

WorldPop

February 2024

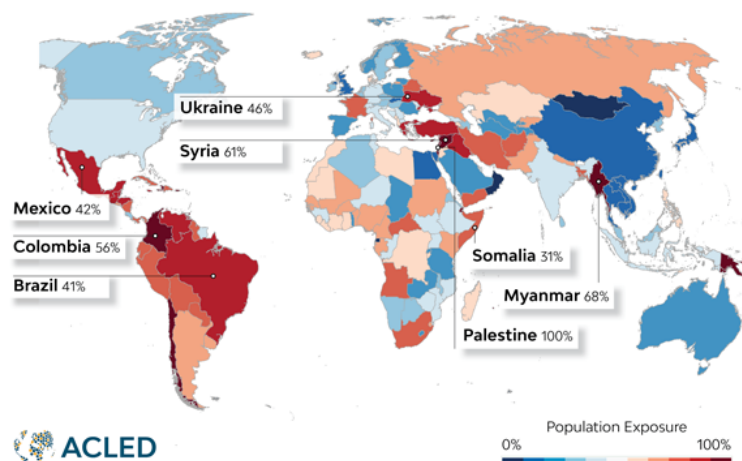


Welcome to our new newsletter!

Pictured: Senior Enterprise Fellow Dr Natalia Tejedor Garavito addressing DANE's "Statistical Mind: 70 making us all count" meeting in Bogotá, Colombia.

Making decisions count everyone, everywhere

Population Exposure Rate to Armed, Political Violence, and Riots within 5km of Event Location in 2023



National Conflict Exposure Variations in 2023. ACLED Conflict Exposure Calculator

Welcome to our first newsletter of 2024. Every few months we keep you up to date with what's happening in our innovative, open, geospatial, demographic research programme.

WorldPop produces estimates of populations with age/sex breakdowns for each 100m x 100m grid square on the planet. These are used as default, open access datasets for NGOs planning humanitarian and development interventions, and help governments fill census gaps.

This month we celebrate the launch of the Conflict Exposure Calculator, a result of our new collaboration with the Armed Conflict Location & Event Data Project (ACLED). We focus on our recent co-development and capacity strengthening work and the new [Longitudinal Population Survey \(LPS\) Mapper](#), developed to support climate health research for the Wellcome Trust. We update our progress on our Global 2 project, review [new projects](#) and list recent [academic journal articles and datasets](#) produced by our team.

This year marks our 10th anniversary which we are planning to celebrate in October. More details will follow later this year.

Conflict Exposure Calculator

Conflict Exposure Calculator ⓘ [Download Selected Data](#)

The Conflict Exposure Calculator shows the number of people exposed to conflict in the selected area and time period. Use the filter options to choose a geographic location where people are exposed, the type of conflict they are exposed to, the types of actors involved in the events, and/or the time period.

What level of aggregation are you interested in?
Admin1 Level

Are you interested in specific:
 Admin1 Levels Event Types
 Actor Types Actors

Select a country to get started.
Myanmar

Select the administrative divisions (e.g., provinces) you're interested in:
Ayeyarwady, Bago-East, Bago-West, Chin, Kachin

Do you want to filter to events within a certain date range? Defaults to previous 12 months.
2023-02-02 to 2024-02-02

[Click to Apply](#)
[Reset Filters](#)

Country	Admin1 Level	1km	2km	5km	Best	Total Events
▼ Myanmar (18)		9,864,318	18,857,244	37,092,975	31,924,476	12,727
	Yangon	1,598,206	3,790,784	5,698,655	5,240,388	315
	Sagaing	1,426,036	2,124,955	3,989,355	3,474,523	3,495
	Shan-North	610,519	1,272,215	3,389,310	3,289,426	1,317
	Mandalay	990,835	2,084,540	3,748,302	3,038,992	1,083
	Rakhine	553,252	1,194,876	3,036,234	2,243,601	633
	Tanintharyi	476,020	860,750	2,239,435	1,955,918	895
	Magway	675,582	1,120,800	2,064,528	1,936,768	1,180
	Bago-East	531,553	1,030,270	1,959,033	1,822,763	593
	Mon	460,828	805,621	1,613,390	1,523,031	499
	Kachin	440,312	798,887	1,600,504	1,516,219	734
	Shan-South	418,082	729,127	1,575,391	1,214,872	338
	Bago-West	348,865	588,433	1,406,885	1,185,558	208

Exposed Population: 31,924,476 people across 18 administrative divisions in 1 country

The Conflict Exposure Calculator interface

An early outcome from our new collaboration with the Armed Conflict Location & Event Data Project (ACLED) is the Conflict Exposure Calculator, a new web tool that was launched in early February. This innovative interactive tool allows users to calculate the number of people exposed to conflict in areas and time periods they select and has been acknowledged as a valuable resource to support the work of Global NGOs.

