

TEP4221 Python for Sustainability Analysis

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Research question:

Which countries need to invest more in renewable energy and control the use of non-renewable sources and CO₂ emissions?

Datasets

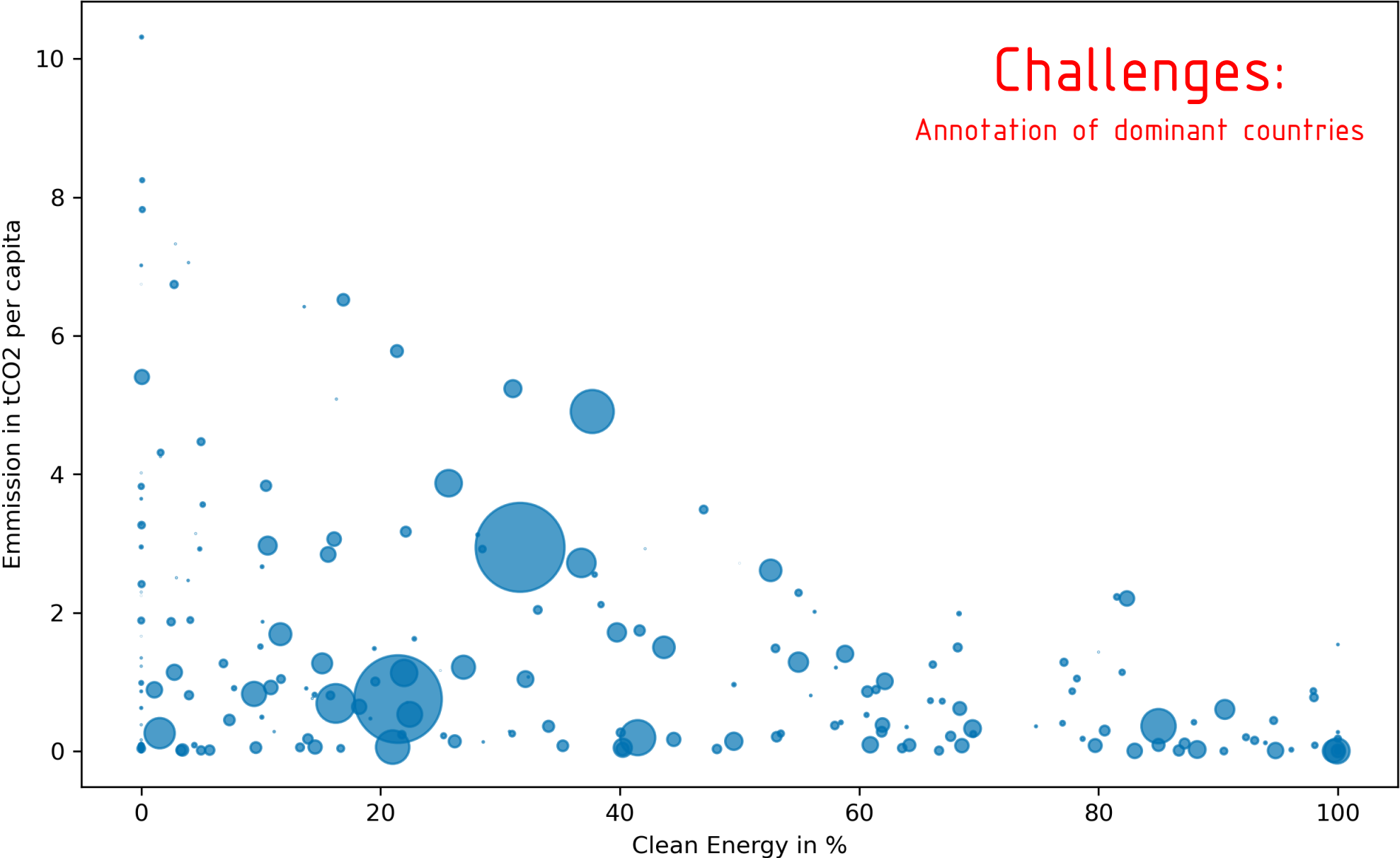
The screenshot shows the Ember Climate website. The header includes the Ember logo and navigation links: Countries & regions, Topics, Data, Insights, and About. The main content area is titled 'Yearly electricity data' and includes a sub-header 'Home / Data / Data catalogue /'. Below this, it states 'Updated on 2 November 2022' and 'Ember's latest yearly electricity generation, capacity, emissions and demand data from over 200 geographies.' A 'Topic: Electricity' link is provided. At the bottom, there are 'Download' and 'Share this data set' buttons.

The screenshot shows the Natural Earth website. The header includes the Natural Earth logo and navigation links: Home, Features, Downloads, Blog, Issues, Corrections, and About. The main content area is titled 'Free vector and raster map data at 1:10m, 1:50m, and 1:110m scales'. Below this, there is a search bar and a 'Map Gallery' section. A map of the world is shown with a legend for 'Admin 0 - Countries'. The text describes Natural Earth as a public domain map dataset available at 1:10m, 1:50m, and 1:110 million scales. A 'Get the Data' button is prominently displayed. Below the main text, there are three sections: 'Convenience', 'Neatness Counts', and 'GIS Attributes', each with a brief description and a small image.

The screenshot shows the United Nations Population Division website. The header includes the United Nations logo and navigation links: WPP Home, Data, Graphs / Profiles, Documentation, World Urbanization Prospects, Population Division, and Contact Us. The main content area is titled 'World Population Prospects 2022'. Below this, there is a 'Download Files' section with a 'File type' dropdown menu (Standard Projections, Special Aggregates, Documentation, Archive) and a 'Major topic / Special groupings' dropdown menu (Most used, Population, Fertility, Mortality, CSV format). The text explains that the CSV files are meant for bulk processing in statistical softwares like R and Stata. A list of columns is provided: SortOrder (numeric), LocID (numeric), Notes (string), ISO3_code (string), ISO2_code (string), and SDMX_code (string).

The screenshot shows the World Bank Data Catalog website. The header includes the World Bank logo and navigation links: HOME, DATA, COLLECTIONS, GETTING STARTED, FAQs, and LOGIN. The main content area is titled 'World Development Indicators'. Below this, there is a 'Metadata last updated on - Sep 23, 2022' section. The text describes the World Development Indicators (WDI) as the primary World Bank collection of development indicators. A 'Compare' button and a 'Version' dropdown menu are visible. Below the main text, there are three sections: 'Overview', 'Indicators', and 'Citations'. A 'Data Updates and Errata' section is also present. On the right side, there is a 'Data Access and Licensing' section with a 'Classification: Public' label and a 'License: Creative Commons Attribution 4.0' label. A 'Contact' section with an email address 'data@worldbank.org' and a 'Topics' section are also visible.

Clean energy vs emissions per capita



Share of world population vs emissions

