **Statistical News**
4. Secretariat of two **working groups** of the Statistical Conference of the Americas
 - ✓ **Document to harmonize a methodological framework for the measurement of disaster-related indicators of the SDGs and the Sendai framework for disaster risk reduction**
 - ✓ **Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters in Spanish**
5. Partnership and **Cooperation with UN and regional organizations** and **Regional Coordination through GGIM Americas** between Official geospatial community and NSOs



Our products and platforms

- **CEPALSTAT DATABASE** https://cepalstat-prod.cepal.org/cepalstat/WEB_CEPALSTAT/estadisticasIndicadores.asp?idioma=

LAC Environment Metrics: +75 Indicators, 210 environmental series in Excel, 600 K data points over 30 years long. 30K monthly views.

- **Statistical Yearbook (Environment Statistics Chapter):** <https://www.cepal.org/es/publicaciones/ae>

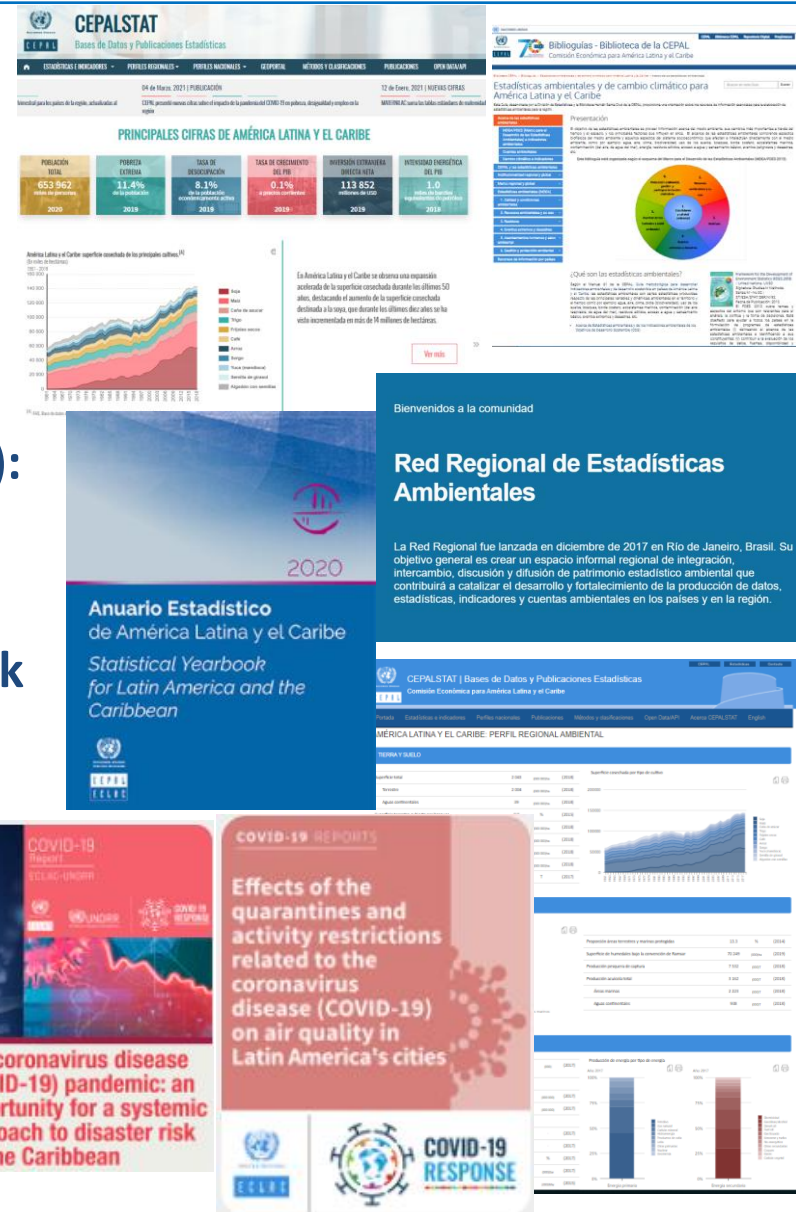
- **Covid-19 impact in air pollution in cities (LA):** <https://www.cepal.org/en/publications/45885-effects-quarantines-and-activity-restrictions-related-coronavirus-disease-covid>

