

Data Overview

1. Data coverage: Electricity/Electricity & Heat Emissions

First section gives overview of both geographical and time coverage for 8 indicators from 5 different data sources of emissions data for electricity.

Sources (in order of time range)

BP Statistical Review (3) 1990-2021

OECD (1) 1990-2020

IEA (1) 1990-2019

EU JRC EDGAR V6.0 (1) 1990-2018

Our World in Data (2) 2000-2021; 1990-2018

Conclusions:

OWID_1 and EDGAR provide broadest country coverage albeit ending in 2018.

Definitions:

EDGAR: CO2 emissions from electricity, measured in thousand tonnes of carbon dioxide-equivalents.

BP: Carbon Dioxide Emissions from Energy in Million tonnes of carbon dioxide.

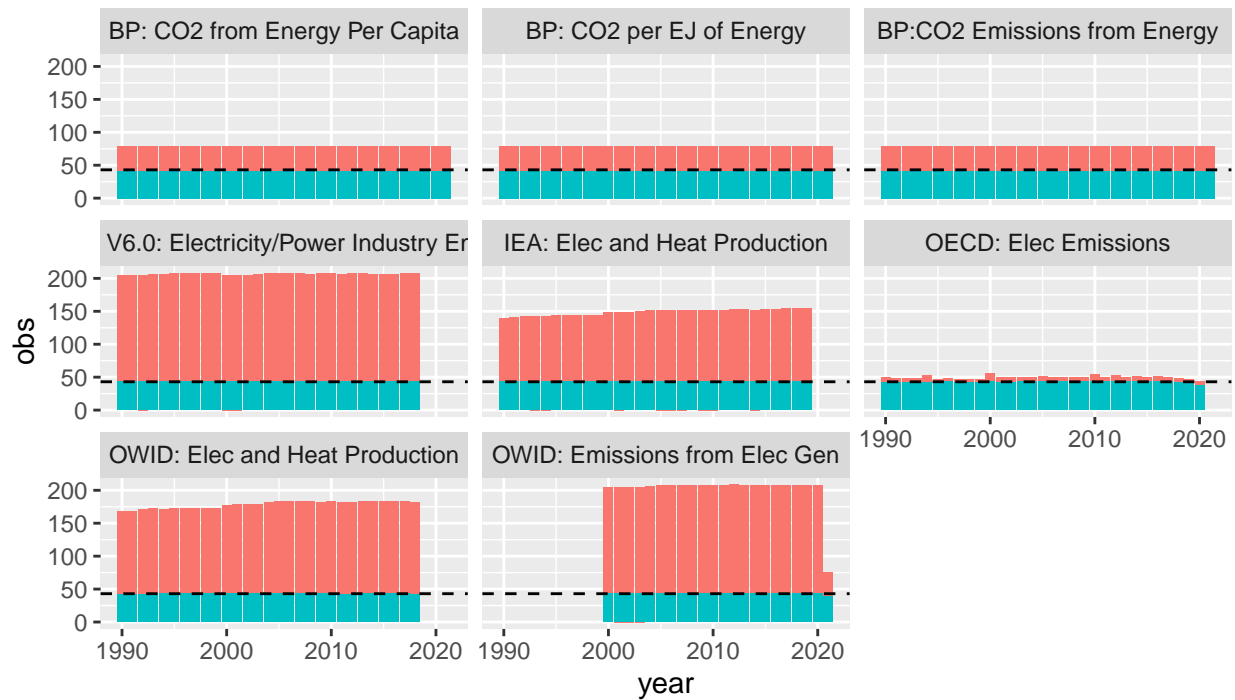
OWID: The sum of all greenhouse gases from electricity and heat production, measured in tonnes of carbon dioxide equivalents.

OWID: Greenhouse-gas emissions produced in the generation of electricity, measured in million tonnes of CO2 equivalent.

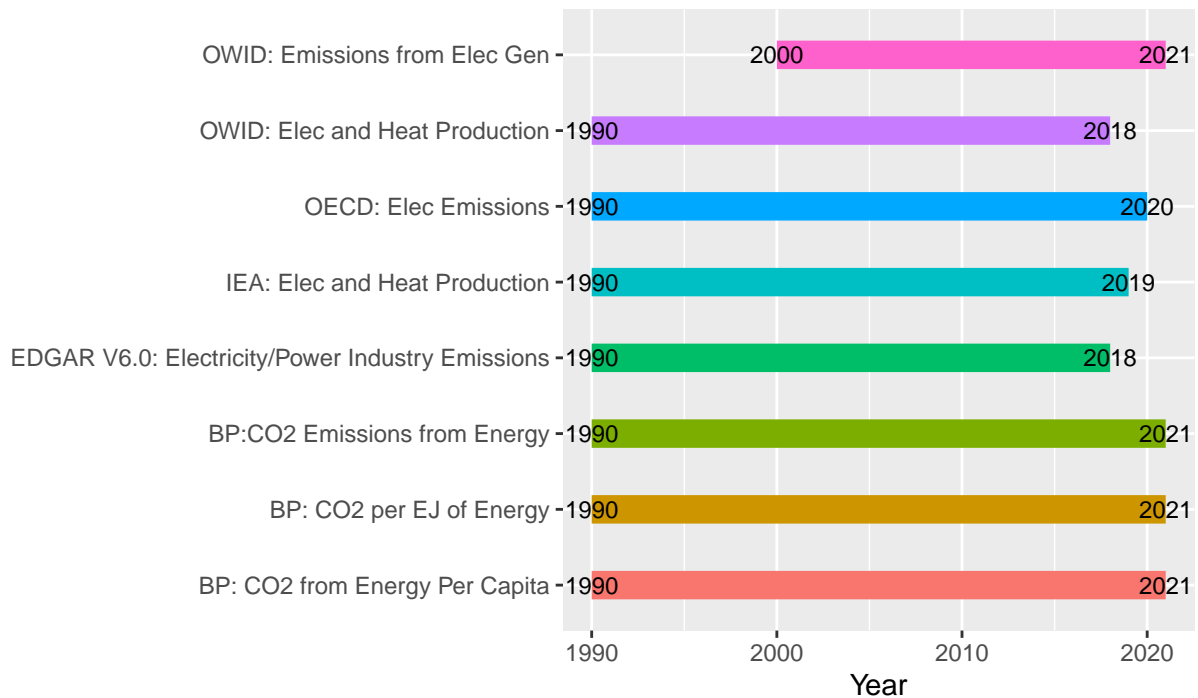
OECD: Emissions from electricity in OECD countries.

