



# UNdata Visualizations

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# UNdata

## <http://data.un.org>

Data Warehouse; main UNSD data dissemination platform

34 databases from 19 international agencies, >60 mn records

Replaced various preceding UNSD dissemination systems;  
Significantly improved efficiency and reduced costs

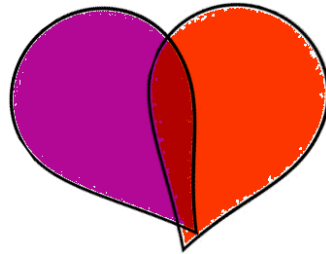
Single user interface over multiple statistical databases

Text search over data

SDMX API, based on Eurostat's SDMX Reference Infrastructure software



# UNdata Visualizations Rationale



Provide data analysis tools for

**1. Information consumers**

**2. Information producers**



## How?

### 1. Information consumers

Showcasing UNdata databases

Telling stories and providing attractive visualizations

Enabling comparisons, time series visualization



### 2. Information producers

Providing tools to facilitate development of commonly used charts

Using SDMX through the UNdata API



# UNdataVIS : Challenges

Data gaps

Political issues

Variety of subjects

Interaction



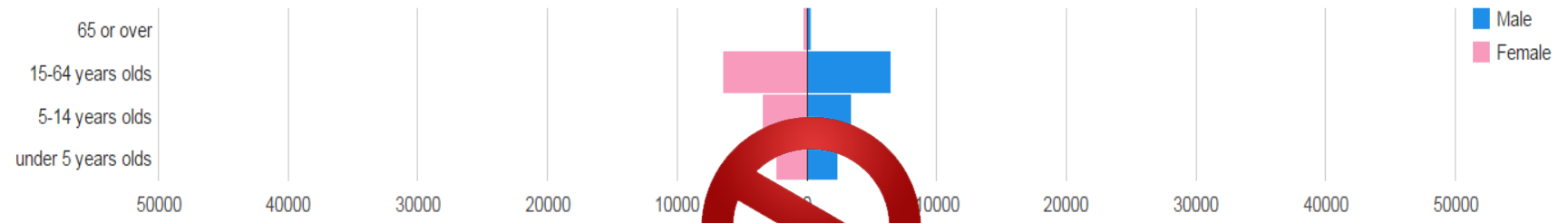
# UNdataVIS : Challenges Examples

## AFG 1975

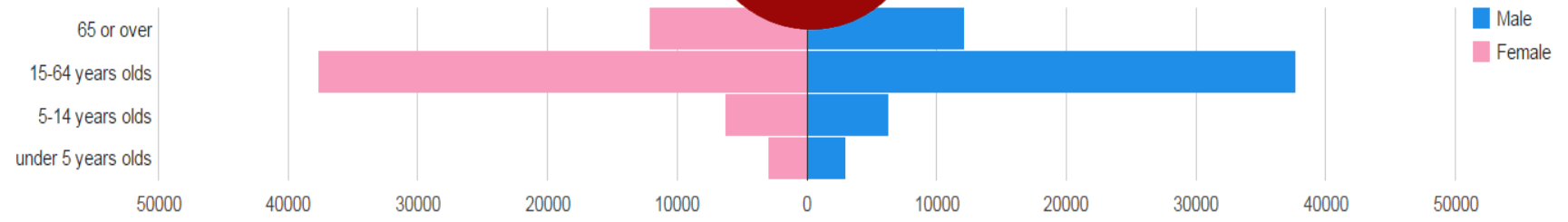
Delete Pyramid  Overlap

[Start](#) [Stop](#) 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055 2060 2065 2070 2075 2080 2085 2090 2095 2100

### 1975



### 2100





# UNdataVIS : Challenges Examples

**Countries**  
Select all | Clear all

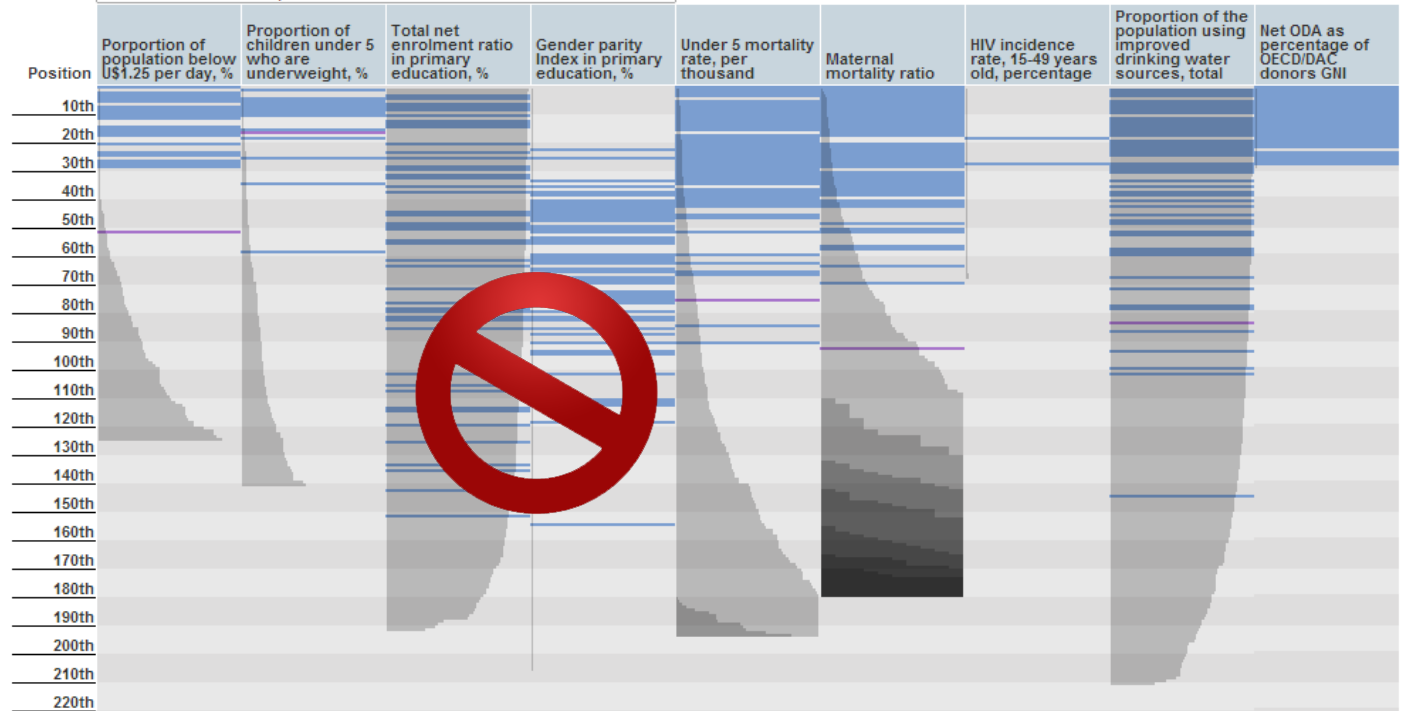
- Bolivia
- Bosnia and Herzegovina
- Botswana
- Brazil
- British Virgin Islands
- Brunei Darussalam
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic

**Regional groups**  
Select all | Clear all

- Developed regions
- Northern Africa
- Sub-Saharan Africa
- South-Eastern Asia
- Eastern Asia
- Southern Asia
- Western Asia
- Caucasus & Central Asia
- Oceania
- Latin America & the Caribbean

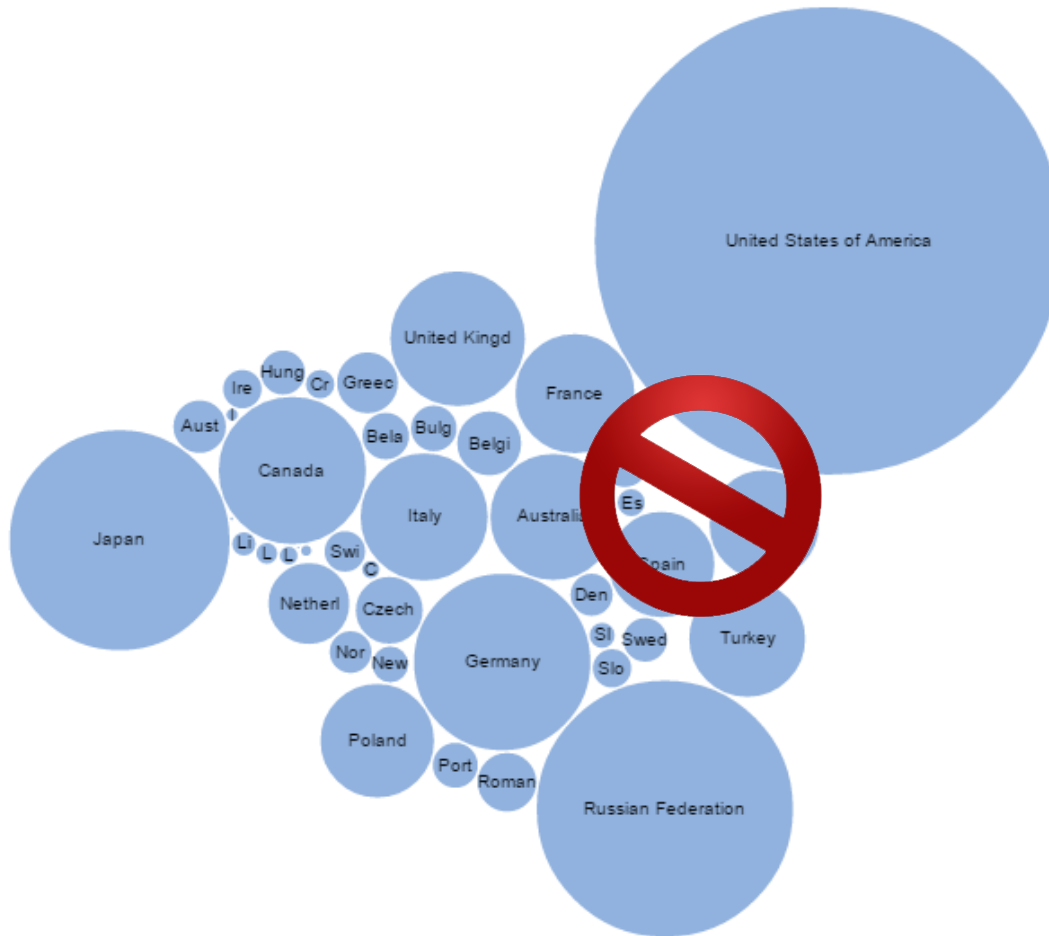
## Global performance ranking

Countries' values x position in the latest data available





# UNdataVIS : Challenges Examples

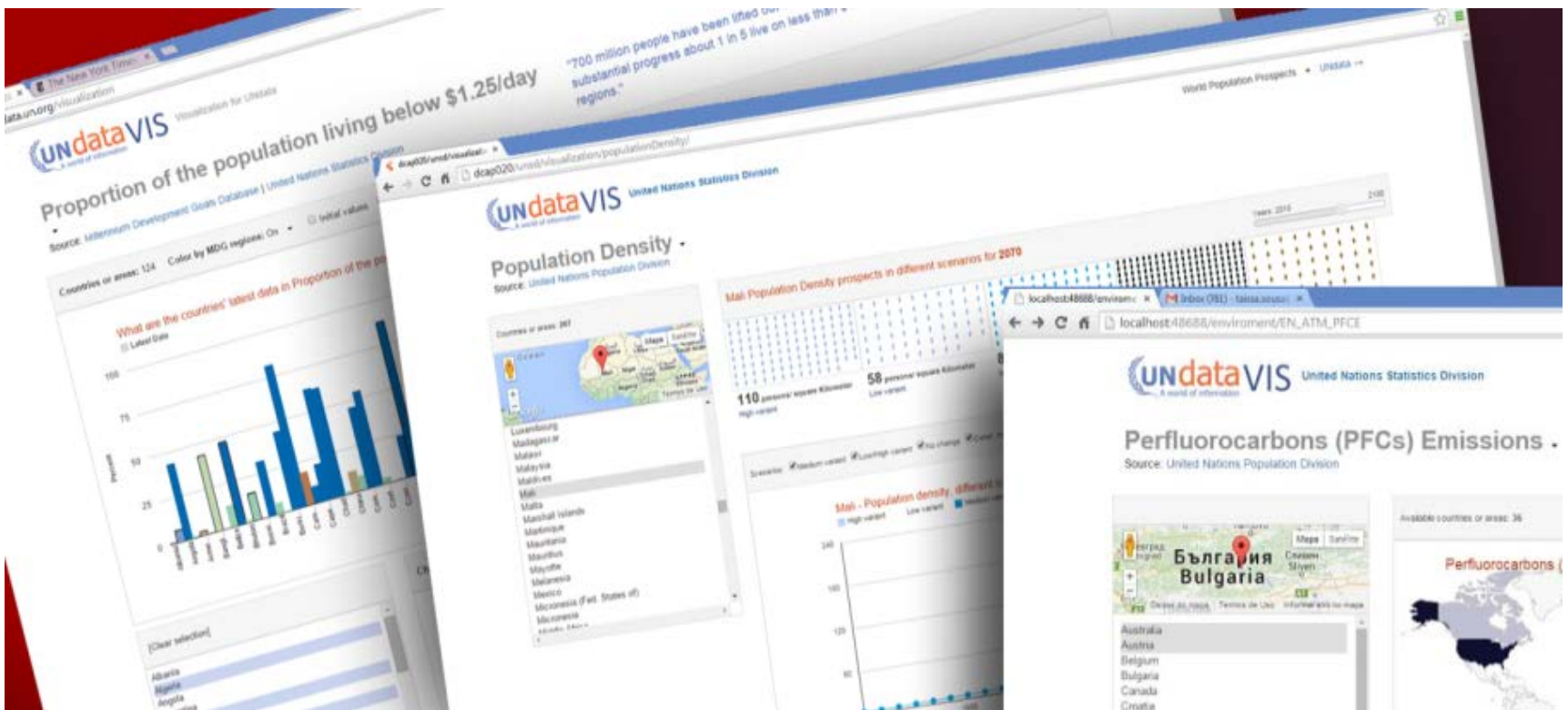