At the virtual launch event, Anthony Nwanze, Child Protective Specialist at Save the Children said, "It's going to change the dynamics of what we do...it gives us insight and we can invest the resources we have to meet the needs of the children".

[Read more...](#)

Co-development and Capacity strengthening



Iyanuloluwa Olowe guiding participants in our Vaxpop workshop in Abjua, Nigeria

In December spatial statistical methods expert Dr Edson Utazi and GIS Specialist Iyanuloluwa Olowe travelled to Abuja, Nigeria to run an advanced level workshop to strengthen in-country capacity to undertake zero-dose estimation at the district, ward, and health facility catchment area levels. More than 20 workshop participants from data teams within the Ministry of Health and other ministries, departments and agencies took part in the 3-day workshop which was funded as part of our Gavi, the vaccine Alliance-funded VaxPop II project.

[Read more...](#)



Drs Natalia Teledor Garavito, Ortis Yankey and Chris Nnanatu (online) join Thai National Statistics Office participants on the last day of the workshop

Following a virtual training workshop for the Thailand National Statistical Office (TNSO) in November, Principal Enterprise Fellow Dr Natalia Tejedor Garavito and Research Fellow Dr Ortis Yankey travelled to Thailand the following month to conclude the second phase of innovative training in spatial population modelling. More than 25 participants from the TSNO and academia joined the 2-week in-person workshop, which was further supported online by Senior Research Fellow and project lead, Dr Chris Nnanatu who joined the session from the UK. The workshop was a follow-up to training provided by WorldPop in 2022 and included further collaboration with TSNO on their spatial population modelling efforts.

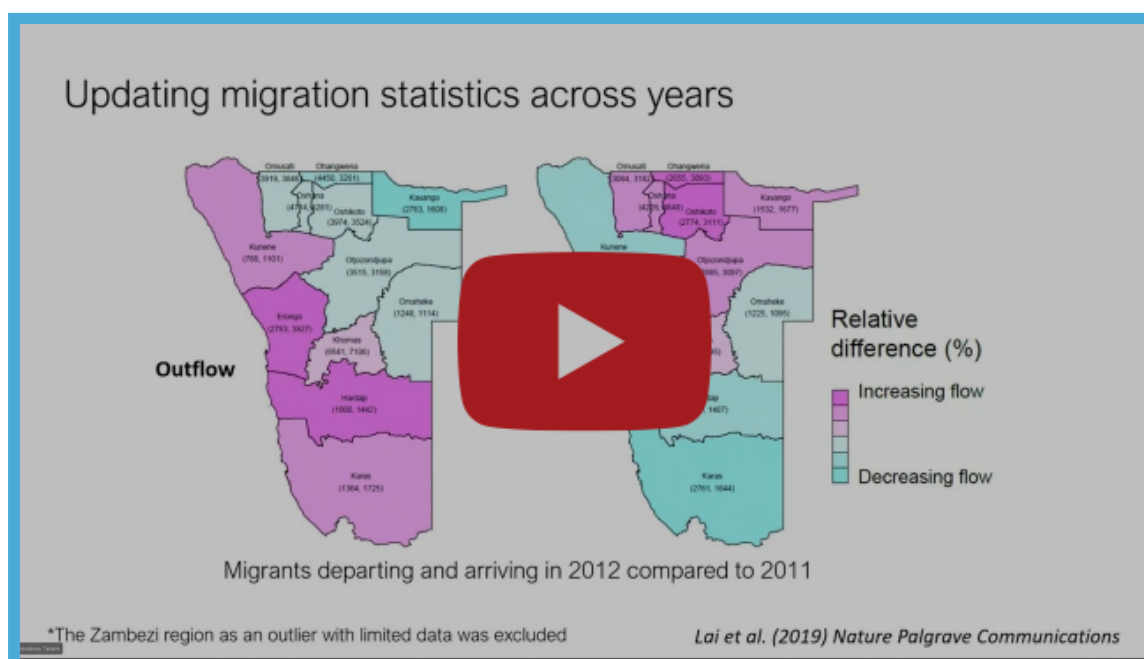
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Ethiopian Statistical Services modelled Population Estimates workshop