IEA: Electricity and heat production contains the sum of emissions from electricity production, combined heat and power plants and heat plants. It is the sum of main activity producers and autoproducers. Emissions from own on-site use of fuel are included.

Country coverage: Emissions from Electricity



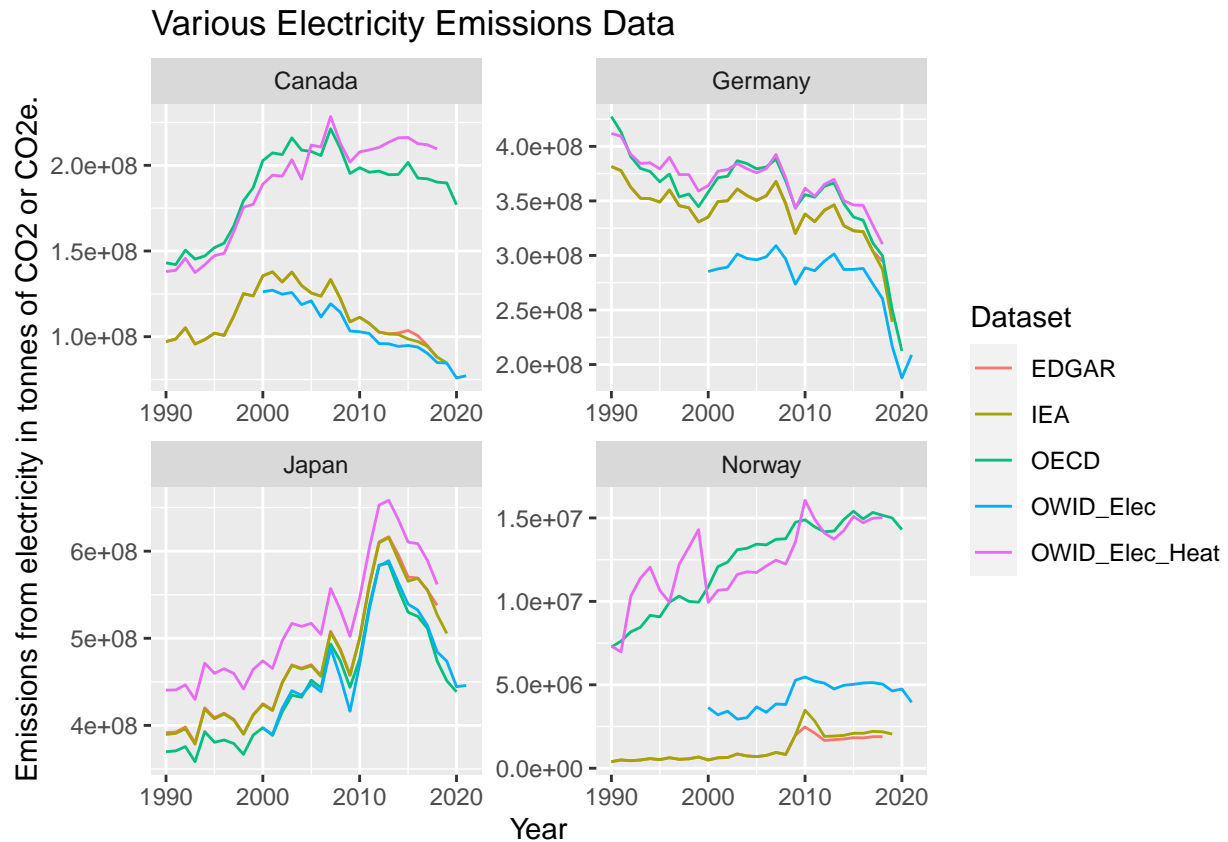
Year coverage: Emissions from Electricity



