

Friday Seminar on Emerging Issues

## The Data Revolution in Action

Vision of a federated system of SDG data hubs and innovation platforms

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MARCH 2, 2018

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WORLD BANK

# Make Data Convenient

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# The WDI Experience



## WORLD DEVELOPMENT INDICATORS

# 2017



### World view

| Year | Population (mill.) | GDP (billion USD) | GDP per capita (USD) | Growth rates (%) |     |            | Poverty (percent of population) |              |
|------|--------------------|-------------------|----------------------|------------------|-----|------------|---------------------------------|--------------|
|      |                    |                   |                      | Population       | GDP | Per capita | Below \$1.90                    | Below \$2.00 |
| 2017 | 7.5                | 150,000           | 20,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2016 | 7.4                | 145,000           | 19,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2015 | 7.3                | 140,000           | 19,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2014 | 7.2                | 135,000           | 18,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2013 | 7.1                | 130,000           | 18,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2012 | 7.0                | 125,000           | 17,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2011 | 6.9                | 120,000           | 17,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2010 | 6.8                | 115,000           | 16,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2009 | 6.7                | 110,000           | 16,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2008 | 6.6                | 105,000           | 15,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2007 | 6.5                | 100,000           | 15,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2006 | 6.4                | 95,000            | 14,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2005 | 6.3                | 90,000            | 14,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2004 | 6.2                | 85,000            | 13,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2003 | 6.1                | 80,000            | 13,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2002 | 6.0                | 75,000            | 12,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2001 | 5.9                | 70,000            | 12,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 2000 | 5.8                | 65,000            | 11,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1999 | 5.7                | 60,000            | 11,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1998 | 5.6                | 55,000            | 10,500               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1997 | 5.5                | 50,000            | 10,000               | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1996 | 5.4                | 45,000            | 9,500                | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1995 | 5.3                | 40,000            | 9,000                | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1994 | 5.2                | 35,000            | 8,500                | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1993 | 5.1                | 30,000            | 8,000                | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1992 | 5.0                | 25,000            | 7,500                | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1991 | 4.9                | 20,000            | 7,000                | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |
| 1990 | 4.8                | 15,000            | 6,500                | 1.2              | 7.5 | 7.5        | 10.0                            | 10.0         |

# Data are often far from Convenient

SDG Indicators  
Global Database

Can only download one country or indicator at a time

Explore the data:  
**By country or area** By SDG indicator

World

Indicator : 1.1.1 - Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)

| Series Type | Series Description  | Country or Area Code | Country or Area Name        | LDC | LLDC | SIDS | Frequency | Source type   |
|-------------|---|----------------------|-----------------------------|-----|------|------|-----------|---------------|
| 10          | Proportion of population below the international poverty line of US\$1.90 per day | MDG_WORLD            | World                       |     |      |      | Annual    | Not available |
| 10          | Proportion of population below the international poverty line of US\$1.90 per day | SDG_NASUR            | Europe and Northern America |     |      |      | Annual    | Not available |
| 10          | Proportion of population below the international poverty line of US\$1.90 per day | BLR                  | Belarus                     |     |      |      | Annual    | Not available |
| 10          | Proportion of population below the international poverty line of US\$1.90 per day | BGR                  | Bulgaria                    |     |      |      | Annual    | Not available |
| 10          | Proportion of population below the international poverty line of US\$1.90 per day | CZE                  | Czechia                     |     |      |      | Annual    | Not available |

World Economic Outlook Database, October 2017

Step 4 of 5

5-step query tool

4. Select Date Range

Date Range  
Start Year: 2015 End Year: 2022

Advanced Settings (Optional)

Notes  
 Append Subject Notes  
 Append Country/Series-specific Notes

Fields to show on report

...for Country  
 WEO Country Code  
 ISO Alpha-3 Code

...for Subject  
 Subject Descriptor  
 WEO Subject Code

Sort Order  
 by Country then Subject  by Subject then Country

Decimal Symbol  
 "." e.g. 100.99  "," e.g. 100,99

Blank Rows  
 Show all rows  Remove rows with no data

# Make Data Convenient: Making Data Open

**WORLD DEVELOPMENT INDICATORS 2017**

**World view**

| Country | Population (millions) | Population growth (annual %) | Urban population (millions) | Urban population growth (annual %) | Mean national income (PPP, \$) | Human Development Index (HDI) | Life expectancy at birth (years) | Gender inequality index (GII) | World Bank ID |
|---------|-----------------------|------------------------------|-----------------------------|------------------------------------|--------------------------------|-------------------------------|----------------------------------|-------------------------------|---------------|
| Algeria | 35.1                  | 0.2                          | 17.2                        | 0.2                                | 10,710                         | 0.72                          | 75.2                             | 0.1                           | SD            |
| Algeria | 35.1                  | 0.2                          | 17.2                        | 0.2                                | 10,710                         | 0.72                          | 75.2                             | 0.1                           | SD            |
| Algeria | 35.1                  | 0.2                          | 17.2                        | 0.2                                | 10,710                         | 0.72                          | 75.2                             | 0.1                           | SD            |