# Product : UNdataVIS

MGDs, Population, and GHG Visualizations

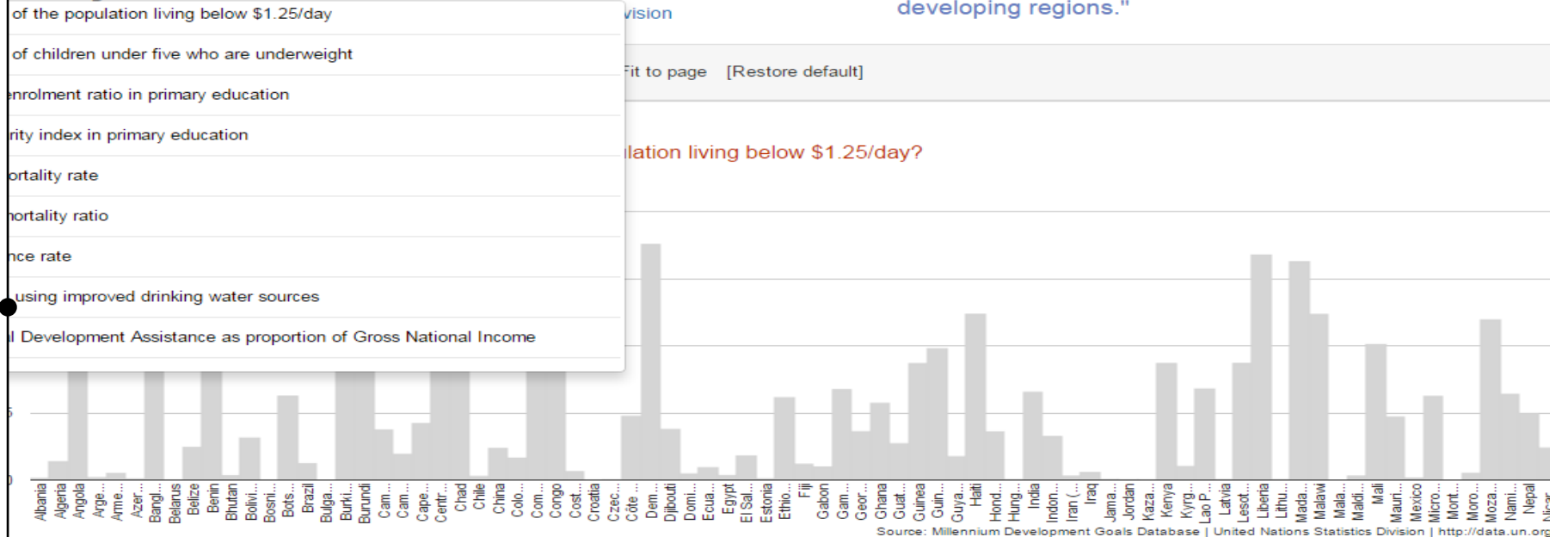


# UNdataVIS : MDGs visualizations

UNdataVIS  
World of information

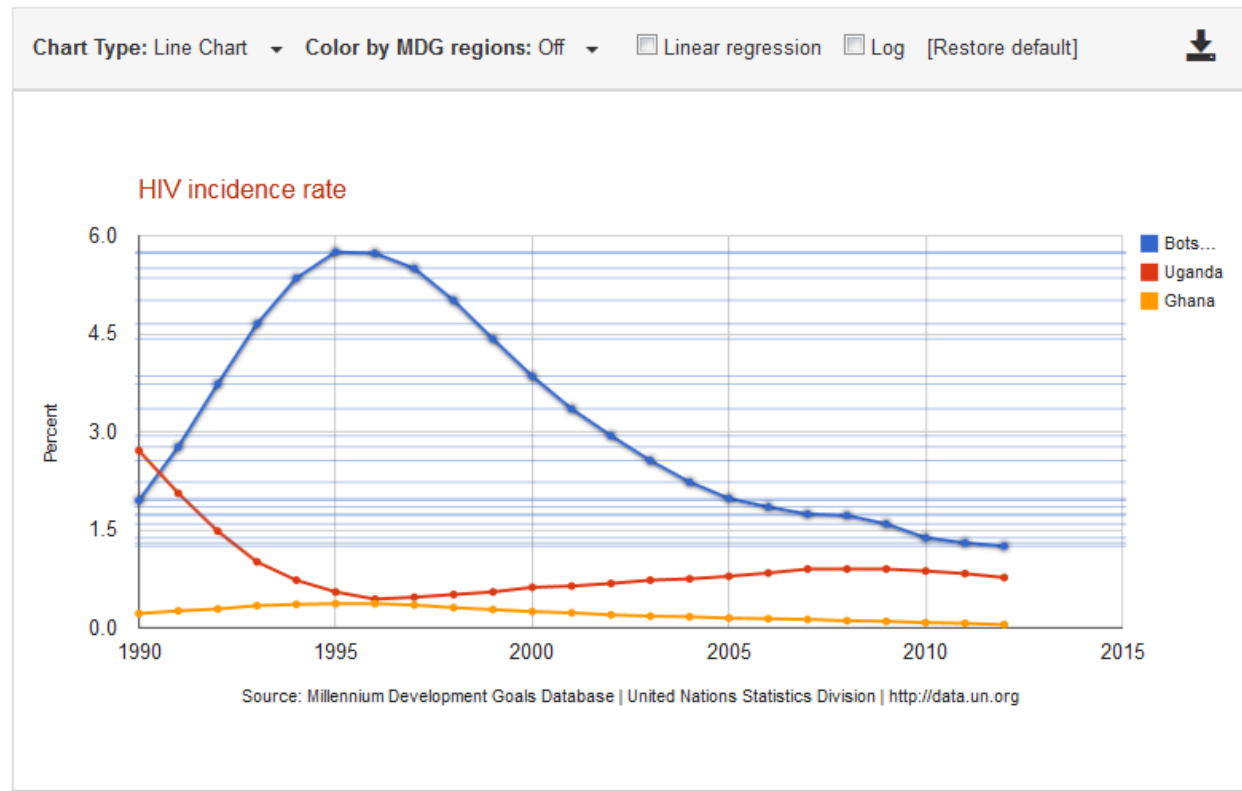
## Proportion of the population living below \$1.25/day

"700 million people have been lifted out of extreme poverty. Substantial progress about 1 in 5 live on less than \$1.25/c in developing regions."