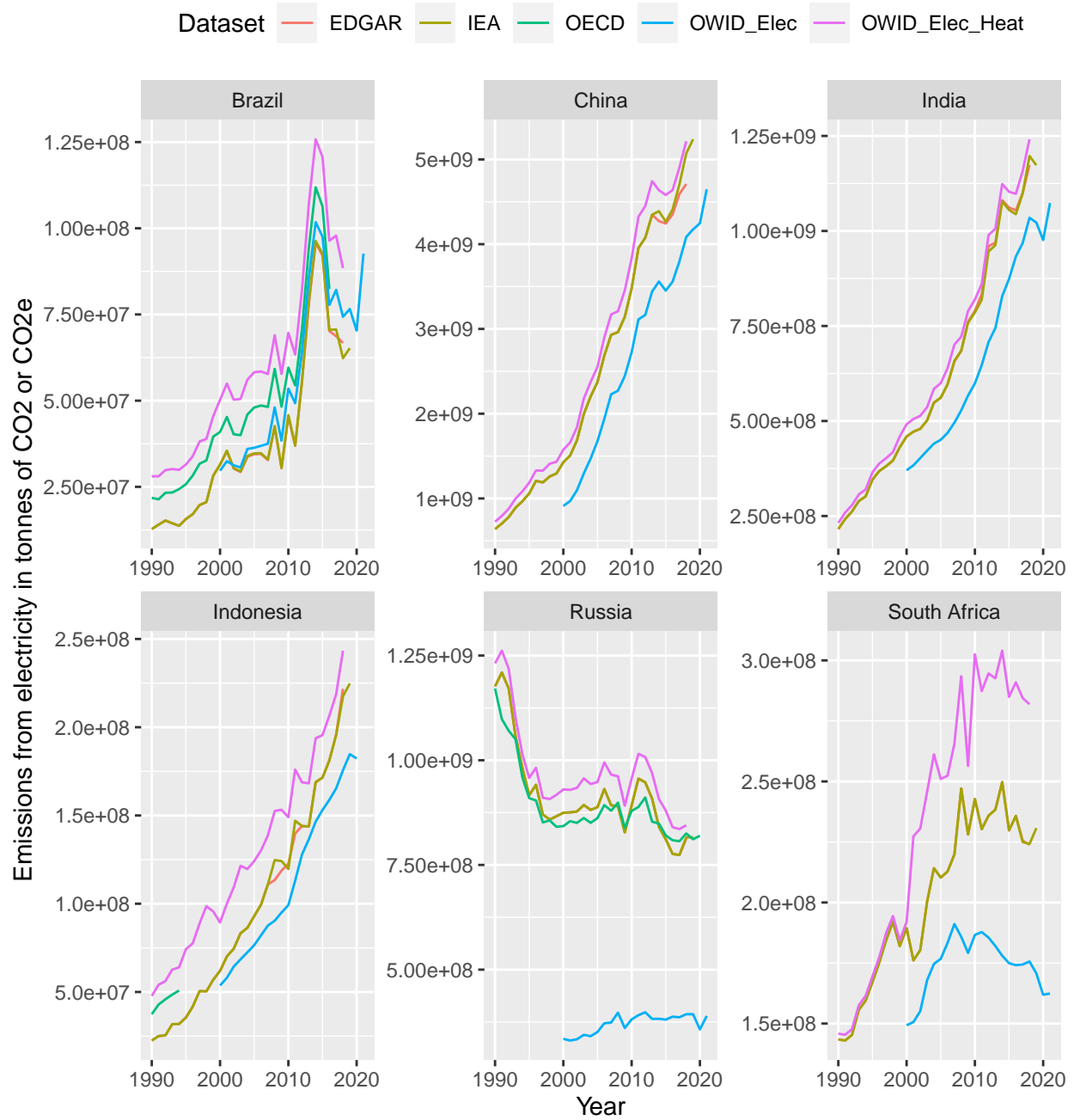
Comparing sample country time series

Conclusions: EDGAR and IEA data are nearly identical OWID Elec and OECD are similar OWID Elec_2 has a shorter time horizon and diverges from other series.