Our new Foreign and Commonwealth Development Office-funded project, *Data for Development*, got off to a great start just before the Christmas break with Dr Chris Nnanatu and Dr Assane Gadiaga leading a 4-day online workshop for data experts at the Ethiopian Statistical Services. The workshop covered our methods for modelled population estimates in the production of bespoke high-resolution population data for countries in low- or middle-income countries. Focussing on the key theoretical basis and R programming skills required to successfully design and implement population estimation models, the workshop also explored spatial and statistical modelling and analysis methods as well as spatial data processing and visualisation using R software. The team are currently planning an in-person follow-up workshop in Addis Ababa in the coming months.

[Read more...](#)



Geospatial data integration for estimating subnational population distributions and dynamics



In December Professor Andy Tatem presented our work on geospatial data integration for estimating subnational population distributions and dynamics at the Office for National Statistics, Data Science Campus mobile phone data workshop.

While geospatial data derived from satellites, surveys and mobile phones can provide insight into trends in population distributions and dynamics, Professor Tatem emphasised that analysing such data needs to account for bias and incompleteness. He also recognised the vital importance of co-development of methods with stakeholders to ensure their long term use.

Global 2 update

Our Global 2 project is making good progress updating our open, gridded population estimates to 2030, incorporating the latest round of census data, and refining methods. We continue to work at pace and expect to release the first tranche of updated country datasets in April this year.

[Read more...](#)



Conferences and workshops



Dr Natalia Tejedor Garavito at DANE conference in Bogota, Columbia

November 2023

Professor Andy Tatem travelled to Malawi to meet with staff at the African Institute for Development Policy (AfiDep) and presented our work at their annual board meeting. AfiDep is a non-profit research and policy institute that promotes the use of data and evidence for improving development-focussed decision making.

Deputy Director for Enterprise and Engagement, Ian Coady travelled to Punta del Este, Uruguay to join the Festival de Datos, a celebration of the use of data in international development, organised by Global Partnership for Sustainable Development Data. The 3-day festival included debates on AI for Development,

inclusive data processes, innovations for public health surveillance and intelligence, and the principles guiding efforts to share privately held data that has the potential to improve lives.

[Read more...](#)

Senior Research Fellow Dr Sarchil Qader took part in the Data for Decision-Making panel discussion at the 1st MEED Conference for Regional Development in Sulaymaniyah, Kurdistan Region of Iraq. Regional development in Iraq is compromised because the country has not conducted a census in several decades. During the debate Dr Qader explained how new satellite data combined with WorldPop datasets and expertise could help fill the current data gap and support sustainable development in the region.

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December 2023

To celebrate its 70th Anniversary the National Administrative Department of Statistics, Colombia (DANE) organised a two day event where Senior Enterprise Fellow Dr Natalia Tejedor Garavito was invited to give a talk. She spoke on the work WorldPop has been doing to estimate population and support NSOs to create bespoke population estimates and took part in a panel discussion on the main challenges in terms of human capital and technological resources for the full implementation of statistical frameworks.

[Read more...](#)

Later in the month, Principal Research Fellow Dr Shengjie Lai took part in the Guangdong-Hong Kong-Macao Public Health Summit Forum held at Sun Yat-sen University, Guangzhou, China and gave a speech at the Infectious Disease Prevention and Unified Health sub-forum.