# UNdataVIS : MDGs visualizations

- [Clear selection]
- Burundi
  - Cambodia
  - Cameroon
  - Chad
  - Colombia
  - Congo
  - Côte d'Ivoire
  - Democratic Republic of the Congo
  - Djibouti
  - Dominican Republic
  - Eritrea
  - Ethiopia
  - Gabon
  - Gambia
  - Georgia
  - Ghana
  - Guinea-Bissau
  - Haiti
  - Indonesia
  - Jamaica
  - Kenya
  - Kyrgyzstan
  - Lesotho

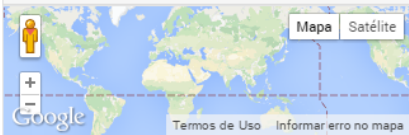


Botswana

# UNdataVIS : World Population Prospects

## Total population ▾

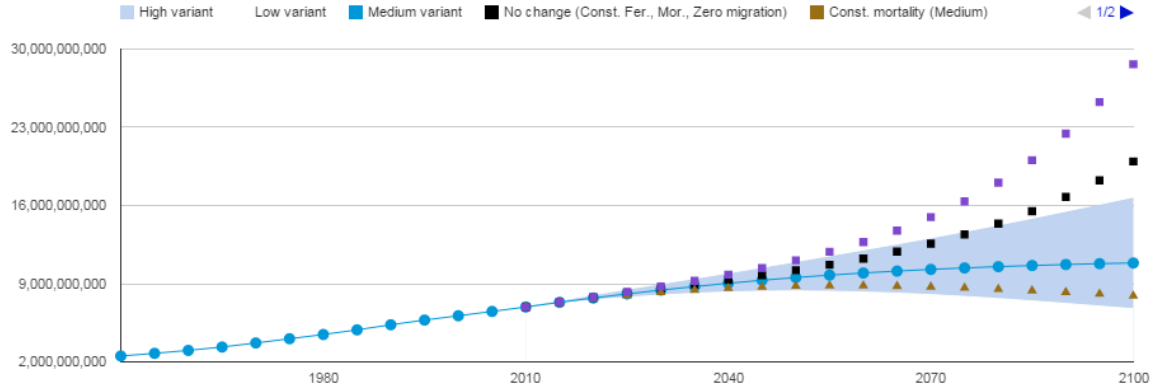
- Total population (scenario, sex, age, location)
- Population growth rate, births, reproduction, deaths & migration
- Population Density



- Afghanistan
- Africa
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antigua and Barbuda
- Areas not elsewhere specified
- Argentina
- Armenia
- Aruba
- Asia
- Australia
- Australia/New Zealand

Scenarios:  Medium variant  Low/High variant  No change  Const. mortality  Const. Fertility  Instant replacement  Zero migration

### World - Total population, different scenarios

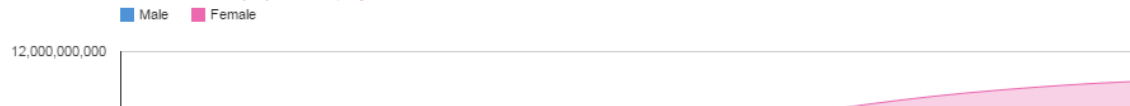


Source: World Population Prospects: The 2012 Revision | United Nations | data.un.org

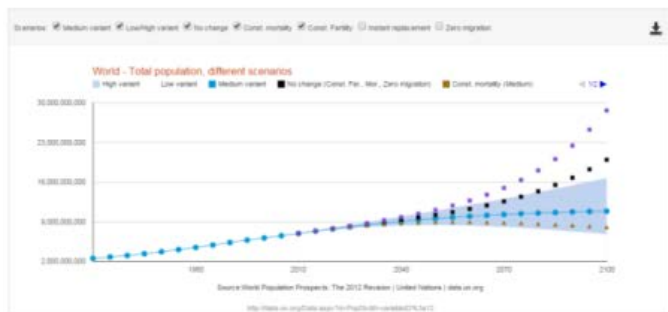
<http://data.un.org/Data.aspx?d=PopDiv&f=variableID%3a12>

Sexes:  Male  Female

### World - Total population, by sex

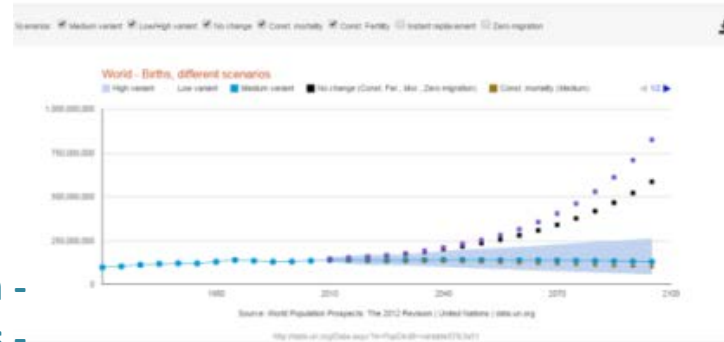
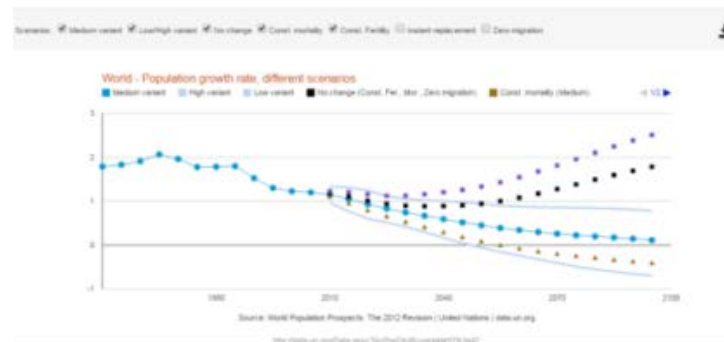
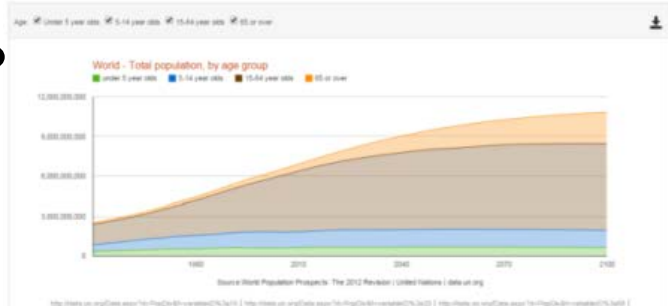
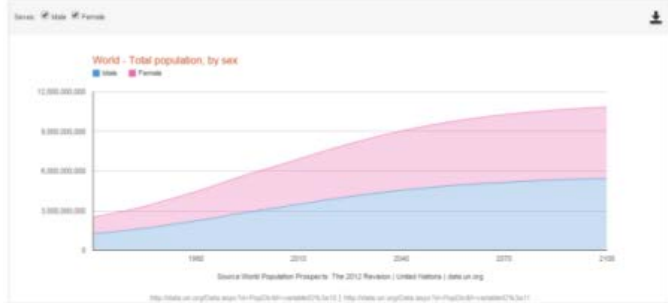