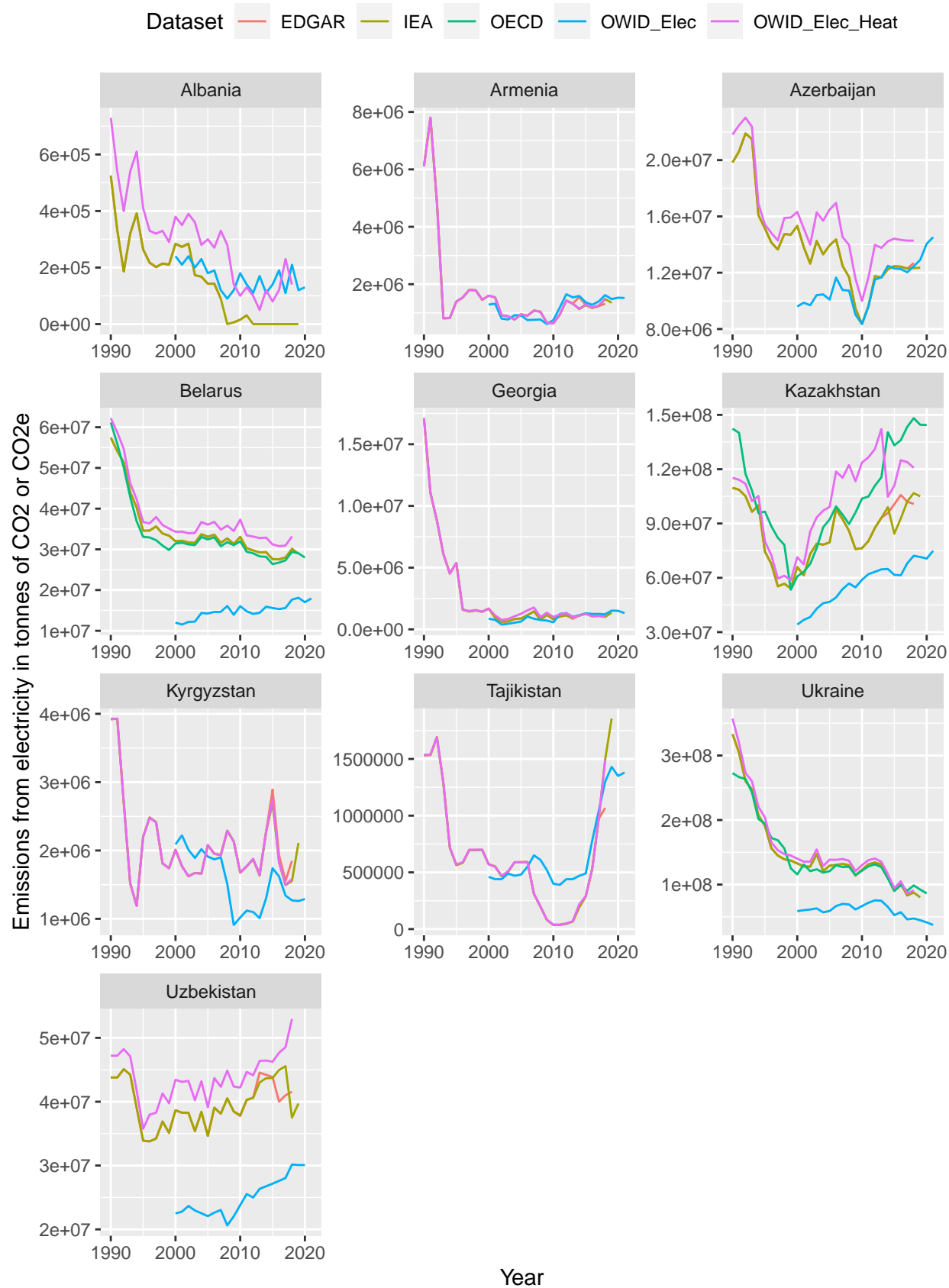
Canada, Germany, Japan, Norway



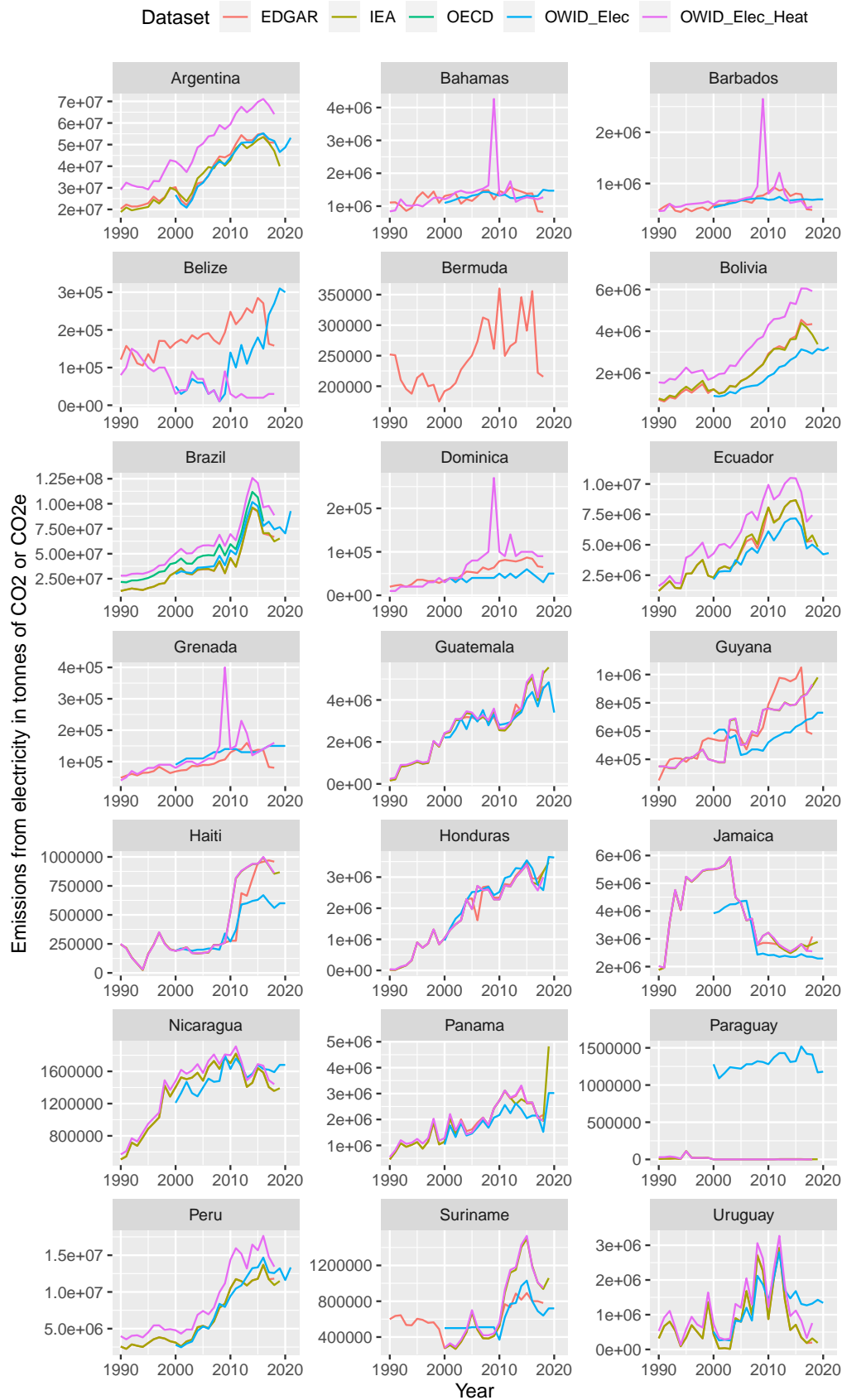
BRICS(+)