- **COVID-19): systems approach to disaster risk in the Caribbean**

<https://www.cepal.org/en/publications/46732-coronavirus-disease-covid-19-pandemic-opportunity-systemic-approach-disaster-risk>

- **Environment Statistics Biblioguide** <https://biblioguias.cepal.org/estadisticasambientales>

- **Regional Network of Env Stats:** <https://comunidades.cepal.org/estadisticas-ambientales/es>



What and how to measure?

What do we want to measure?

➤ Situation and changes

Status and environmental trends in order to measure fossil fuel subsidies

- Temporary changes in key variables from t_0 → t_1
- Changes in the spatial distribution

Monitoring and evaluation of environmental dynamics

➤ What is happening? What has changed?

The scale and impact of fossil fuel subsidies

➤ Processes - programs, incentives, regulations, enforcement action

Results
Impacts } What proportion is attributed to the intervention?

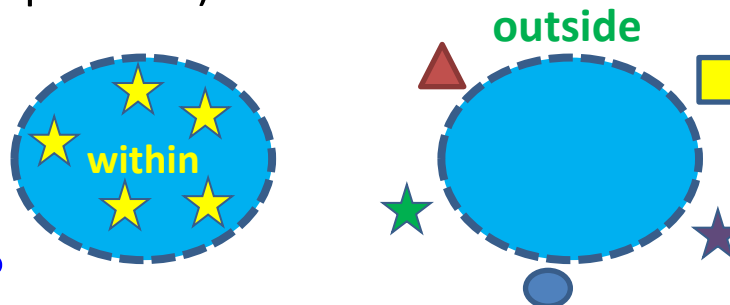


We need

1. Define detailed **demand** for indicators by policies and targets (for example, Ensure sustainable consumption and production patterns)

2. **Definition of variables and Statistical unit** = boundaries
(what stays within and outside)

What are (types) fossil fuel subsidies?
What are the prices, margins, taxes, etc?



3. **Articulate with a statistical classification** (hierarchy, disaggregation)

COFOG, Energy products (fossils) and minerals, etc

4. **Identify / Select / Develop** data sources

Public finances, customs, estimation and models: which institutions carry them?

5. Make the data collection and calculation **methodology explicit**

Use international statistical standards and recommendations for spatial and temporal comparability (Statistical Commission UN)