# UNdataVIS : World Population Prospects



## Total population

- by scenario
- by sex
- by age
- by location



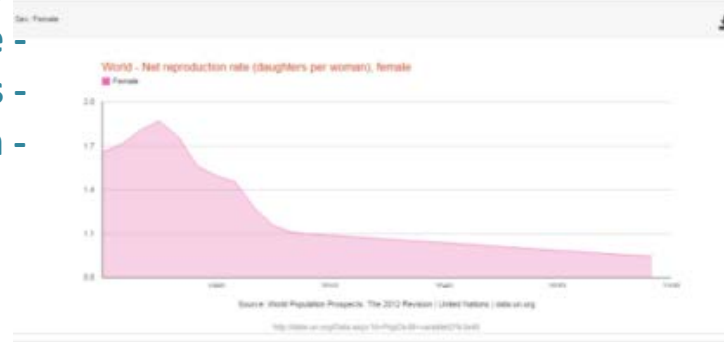
## Population growth -

## Births -

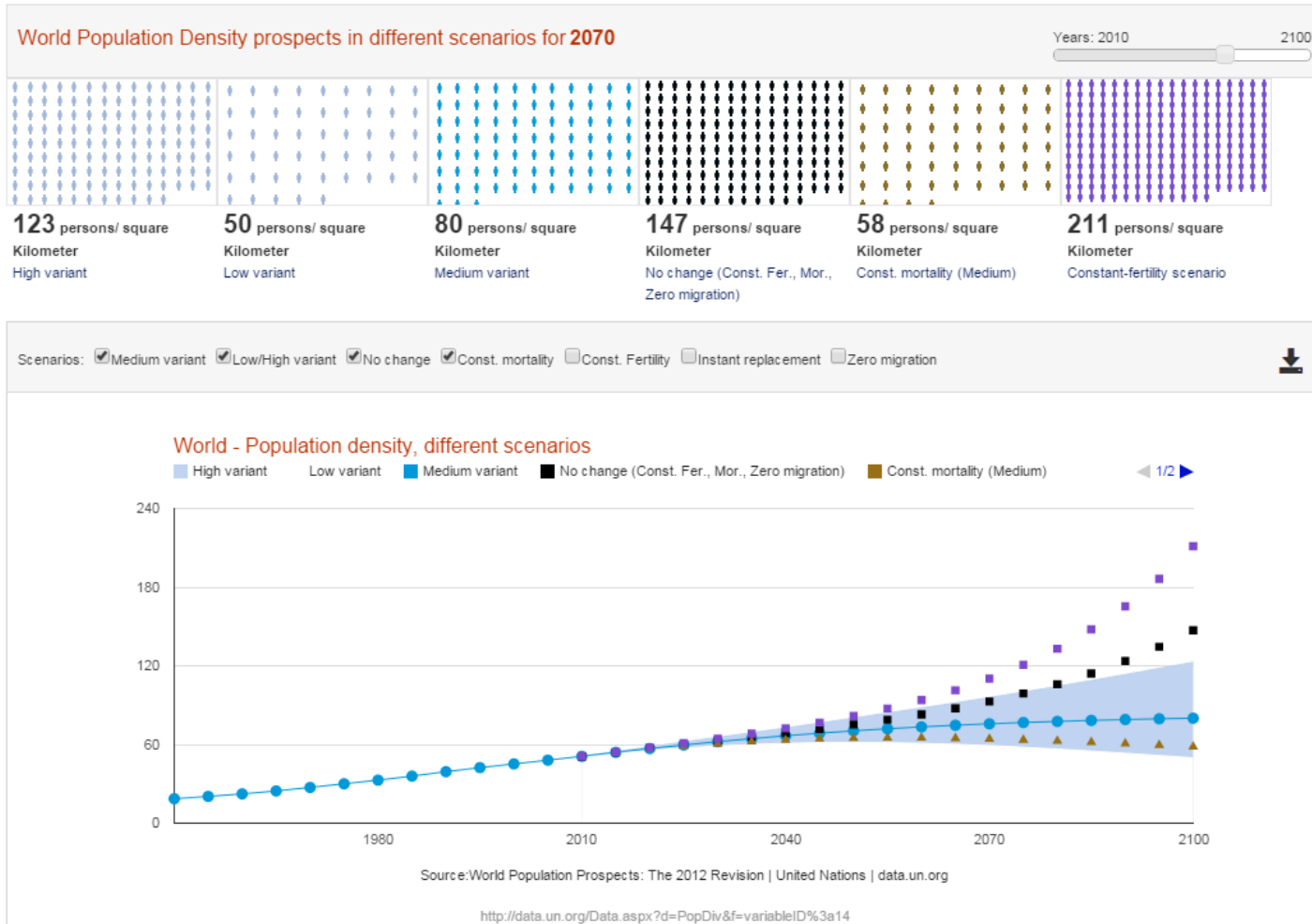
## Reproduction rate -

## Deaths -

## Net migration -



# UNdataVIS : World Population Prospects

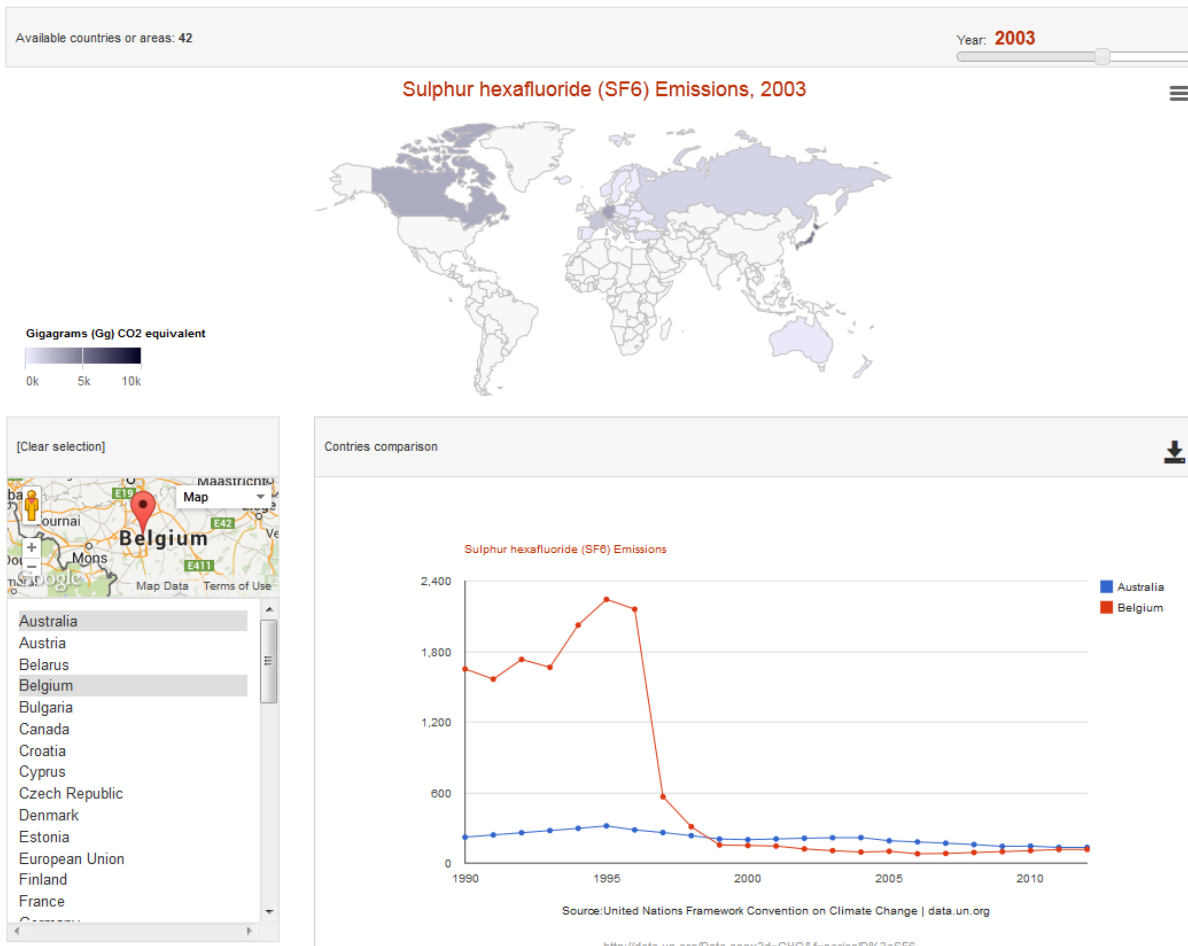




