COVID-19 DATA in HARVARD DATAVERSE

NIH Webinar on Sharing, Discovering, and Citing COVID-19 Data and Code in Generalist Repositories April 24, 2020 Mercè Crosas, Ph.D. University Research Data Management Officer Chief Data Science and Technology Officer, IQSS Harvard University

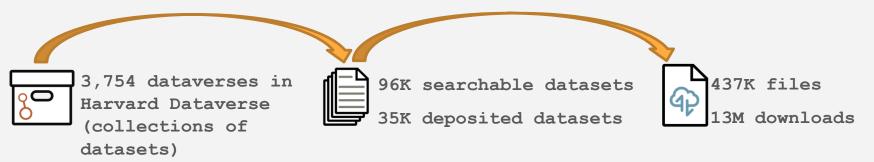
Picture of Barcelona public health professionals by Samuel Aranda for The New York Times



Dataverse



- Dataverse is an open-source software with a growing, active community
- Harvard Dataverse is one of the 56
 Dataverse repositories world-wide
- Open to all research domains
- Researchers can deposit for free
- New data curation services (fee-based)



COVID-19 Datasets in Harvard Dataverse

- 50 COVID-19 datasets with 2,043 data files deposited since February 7
- Total of **48,471 downloads** by April 23
- Include datasets on: COVID-19 statistics, social science studies to evaluate the effectiveness of government measures, survey data, Twitter data, gubernatorial responses, replication data for preprints

Example of COVID-19 datasets in Harvard Dataverse

POPULATION

COUNCIL

HARVARD Dataverse

India (1)

Add Data 👻 Search -

COVID-19 Research & Evaluations (Population Council)

Harvard Dataverse > Population Council Dataverse > COVID-19 Research & Evaluations

Partnering with national health ministries and other government agencies in sub-Saharan Africa, South Asia, and Latin are conducting COVID-19 public health and social science research to produce relevant and timely evidence to suppor evaluating the effectiveness of prevention and mitigation measures, and assessing longer-term health, social and econd

Search this dataverse	Q Find Advanced Search	Respondir
Dataverses (0)	1 to 3 of 3 Results	COVID-19
Datasets (3)	COVID-19-related knowledge, attitudes, and practices among adolesc	COMD-TA
Publication Year 2020 (3)	Archarya, Rajib; Gundi, Mukta; Ngo, Thoai D.; Pandey, Neelanjana Niranjan; Santhya, K.G.; White, Corinne; Zavier, A.J.F., 2020, "COV adolescents and young people in Bihar and Uttar Pradesh, India".	
Subject	UNF:6:bXN3j4YIR/3fmrYjvBY+kg== [fileUNF]	
Social Sciences (3)	To control the spread of COVID-19 in India and to aid the efforts of the Ministr and other non-governmental organizations are conducting research to assess	refevante anta thittery ev
Author Name		the spread of coronavi
Ngo, Thoai D. (3)	COVID-19-related knowledge, attitudes, and practices in urban slums	effectiveness of preven
White, Corinne (3) Pinchoff, Jessie (2)	Apr 22, 2020	
Abuya, Timothy (1)	Abuya, Timothy; Austrian, Karen; Isaac, Adan; Kangwana, Beth; M Mercy; Ochako, Rhoune; Pinchoff, Jessie; Tidwell, Ben; White, Co	abbeet minite and and
Archarya, Rajib (1)	in urban slums in Nairobi, Kenya*, https://doi.org/10.7910/DVN/VC	the pandemic.
More.	To control the spread of coronavirus, the Kenyan Ministry of Health COVID-19 measures. Of concern are the densely overcrowded, poor urban slums where	
Keyword Term	COVID-1	READ MORE
COVID-19 (3)		
attitudes (3) coronavirus (3)	COVID-19-related knowledge, attitudes, and practices among decision Apr 20, 2020	
knowledge (3)		A POST OF THE PARTY OF THE PARTY OF
indigenous (1)	White, Corinne; Zamora, Ramón, 2020, "COVID-19-related knowle municipalities in Guatemala", https://doi.org/10.7910/DVN/30WUC	
More.	Indigenous communities are often socially and economically marginalized whi	ch makes them particularly yulgerable to the impact of COVID-19
Geographic Coverage Country / Nati		
Guatemala (1)	program	- •

Responding to the **COVID-19** Pandemic

Our Research

The Population Council is producing relevant and timely evidence to help control the spread of coronavirus, evaluate the effectiveness of prevention measures, and assess immediate and longer-term effects of the pandemic.