6. **Comprehensive description:** metadata and methodology sheets

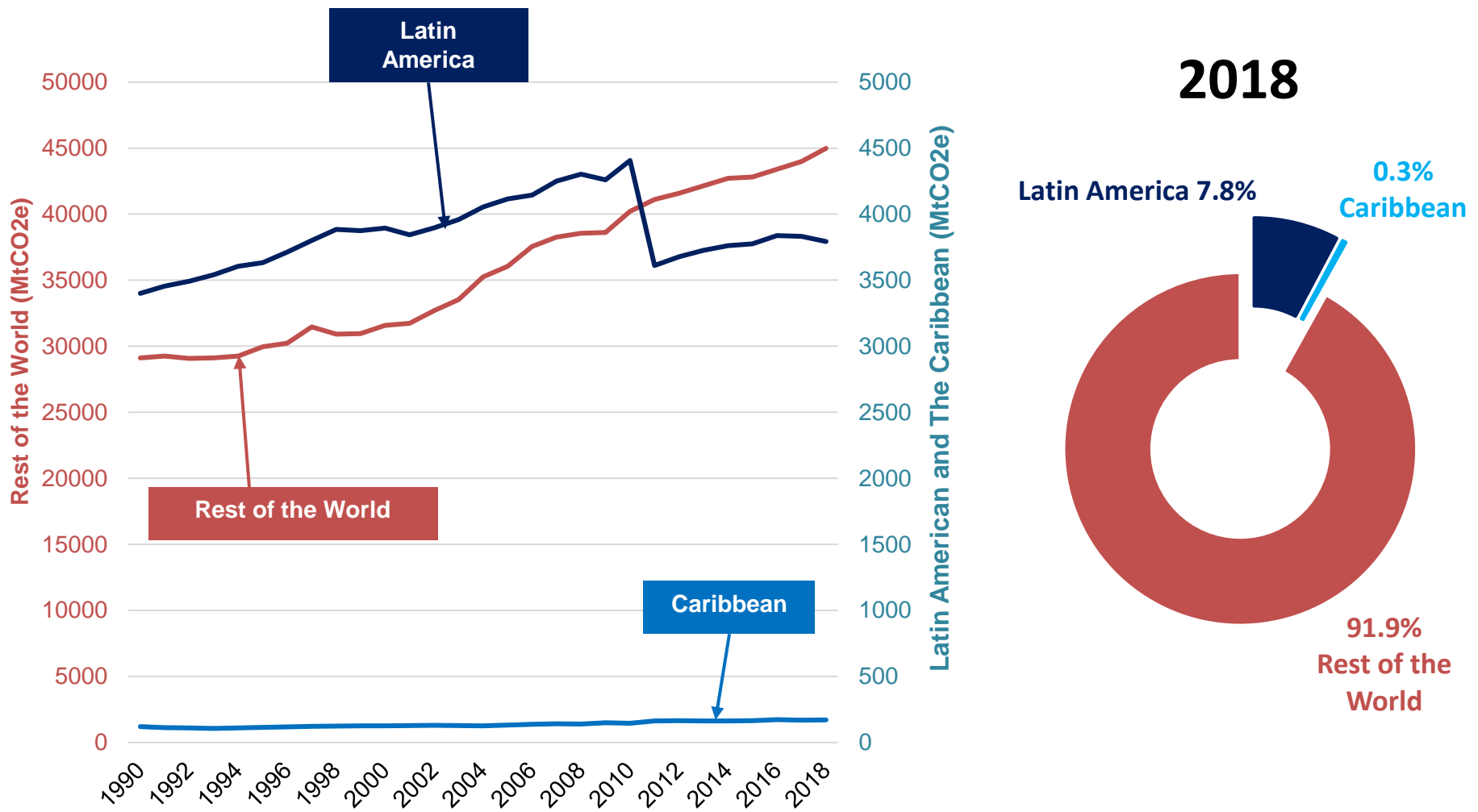
7. **Inter and intra-institutional cooperation**



- Indicator 12c1: **Amount of fossil-fuel subsidies (production and consumption) per unit of GDP**
- Relevant for energy and mobility transition
- Strategic indicator:
 - **Socioeconomic**
 - energy and transport matrix for LAC countries based on fossils
 - subsidies reduce E and T costs in consumer goods and services
 - **Environmental sustainability (carbon emissions, climate change)**
- Difficulty of measurement, since the numerator (subsidies) must be estimated, with various methodologies
 - **Price analysis / production costs, direct / induced transfers, carbon tax, etc**
- **There are statistics on fuel prices and carbon taxes**
- **Low production of statistical series for subsidies:**
 - **Data collection to estimate the numerator by the statistical authority, sector ministries and state companies depends on their capacities and resources**