# UNdataVIS : GHG Inventory

## Sulphur hexafluoride (SF6) Emissions

Source: United Nations Framework Convention on Climate Change





United Nations  
Statistics Division

# Product:

# SDMX Visualization Package

A toolkit to enable chart design using SDMX data



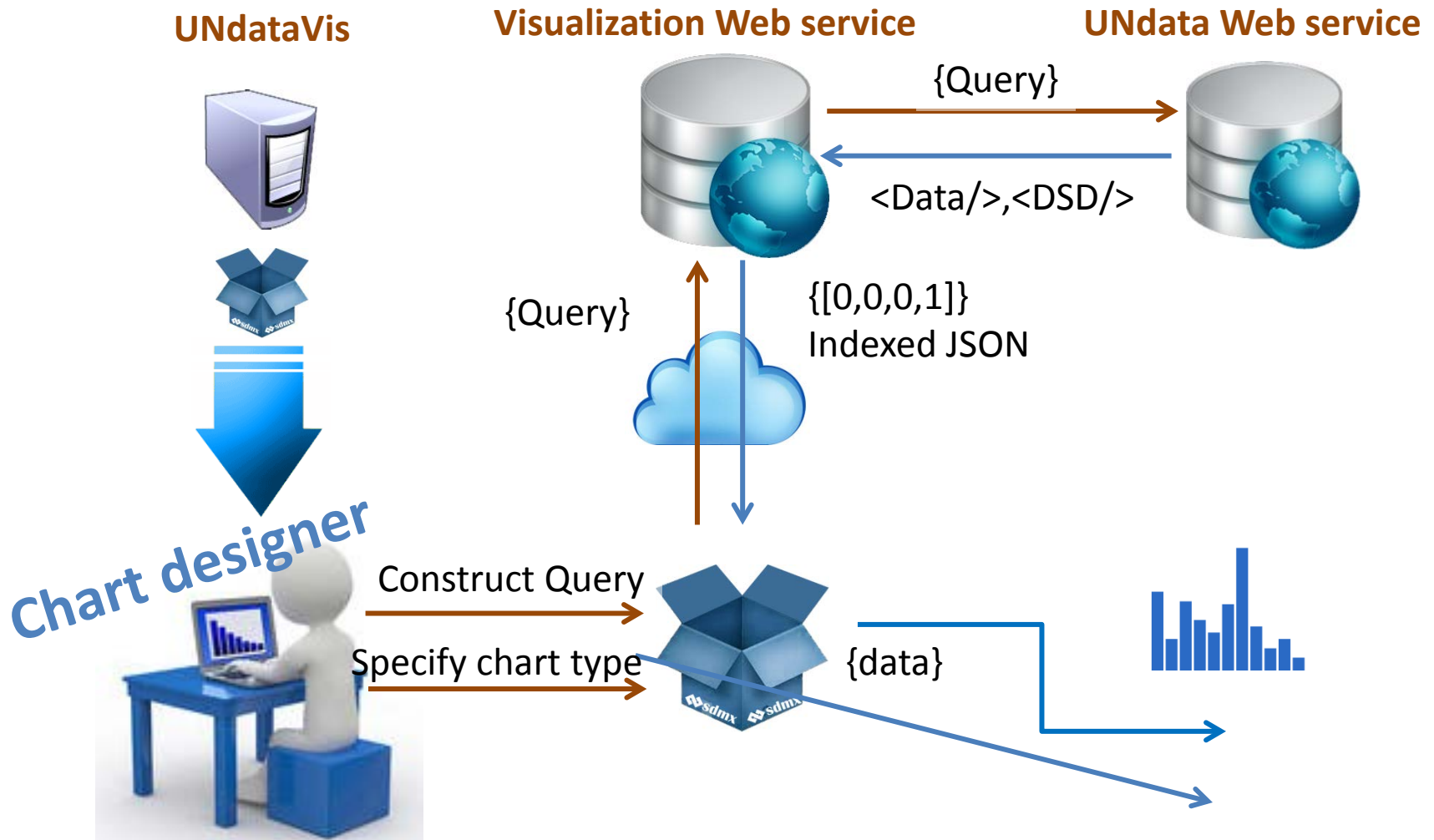


Few tools for SDMX-JSON available yet

Must implement custom transformations

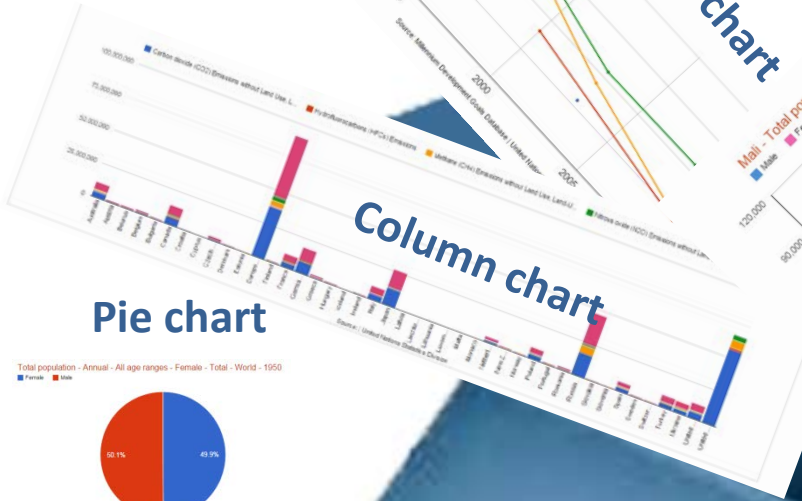