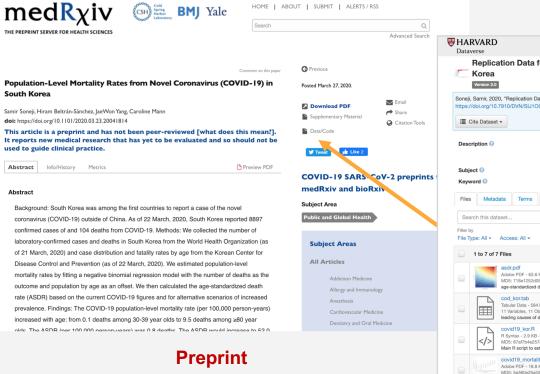
Search

DONATE

News & Views

Events

Example of COVID-19 replication data



Abstract

Abstract

Replication Data + Code

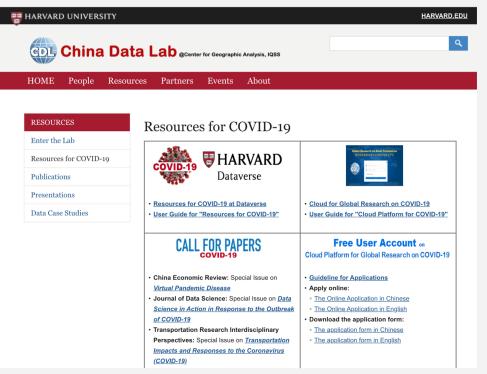
HARVARD Dataverse		Add Data 👻	Search 👻	About Us	er Guide Support	Sign Up	Log In
Replication Data for: Popul	ation-Level Mortality R	ates from N	ovel Coro	navirus (C	OVID-19) in So	outh	
Soneji, Samir, 2020, "Replication Data for: Popula				Korea",	Dataset Metrics	9	
https://doi.org/10.7910/DVN/SIJ10C, Harvard Dataverse, V2, UNF:6:5i89rp8FiJEdtA		Learn about Data Citation Standards.			45 Downloads 📀		
nov cas Subject I	s set of replication files enables publi rel coronavirus (COVID-19) based on le fatality rates by age. (2020-03-22) dicine, Health and Life Sciences VID-19						
Files Metadata Terms Versions							
Search this dataset	Q Find						
File Type: All - Access: All -						11 Sort	t v
1 to 7 of 7 Files						▲ Download	t v
Adobe PDF - 63.6 KB - Apr 21, 202 MD5: 718e1252d059ad8373434a7d age-standardized death rate for CO		rcount			ili Explore	▲ Downloa	ad
Cod_kor.tab Tabular Data - 584 B - Apr 21, 2020 11 Variables, 11 Observations - UN leading causes of death, south kore	F:6:7N7aDBJbT15yKEsW8h4jPw==				tit Explore ◄	▲ Download	i v
Covid19_kor.R R Syntax - 2.9 KB - Apr 21, 2020 - 1 MD5: 87af7b4e257d6d88b95c6258 Main R script to estimate mortality of					ilit Explore	▲ Downlos	ad
Covid19_mortality_rates_south Adobe PDF - 18.8 KB - Apr 21, 202 MD5: 5e360e25a53eae27d279fca8 COVID-19 population-level mortality	0 - 0 Downloads 35de9228				Explore	₹ Downloa	ad
functions.R R Syntax - 11.2 KB - Apr 21, 2020 - MD5: a84364baf08856a9c986431 Functions necessary for calculation	182dd9e1				it Explore	± Downloa	ad

Most popular dataset in Harvard Dataverse in 2020

HARVARD Dataverse	Add Data 👻	Search 👻	About Use	r Guide Support	Sign Up Log	In	
Data (China Data Lab)							
Harvard Dataverse $>$ China Data Lab Dataverse $>$ Resources for COVID-19 $>$ Data $>$	World COVID-19 Da	aily Cases wit	h Basemap				
World COVID-19 Daily Cases with Basemap				×.	Contact C Share		
China Data Lab, 2020, "World COVID-19 Daily Cases with Basemap", https://doi.org/10.7910/DVN/L20LOT, Harvard Dataverse, V15, UNF-6:sy5lKepNnkt2Jw1bs3lmvA== [fileUNF]					Dataset Metrics ()		
I≣ Cite Dataset -	Learr	earn about Data Citation Standards.					
Subject C Earth and Environmental Sciences; Medicine, Hei Keyword C 2019-nCoV, statistics Files Metadata Terms Versions Search this dataset Q Find Filter tby Filter tby: All + Access: All +					It Sort -		
1 to 4 of 4 Files					Ł Download -		
Countries-Confirmed.tab Tabular Data - 1015. KB - Apr 21, 2020 - 127 Downloads 89 Variables, 251 Observations - UNF:6:9BkOMQnd09kw0fElumaTQ== Updated April 18, 2020				Explore -	Ł Download ◄		
Countries-Deaths.tab Tabular Data - 92.8 KB - Apr 21, 2020 - 57 Downloads 89 Variables, 251 Observations - UNF:8:GAVHNB4IUHu4+oVcRol/Awr== Updated April 18, 2020	al File Format (MS Exc lelimited a Format ole Metadata	cei Spreadsneet)					
Countries-Recovered.tab Tabular Data - 95.0 KB - Apr 21, 2020 - 44 Downloads 89 Variables, 251 Observations - UNF:6:v/+szB++ZrdBNrC/nOdHhg== Updated April 18, 2020	Countries-Recovered.tab Data File Citation Tabular Data - Apr 21, 2020 - 44 Downloads B9 Variables, 251 Observations - UNF-6:v/+szB++2rdBNC/hOdrhg== ## Explore -						
World_Map_0302.zip Shapefile as ZIP Archive 1.9 MB - Mar 13, 2020 - 608 Downloads MDS: ea350:c16666ed0000r7r110462356u34e35					Ł Download		