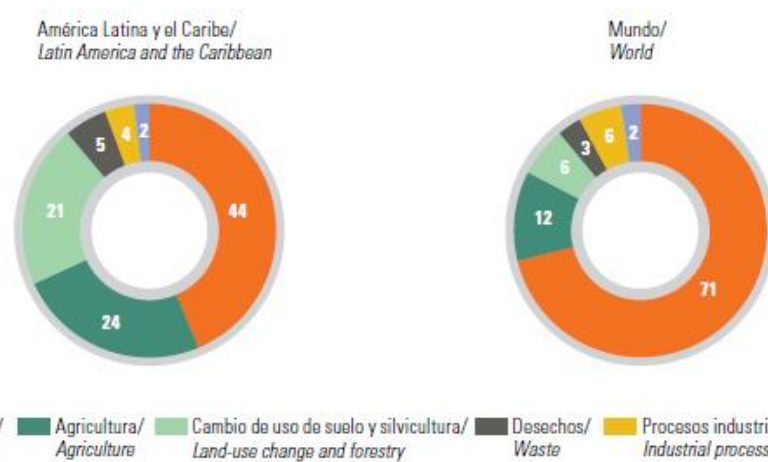
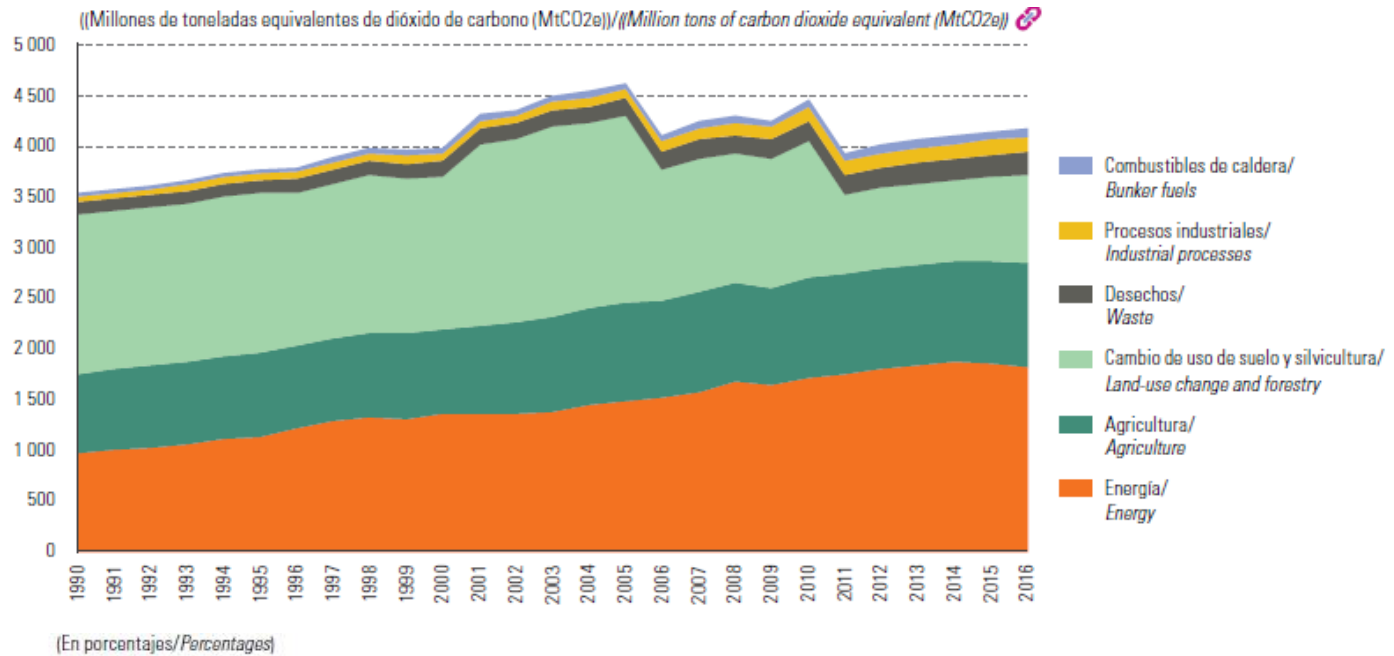
LAC: Evolution of GHG emissions