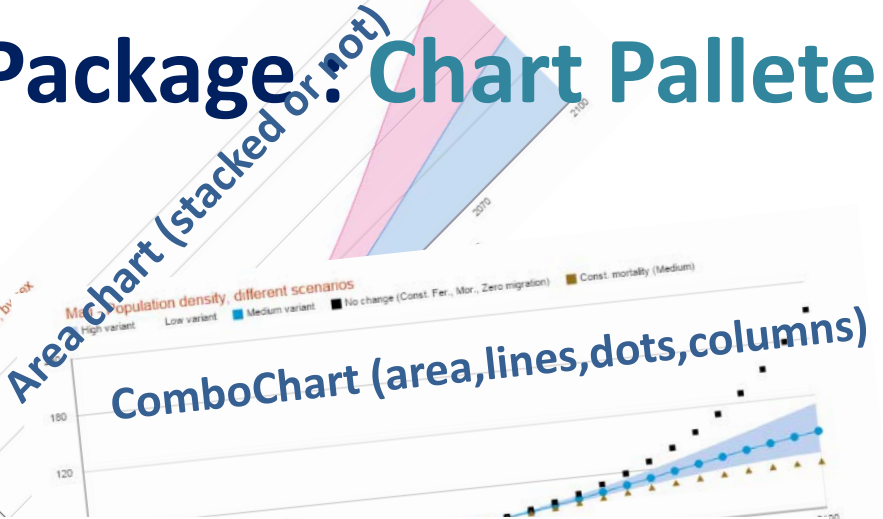
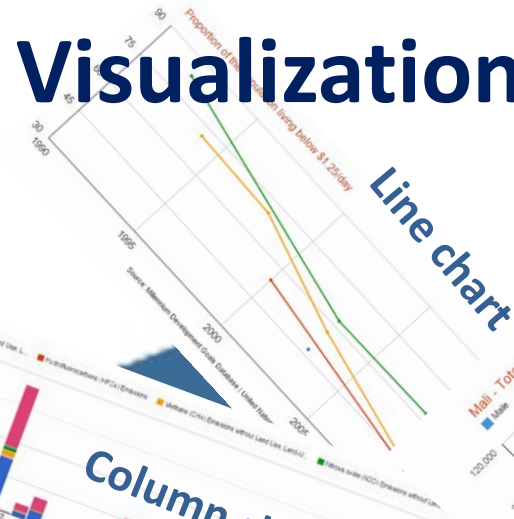


# SDMX Visualization Package : Architecture





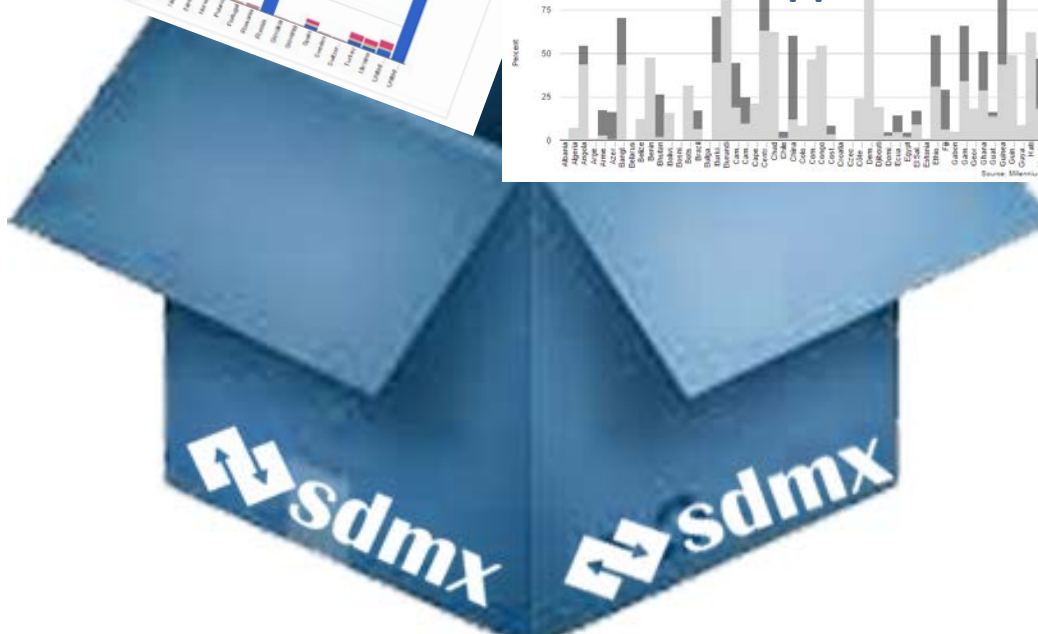
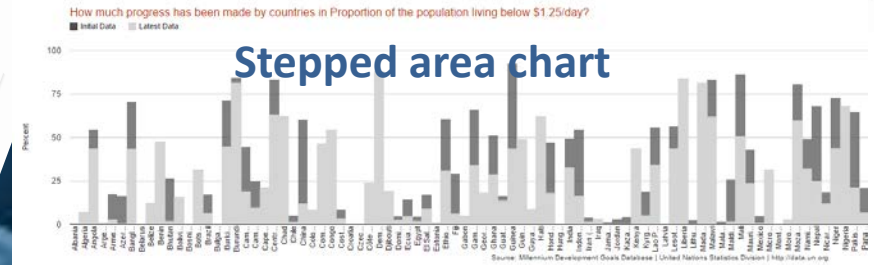
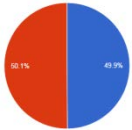
# SDMX Visualization Package: Chart Palette



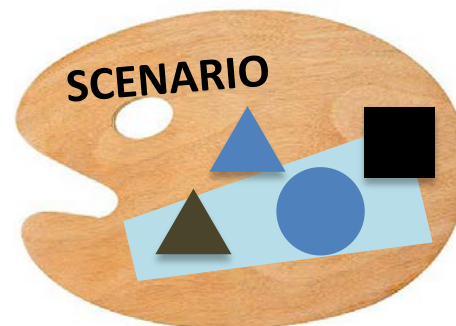
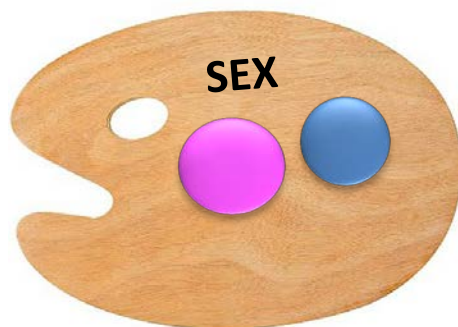
Pie chart