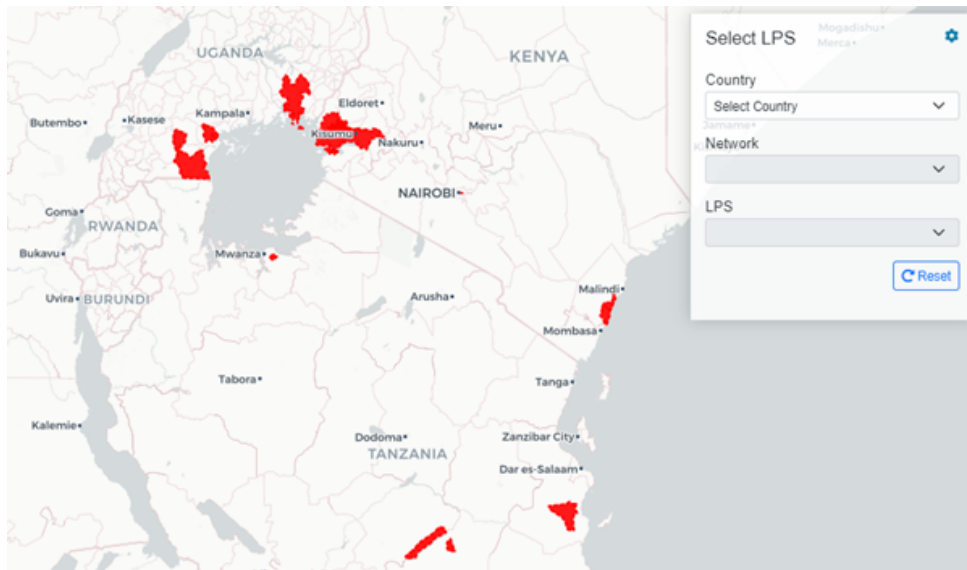
Exploring smart and flexible approaches to create and update national sampling frame



Last month Senior Research Fellow Dr Sarchil Qader presented our work on modern geospatial techniques for supporting census and national surveys, and explored the challenges and advantages to using our preEA Tool as part of the IDinsight Research, Evaluation, and Data seminar series.

Sarchil explained how the preEA tool is used to improve accuracy of Enumeration Area (EA) delineation and enable census enumerators and data collectors to work more efficiently in the field.

LPS Mapper



Longitudinal Population Study (LPS) Mapper

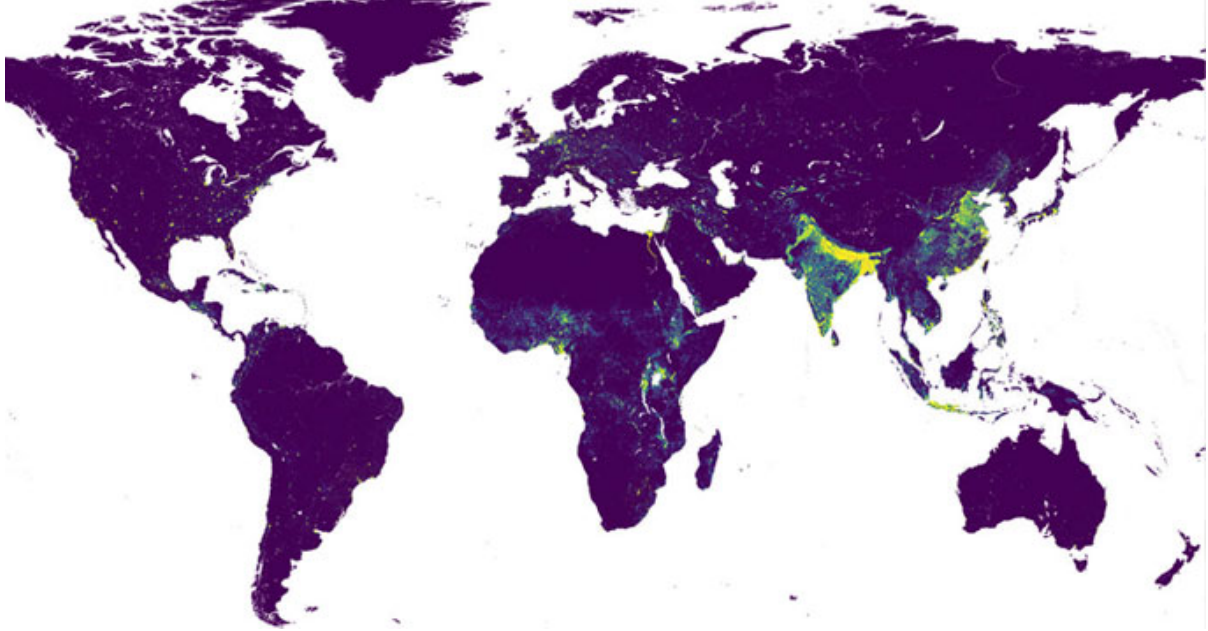
A team led by Principal Enterprise Fellow Dr Natalia-Tejedor-Garavito has recently completed a ground-breaking initiative aimed at improving our understanding of the impact of climate on human health. Through this Wellcome Trust-funded project the team developed an open-source geospatial dataset and interactive web portal that demonstrates the potential for combining health monitoring data with climate datasets.