(MtCO₂e) 1990-2018 y percentage 2018

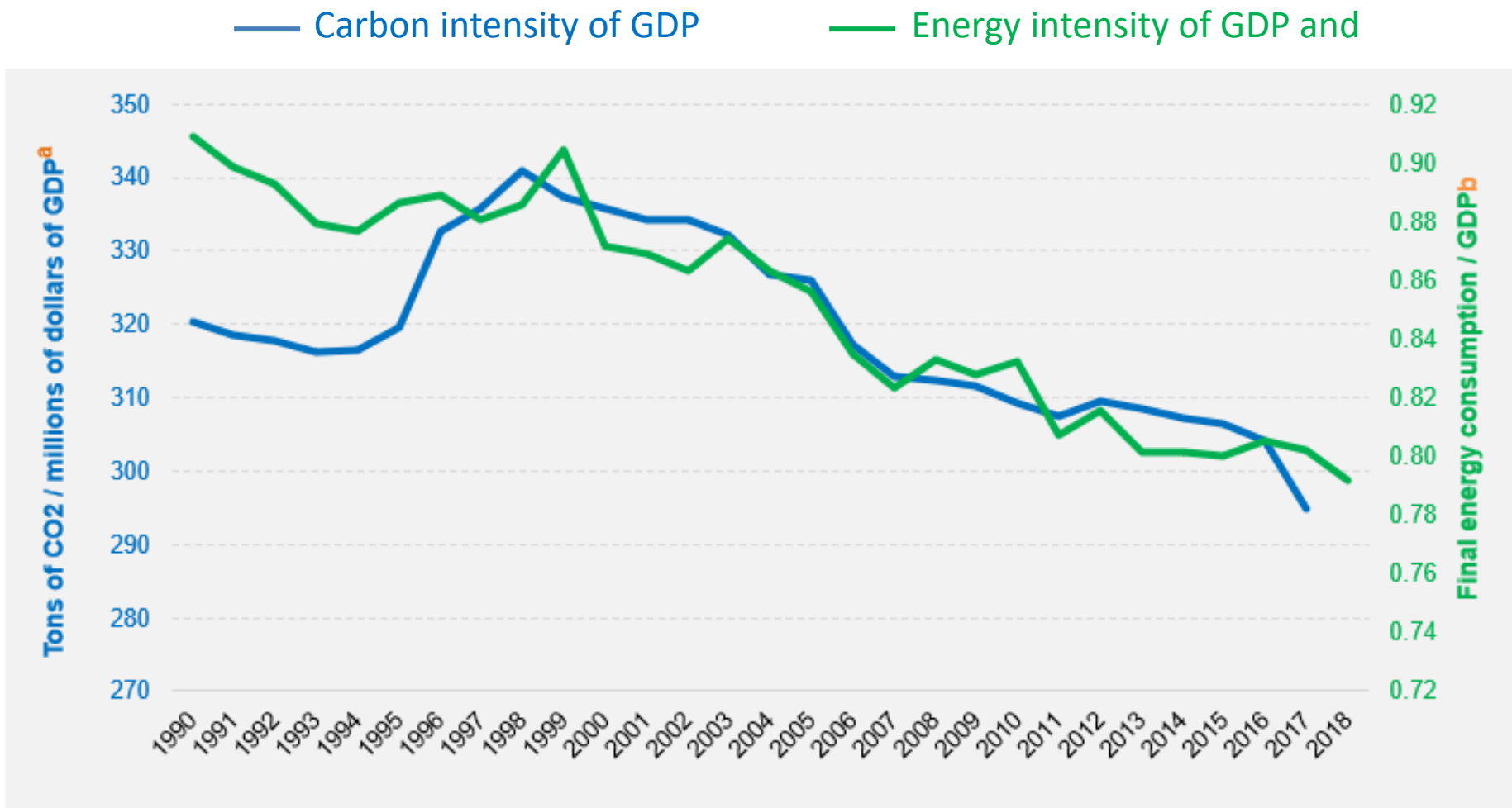


Source: CEPALSTAT based on CAIT, <http://cait.wri.org/>

LAC: Trend in GHG emissions by sector and GHG emissions by sector, 2016



LAC: Energy intensity of GDP and Carbon intensity of GDP

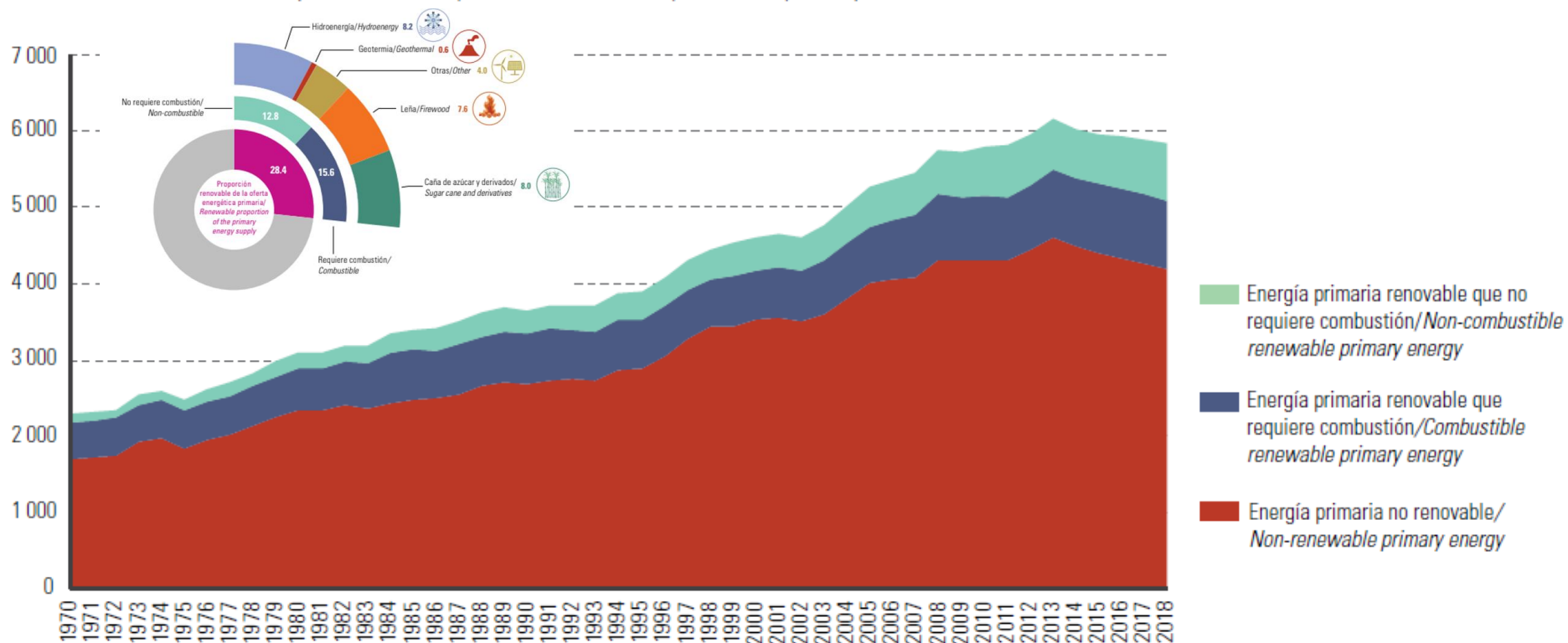


^a Source: Calculated by ECLAC based on: CAIT numerator, <http://cait.wri.org/>; denominator CEPALSTAT <https://estadisticas.cepal.org/cepalstat/Portada.html>

^b Source: ECLAC based on OLADE, <http://www.olade.org/>

LAC: Renewable (combustible and non-combustible) and non-renewable primary energy supply, 1970-2018