Total population - Annual - All age ranges - Female - Total - World - 1950

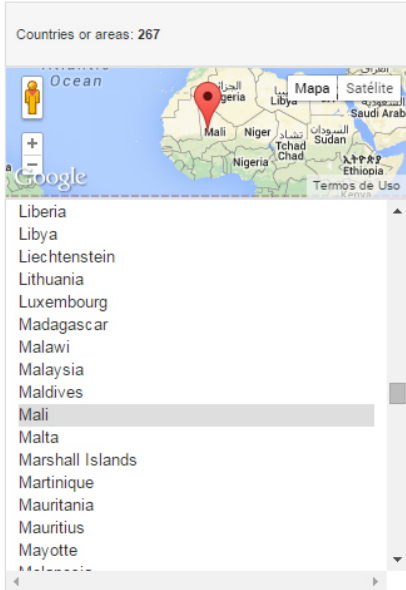
Female Male



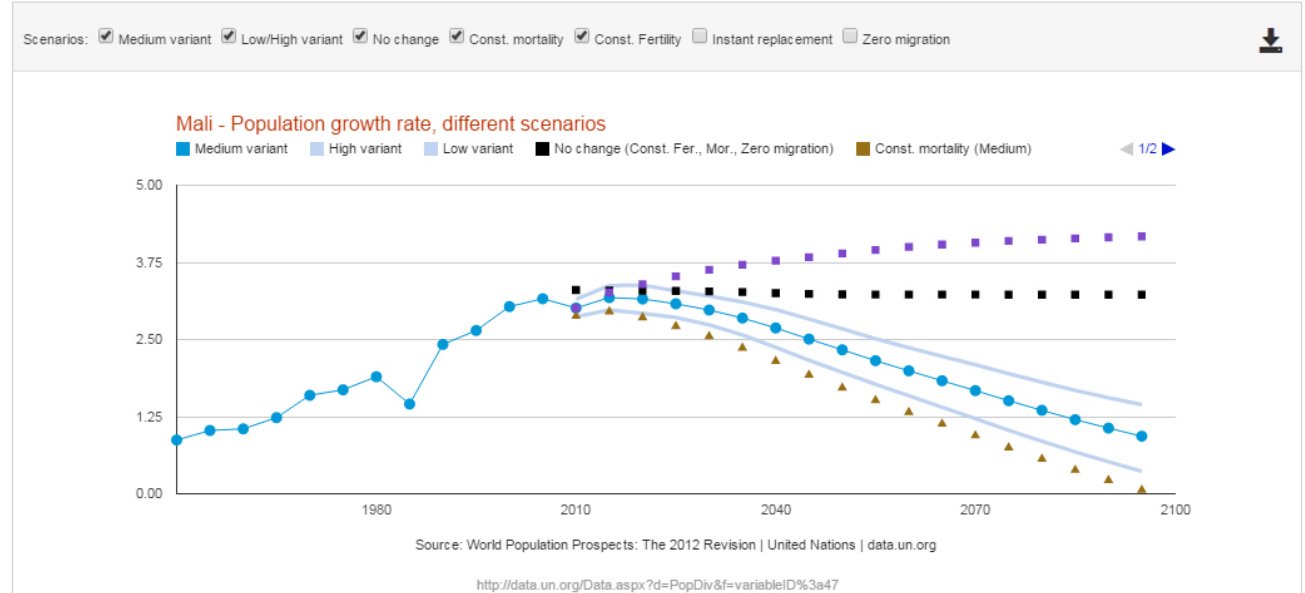
# SDMX Visualization Package : Design Pallete



# SDMX Visualization Package : Other objects

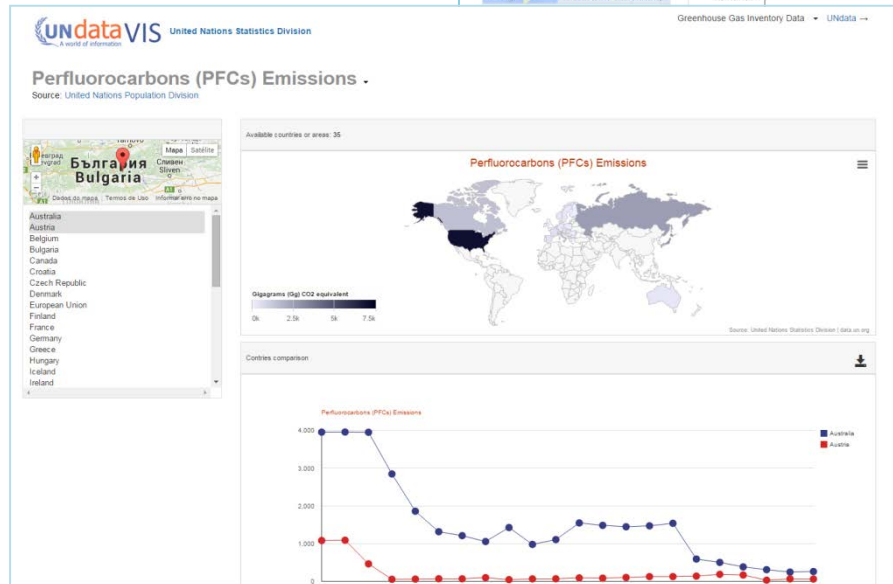
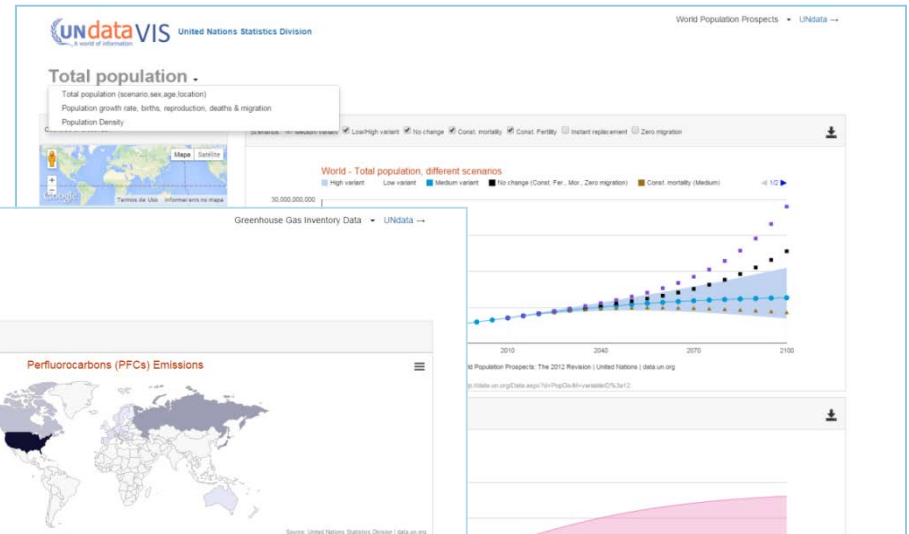


Interaction  
Selection menu



Frame  
Source URL  
Filters

# SDMX Visualization Package : Implementation





# Conclusion

**UNdataViS** uses the **SDMX visualization package** and adds customizations.

The **SDMX Visualization Package** facilitates the use of SDMX data and chart design by data analysts.



United Nations  
Statistics Division

# Thank you!

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