Published on February 20 5,466 Downloads 8,293 Page Views From China Data Lab

Resources for Novel Coronavirus Global Research



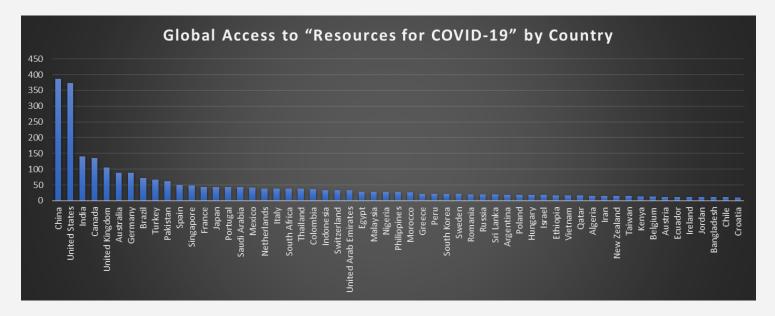
 Part of a larger NSF IUCRC "Spatial Data Lab" project

- Focuses on COVID-19 data and analytical tools (GIS, Statistics)
- Enables access to cloud computing resources
- Facilitates creating, sharing analytical workflows
- All datasets published in Harvard Dataverse
- Datasets include: China census, socio-economic data, China, US, and Global daily COVID-19 data, health facilities, policies and regulations, climate, population mobilities.
- Datasets updated weekly

Credit to Wendy Guan, Tao Hu (IQSS, CGA, Harvard University)

Resources for Novel Coronavirus Global Research

- "Resource for COVID-19" dataverse has had more than 30,000 downloads
- Over 130 countries have accessed the datasets



Credit to Wendy Guan, Tao Hu (IQSS, CGA, Harvard University)

Making European Union COVID-19 Datasets FAIR

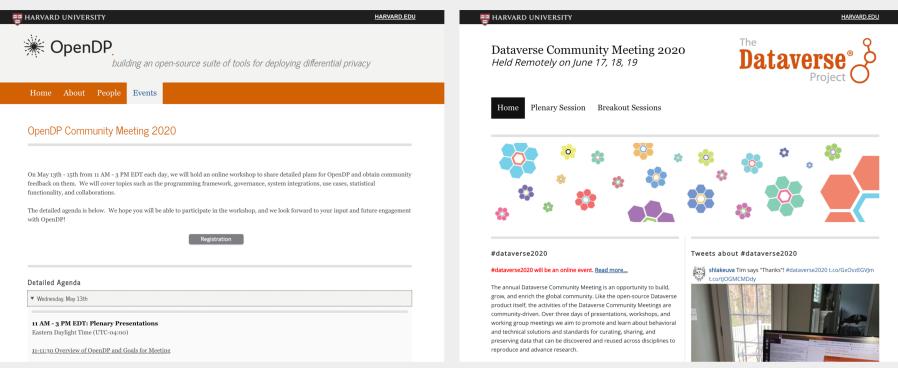
- In the European Union coronavirus datasets mostly not shared as FAIR data
- Some countries (Italy, Austria) publish their data on GitHub, without persistent identifiers
- Most countries share the official statistics as PDFs, sometimes with incorrect or missing data points
- In Spain and the Netherlands all data collected and processed by volunteers and shared on GitHub
- It's a big challenge to force official institutions to translate all their variables from the national language to English and use the same codebook for all countries to make data interoperable
- Slava Tykhonov from DANS-KNAW created an European COVID-19 data hub and archive with FAIR datasets in the Harvard Dataverse, updated daily: <u>https://dataverse.harvard.edu/dataverse/covid-19-eu</u>

Another interesting initiative that started collecting and processing coronavirus data through Harvard Dataverse is <u>CoronaWhy</u>, a global distributed organization, mobilizing volunteers and community partners to address the current challenge through data science, AI, and knowledge sharing.

Thanks and Upcoming Events

OpenDP Community Meeting, May 13-15, 2020: Session on Differential Privacy to Explore and Analyze COVID-19 sensitive data

Dataverse Community Meeting, June 17-19, 2020: Session on Global COVID-19 Data Sharing



@mercecrosas @dataverseorg @HarvardDV