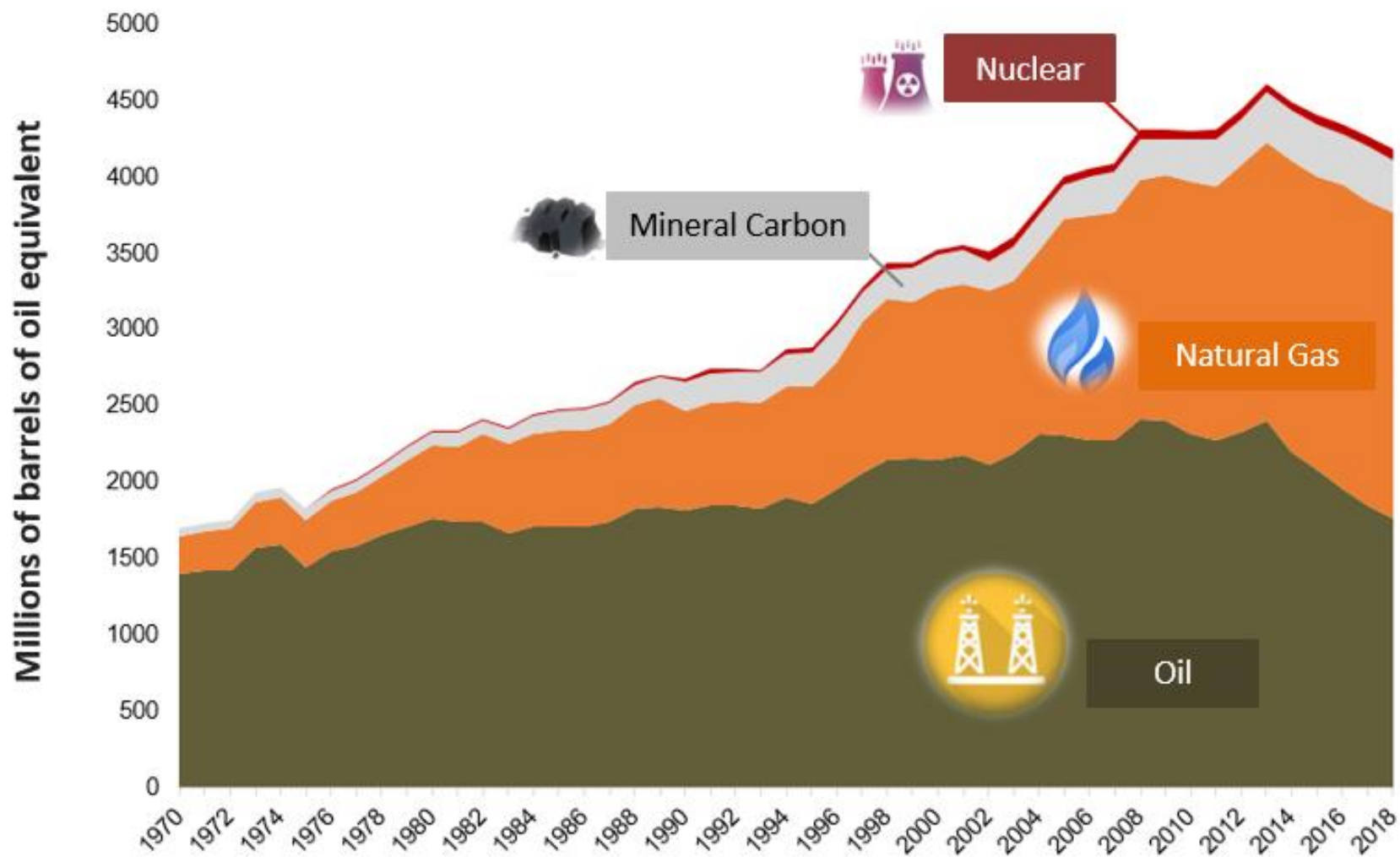
(En millones de barriles equivalentes de petróleo/Millions of barrels of oil equivalent)



^{1A1} OLADE, Sistema de Información Económica Energética (SIEE) [en línea] <http://sier.olade.org/>.

^{1A1} OLADE, Energy-Economic Information System (SIEE) [online] <http://sier.olade.org/>.

LAC: Non-renewable primary energy (fossil and nuclear), 1970-2018



Source: ECLAC based on OLADE, Energy Information System of Latin America and the Caribbean (SIEE) [online] <http://sier.olade.org>

What have we learned?

- There is **heterogeneity** in the level of ES development between countries
- It is important to identify **priority ES areas** that require technical assistance and training for the SDG environmental indicators in each country
- There is a need to exploit **additional existing sources**: administrative records, remote sensing and monitoring stations
- Share valuable national experiences of **incorporating questions / modules in surveys** and censuses to generate new statistical series and indicators
- Importance of working together and building communities of ES practice - **regional cooperation and Regional ES Network** (more than 200 technicians)
- Advance developing **national plans for the development of ES**
- Transition of environmental statistical work from ad-hoc efforts to official multi-purpose **environmental statistical systems**



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Thank you!

Environment, Climate Change Statistics Area
ECLAC Statistics Division

<https://www.cepal.org/en/topics/environmental-statistics>



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