New to this site? [Start Here](#)

[DataBank](#) [Microdata](#) [Data Catalog](#)

## World Bank Open Data

Free and open access to global development data

Search data e.g. GDP, population, Indonesia

Browse by [Country](#) or [Indicator](#)

**RECENT**

**Over 1.25 Million People are Killed on the Road Each Year**

D. Mariano, Jan 08, 2018

**Data science competition: predicting poverty is hard - can you do it better?**

T. Khokhar, Jan 08, 2018

**Going Deeper into TCdata360 Data Availability Leaders and Lagers**

R. Onglao, Jan 02, 2018

**WHAT YOU CAN LEARN WITH OPEN DATA**

**Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)**

44.3

27.2

10.2

Data from World Bank

**Extreme Poverty**

The proportion of the world's population living in extreme poverty has dropped significantly

**Year in Review: 2017 in 12**

# Open data doesn't have to be complex

- ✓ Not only query tools – linkable pages with data that can all be found by Google
- ✓ Bulk downloads of CSV/XLS files + APIs
- ✓ Standard licenses e.g. Creative Commons Attribution.

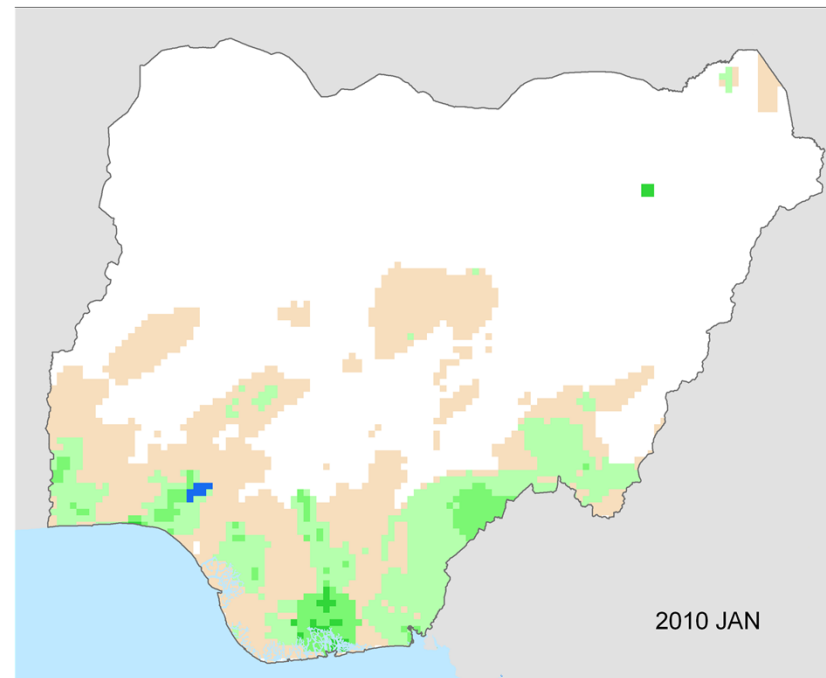
The screenshot shows the World Bank DataBank interface for 'World Development Indicators'. The page is in English and features a search bar, a list of countries, and a 'Preview' section. The 'Download options' menu is open, showing options for Excel, CSV, and Tabbed TXT. The 'Preview' section includes a 'Please select variables from each of the dimensions to view a report. You can select panel or by clicking the links above.' and an 'Apply Changes' button.

Make Data Convenient:

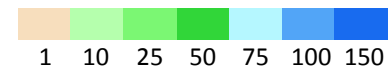
## Making Data (*Technically*) Interoperable

### Technical Interoperability

- Data formats (downloadable, machine-readable)
- Geo-referencing
- Open source tools



Rainfall (mm)



Make Data Convenient:

# Making Data (*Conceptually*) Interoperable

## Conceptual Interoperability

- ❑ Extensible, open-ended, modifiable standards
- ❑ Good metadata
- ❑ Future-proofing our data ecosystem
- ❑ “Premature optimization is the root of all evil” – Donald Knuth