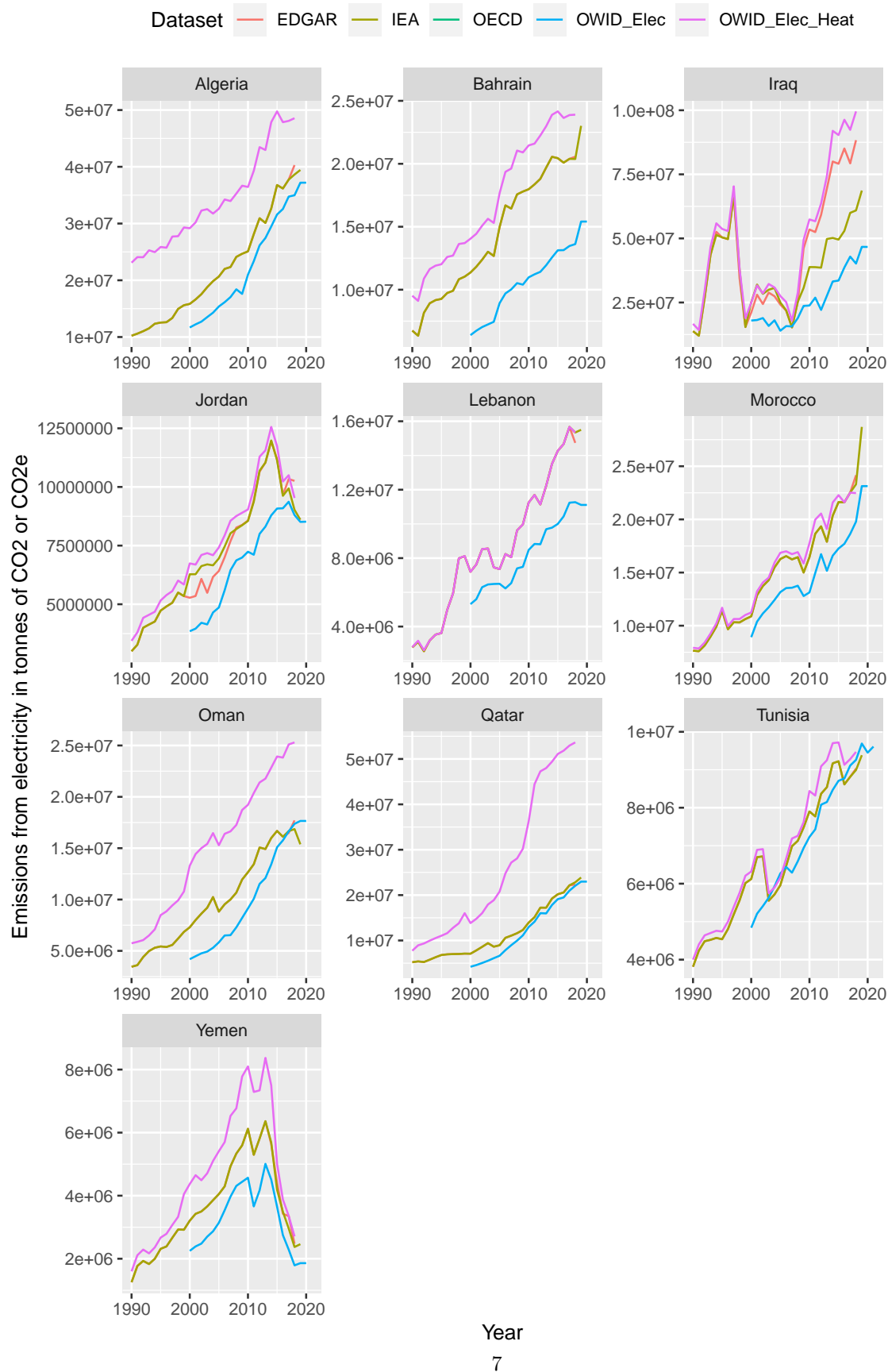
Eurasia & Non-EU/OECD Europe



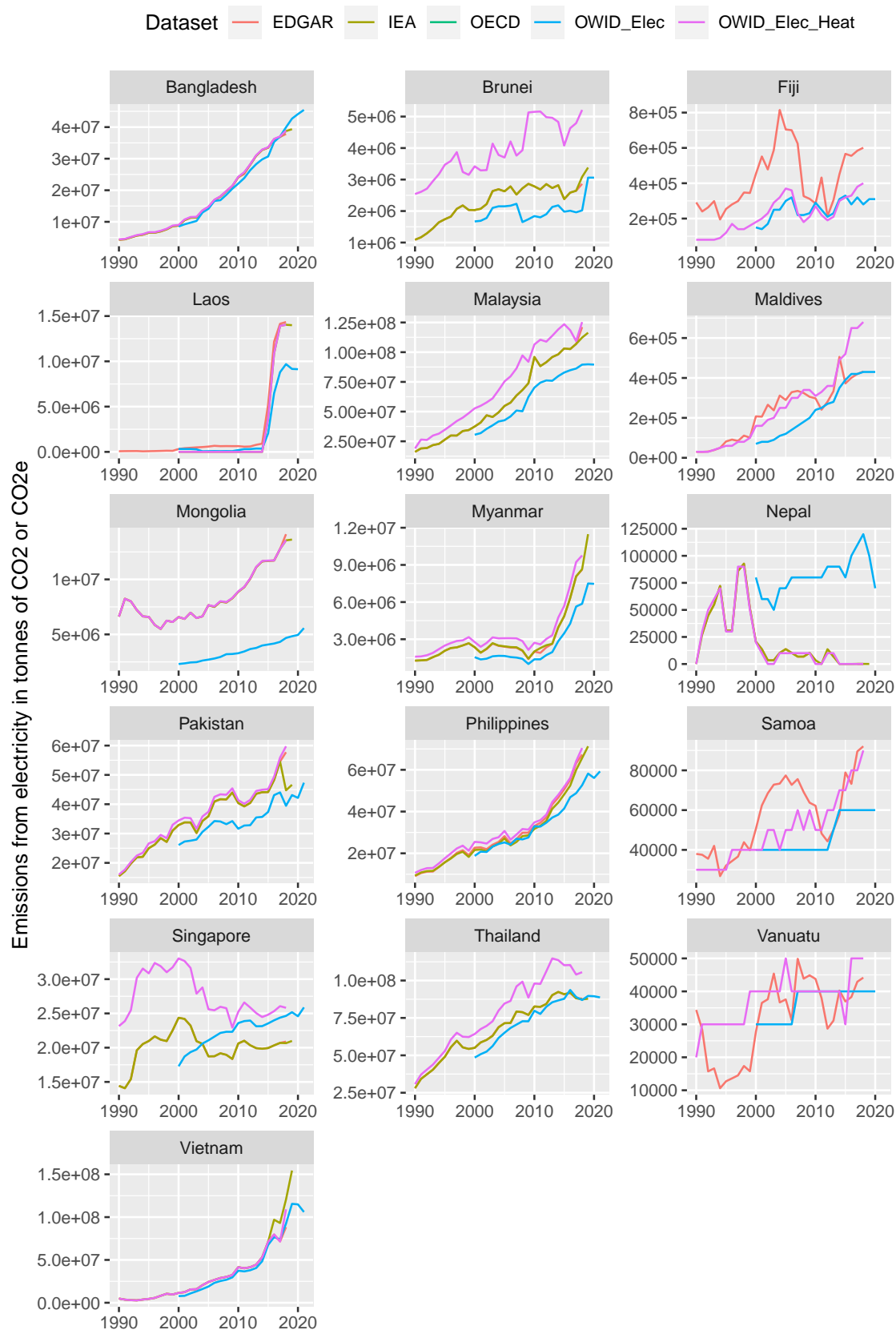
South and Central America



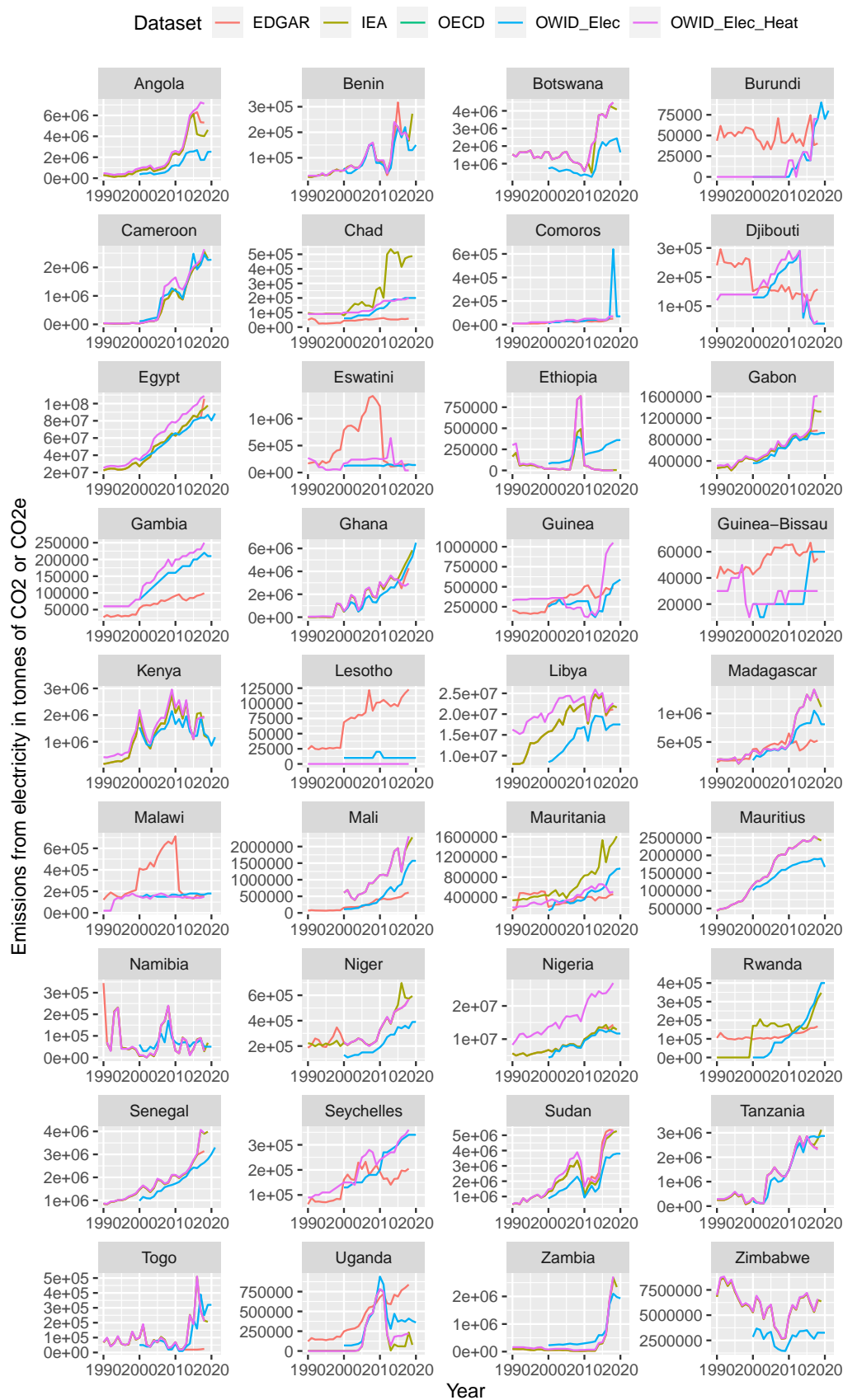
MENA



Asia

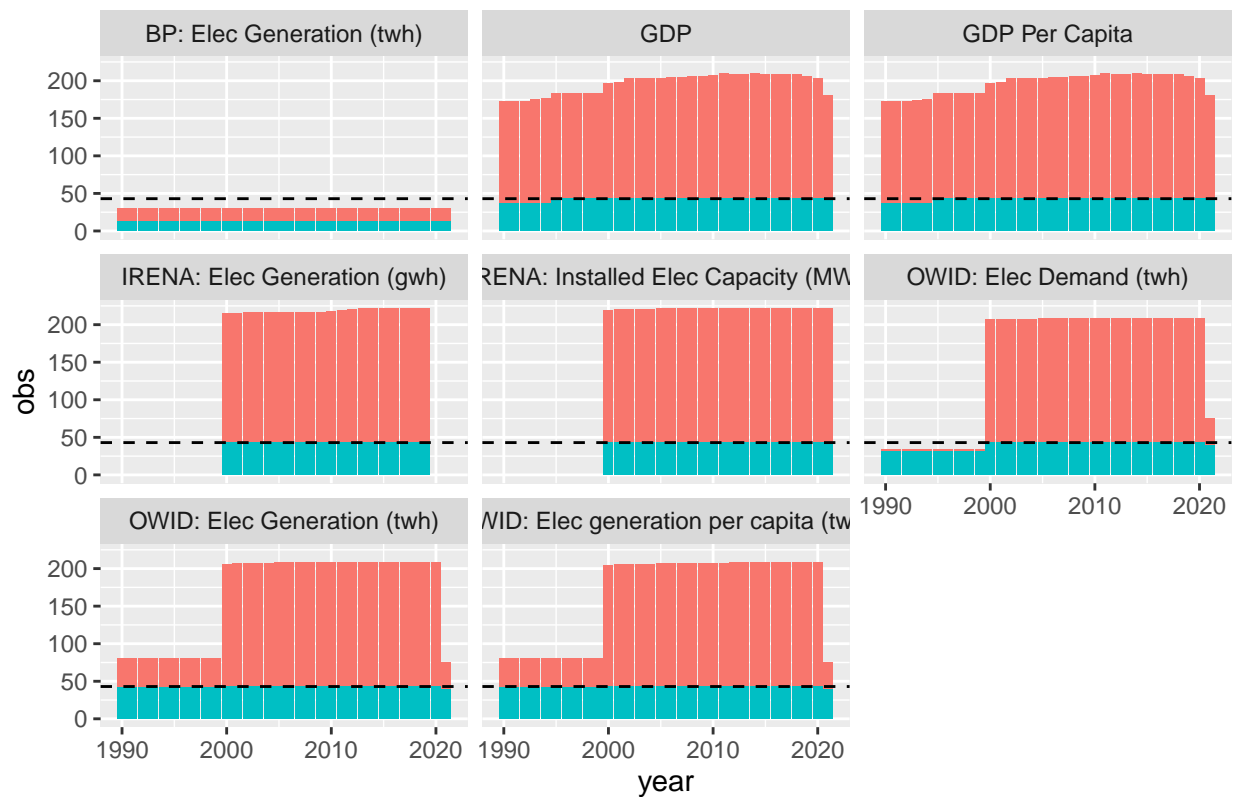


Africa

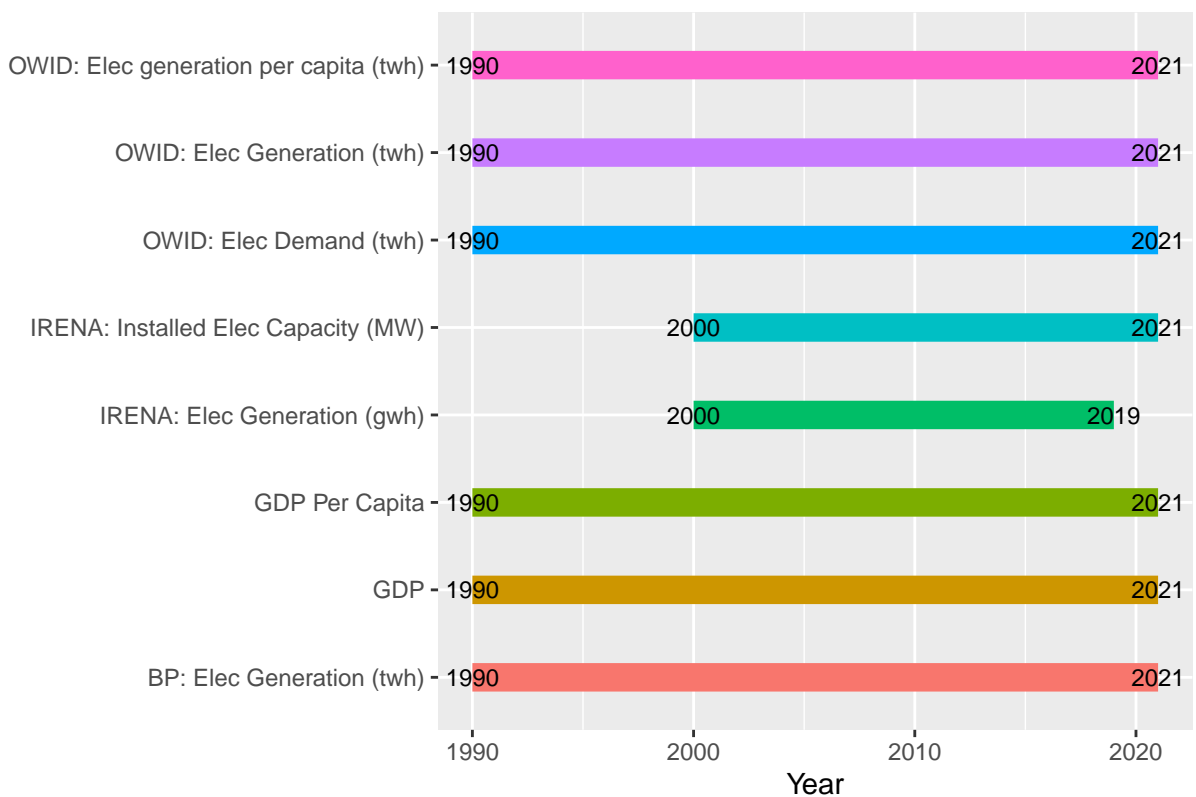


2. Data Coverage: Controls, Generation, Capacity Data

Country coverage: Controls, Generation, Capacity



Year coverage: Controls, Generation, Capacity



