

WorldPop

November 2025

Welcome to your new WorldPop newsletter!



Pictured: Professor Nyovani Madise (African Institute for Development Policy), Professor Clionadh Raleigh (ACLED) and expert panel, Dr Piedad Urdinola (DANE Colombia), Hon. Nasir Isa Kwarra (National Population Commission, Nigeria) and team at WorldPop's 10th anniversary conference, "Mapping the Future of Spatial Demography", 9 October 2024.

Making decisions count everyone, everywhere

Welcome to our November 2025 newsletter. After over a year's hiatus, we're very pleased to be back with an update on what's happening in our innovative, open, geospatial, demographic [research programme](#). As it's a bumper edition covering nearly 18 months, you may need to set aside a few tea breaks to fully enjoy it!

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 by international bodies, such as UNHCR, ESRI and Google, to support and plan humanitarian and development interventions, and help governments fill census gaps.

In this edition we celebrate 10 years of WorldPop impact and the launch of our [Global 2](#) open population datasets for 2015-2030, focus on new [case studies](#) and our recent [co-development and capacity strengthening](#) work. We review the recent global [impact of our open population data](#), and highlight significant [academic journal articles](#) produced by our team.

Celebrating 10 years of WorldPop



Ian Coady (Deputy Director), Professor Andy Tatem (Director), Hon. Nasir Isa Kwarra (National Population Commission, Nigeria), Professor Nyovani Madise (African Institute for Development Policy), Dr Patrick Gerland (United Nations Population Division), and Sada Saxton (Deputy Director) at our 10th anniversary conference.

In October 2024 we celebrated our 10th Anniversary. As well as networking with with partners, colleagues and WorldPop staff past and present, the event focussed on mapping the future of spatial demography. Keynote addresses were given by Professor Jane Falkingham (University of Southampton) on *A Vision for Global Population Research*, Dr Patrick Gerland (United Nations Population Division) on *Future Population Trends and Their Measurement* and Professor Nyovani Madise (African Institute for Development Policy) on *Supporting decision makers with evidence to accelerate the achievement of the Sustainable Development Goals: Examples from Africa*.

[Read more...](#)

New open access Global 2 population data launched

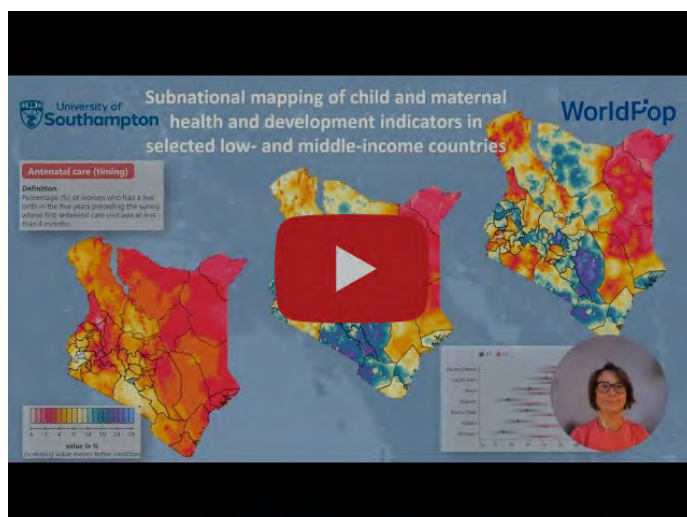


Dr Maksym Bondarenko (Head of SDI), Dr Jessica Espey (Deputy Director, Research), Professor Andy Tatem (Director), Dr Mollie Van Gordon (Gates Foundation) and Dr Sabrina Juran (UNFPA) at the launch of our Global 2 open population data.

On 4 September 2025 over 350 people from across the globe tuned in to our live webinar as we launched our most advanced population dataset yet – [Global 2](#). *The Power of Population Data* event showcased how forward-looking data science is transforming our understanding of where people live – and why it matters. Our new, open Global 2 dataset offers detailed population estimates from 2015 to 2030, mapped down to 100×100 meter grid squares. Built using satellite imagery, AI, and data from recent censuses, it helps pinpoint population changes with precision, which is crucial for everything from health planning to disaster response.