Humanitarian Exchange Language  
hxlstandard.org

#HXL

### Places

|            |                              |
|------------|------------------------------|
| #region    | multi-country region         |
| #country   | country name                 |
| #adm1      | administrative               |
| ..#adm5    | subdivisions                 |
| #adm1+code | admin level 1 p-code         |
| #loc       | place (camp, building, etc.) |
| #geo       | geographical info            |
| #geo+lat   | latitude                     |
| #geo+lon   | longitude                    |

### People and households

|              |                      |
|--------------|----------------------|
| #affected    | number affected      |
| #inneed      | number in need       |
| #targeted    | number targeted      |
| #reached     | number reached       |
| #population  | population category  |
| #beneficiary | beneficiary category |

[hxlstandard.org](http://hxlstandard.org)

### Responses and other operations

|             |                          |
|-------------|--------------------------|
| #activity   | project or activity name |
| #org        | organisation name        |
| #contact    | contact info             |
| #sector     | sector or cluster name   |
| #subsector  | subsector name           |
| #indicator  | indicator name           |
| #capacity   | response capacity        |
| #output     | activity output          |
| #operations | operation-related info   |

### Crises and incidents

|           |                             |
|-----------|-----------------------------|
| #crisis   | crisis/emergency name       |
| #cause    | crisis or incident cause    |
| #impact   | crisis or incident impact   |
| #severity | crisis or incident severity |

### Extras

|              |                   |
|--------------|-------------------|
| #date        | day or period     |
| #status      | e.g. active       |
| #description | general text      |
| #meta        | general meta data |

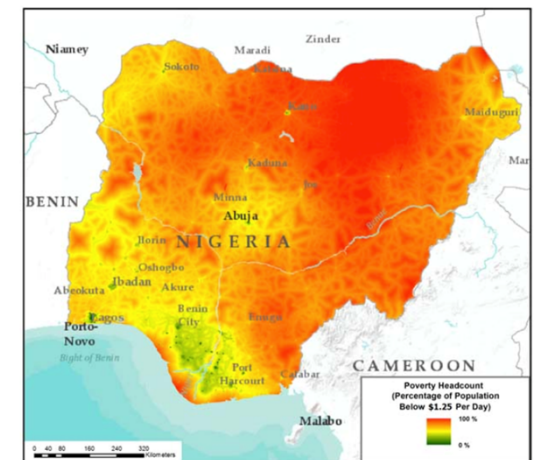
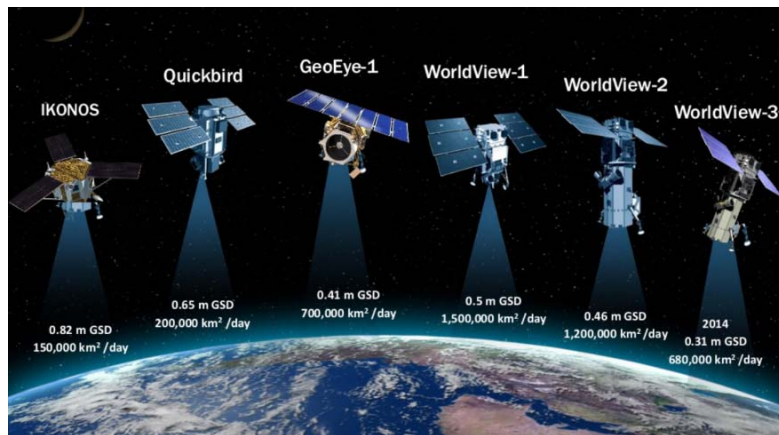


# Make Data Credible

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Make Data Credible:

# Relevance, Transparency, Reproducibility



Make Data Credible:

## Agile, Extensible Standards

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“Don’t let the perfect be the enemy of the good!”

# Learning Together

## Search and Share Development Data

Search Criteria:  All Words  Any Word

Search data e.g Income, Expenditure

25,799 Datasets available [Browse by data type](#) or [country/region](#)

### Featured Data



#### World Bank Open Data

The World Bank's Open Data initiative provides all users with open access to World Bank data.



#### Spatial Database For South Asia

This database is a repository of spatially disaggregated indicators for all countries of South Asia



#### World Subnational Boundaries

World Bank-approved subnational boundaries at the first and second administrative levels



#### Living Standards Measurement Study (LSMS)

The Living Standards Measurement Study (LSMS) is a research project that was initiated in 1980.



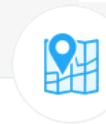
#### Time Series (20,855)

Datasets and Indicators level data that is a sequence of numbers collected at regular intervals over a period of time



#### Microdata (7,918)

Unit-level data obtained from sample surveys, censuses, and administrative systems



#### Geospatial (1,129)

Data that has explicit geographic positioning information included within it in either vector or raster format