3. Data coverage: Other indicators of interest

Definitions:

IRENA: carbon_intensity_elec: Carbon intensity of electricity production, measured in grams of carbon dioxide emitted per kilowatt-hour

IRENA: re_share_eleccap_pct: Renewable share of electricity capacity (%)

IRENA: re_elecgen_gwh: Renewable electricity generation (GWh)

IRENA: re_share_elecgen_pct: Renewable share of electricity generation (%)

BP: electbyfuel_ren_power: Electricity generated from renewables (TWh)

OWID: low_carbon_share_elec: Share of electricity generation that comes from low-carbon sources. This is the sum of electricity from renewables and nuclear

OWID: low_carbon_electricity: Electricity generation from low-carbon sources, measured in terawatt-hours. This is the sum of electricity generation from renewables and nuclear power.

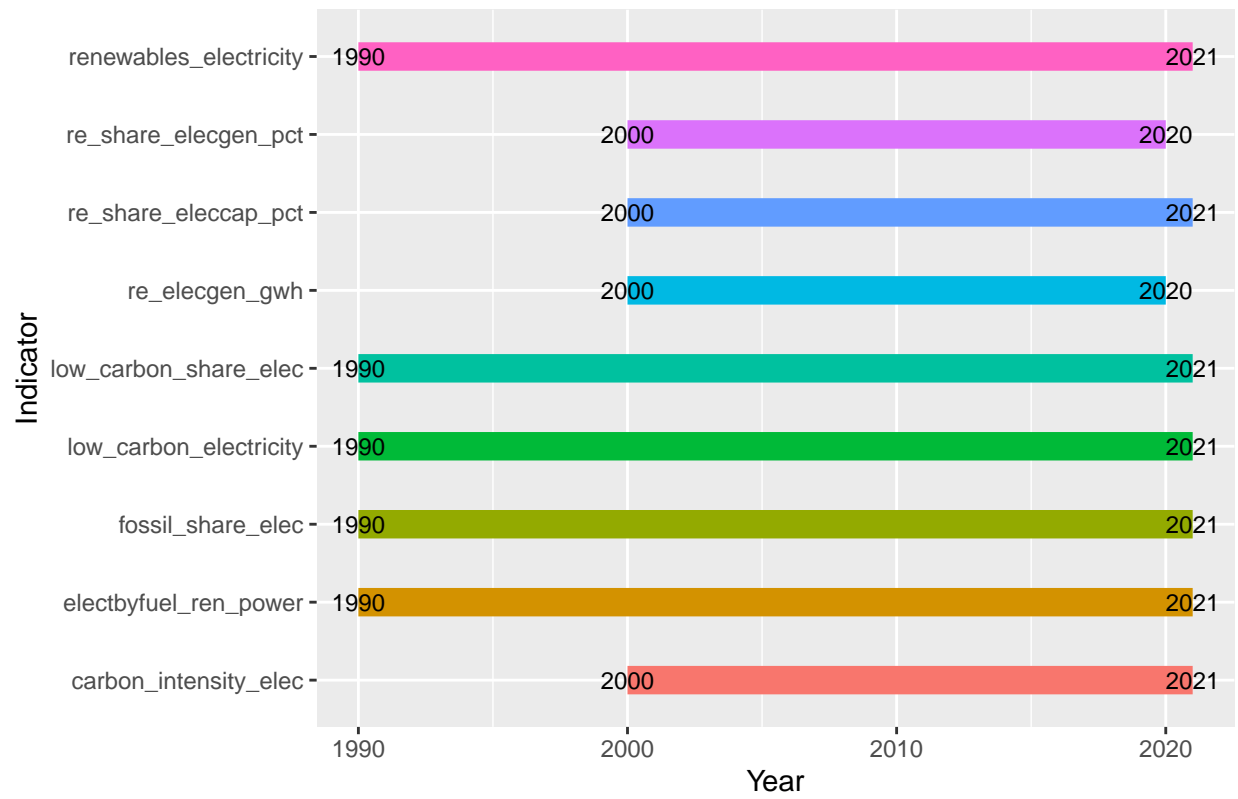
OWID: renewables_electricity: Electricity generation from renewables, measured in terawatt-hours

OWID: fossil_share_elec: Share of electricity generation that comes from fossil fuels (coal, oil and gas combined)

Country coverage: Other interesting variables



Year coverage: Other interesting indicators



Comparing sample country time series

Comparing country sample series

Dataset fossil_share_elec low_carbon_share_elec re_share_eleccap_pct re_share_elecgr