We collected and organised LPS metadata and digitized site boundaries to produce a harmonised open-source geospatial dataset. This dataset allows researchers to streamline their analyses which, when combined with the new interactive web visualisation, facilitates an inclusive environment for innovative interdisciplinary collaboration.

Dr Isabel Fletcher, Technology manager at the Wellcome Trust said "This project has been a fantastic interdisciplinary collaboration and we look forward to seeing how this new dataset and portal are adopted by the wider health community".

[Read more...](#)

New projects



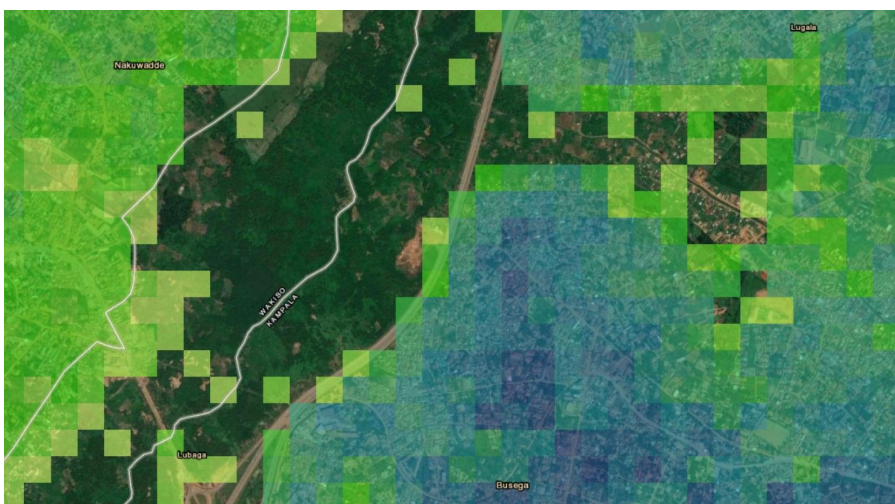
Three new projects have started in the past 3 months, adding to our programme of [16 geospatial and demographic projects](#).

[GRID3 2023-25](#) - a new 2-year contract with GRID3 Inc., to build on successes and lessons learned on previous work, provide updates to Africa-wide demographic and geospatial data products, plus country-specific support for Nigeria and the Democratic Republic of the Congo.

[UNFPA COD-PS](#) - This project is strengthen the humanitarian data workforce supporting Common Operational Datasets on Population Statistics (COD-PS) availability, quality and usability across the UN humanitarian system. It will also address a critical gap in data interoperability standards for COD-PS data, IDP data and refugee data in operational response settings.

[Data for Development](#) - This programme is funded through the FCDO's Global Statistics team. In this programme we are working to enhance decision making and accountability by improving the coverage, quality, and use of data for sustainable development.

Our latest publications



In the past 3 months new open Gridded Population Datasets have been published for [Uganda](#) and our team have also authored or co-authored several research papers, including significant papers on:

- [Imported and indigenous Plasmodium Vivax and Plasmodium Falciparum malaria in the Hubei Province of China, 2005–2019](#)
- [Spatiotemporal variations of “triple-demic” outbreaks of respiratory infections in the United States in the post-COVID-19 era](#)
- [Geospatial Analyses of Recent Household Surveys to Assess Changes in the Distribution of Zero-Dose Children and Their Associated Factors before and during the COVID-19 Pandemic in Nigeria](#)
- [Prior water availability modifies the effect of heavy rainfall on dengue transmission: a time series analysis of passive surveillance data from southern China](#)
- [Impact of Urban Slum Residence on Coverage of Maternal, Neonatal, and Child Health Service Indicators in the Greater Accra Region of Ghana: an Ecological Time-Series Analysis, 2018–2021](#)

See also our recent preprint:

- [Disaggregating Census Data for Population Mapping Using a Bayesian Additive Regression Tree Model](#)

See our [publications list](#) and search more than 200 highly cited papers published since 2004.

We hope you enjoyed our newsletter.

If you did, please share it with your friends and colleagues.

Our next edition will be published in Summer 2024.

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The WorldPop research programme, based in the School of Geography and Environmental Science at the University of Southampton, is a multi-sectoral team of researchers, technicians and project specialists that produces data on population distributions and characteristics at high spatial resolution.