[Read more...](#)

A New Interactive Health and Development Map



Project lead Dr Carla Pezzulo explains how to navigate our new interactive health and development map.

Our innovative Child and Maternal Health and Development indicator interactive map was launched in November 2024.

This [interactive map](#) currently presents multiple indicators as maps, charts and tables for multiple time points for Burkina Faso, India and Kenya. The interface also allows changes over time to be calculated.

WorldPop Podcasts Are Go!



We're piloting NotebookLM to promote our research work.

Image: [AI Generated Podcast](#) by Pradip K from Pixabay.

Back in September 2024, BBC *Tech Life*'s Chris Vallance caught up with Professor Andy Tatem to [talk about Google's Open Buildings project](#), a massive effort to map and monitor changes in the built environment using satellite data.

In a fascinating conversation with journalist and Academy of Social Sciences President Will Hutton on the *The We Society Podcast* in June, Professor Andy Tatem [explained how satellite imagery and mobile phone data are transforming population mapping across the Global South](#).

In August Professor Andy Tatem and Heather Chamberlain spoke with Dr Jesse Rouse at *A Very Spatial Podcast* [about our Global 2 dataset](#).

We've also had some very positive feedback from our piloting of the 'Deep Dive' audio summary feature of Google's NotebookLM as a new way to promote our research. This feature uses AI to create a podcast-like audio conversation between two AI-derived hosts that summarise key points of a document.

[Listen to an example...](#)

WorldPop: "Excellence with Impact"



Professor Attila Lazar (Principal Enterprise Fellow), Ian Coady (Deputy Director), Sada Saxton (Deputy Director), and Professor Andy Tatem (Director) with our Association for Geographic Information award.

At their annual awards ceremony in June 2024 the Association for Geographic Information (AGI) presented five awards to recipients of the highest calibre, recognising excellence within the geospatial sector. Professor Andrew Tatem received the award for Excellence with Impact for WorldPop's work to ensure populations around the world are counted and mapped so they can be included in decision and policy making.

Other award recipients included David Henderson, Chief Geospatial Officer at Ordnance Survey for Outstanding Service to the Geospatial Community, Sabbir Delowar of Map Impact for Environment & Sustainability, Will Robertshaw, Geospatial and AI Engineer at Ramboll was presented with the Early Career Professional of the Year award, and Dr Egbe Manners, Product Manager at Ordnance Survey, with the Geospatial Professional of the Year award.

New Case Studies

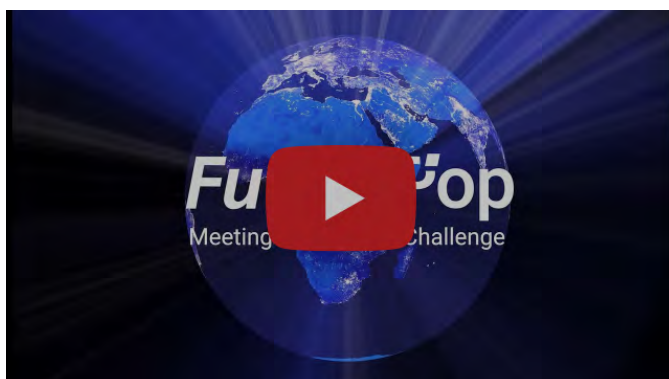


Children in Sierra Leone. Credit: GAVI/Doune Porter © 2011.

Our latest collection of [case studies](#) highlights the diverse global impact of our work, demonstrating how our data is used across various sectors. Applications range from supporting national efforts like Benin's first digital census and generating new national statistics - to critical public health achievements like winning the fight against polio in Nigeria and shaping global childhood vaccination strategies. Our research is crucial for preparedness, and the case studies also detail how our data is used for pandemic mitigation and measuring populations exposed to disasters.

[Read more...](#)

FuturePop: A New Research Initiative Funded by the Wellcome Trust



Dr Natalia Tejedor Garavito, Professor Andy Tatem and Dr Laurence Hawker introduce FuturePop, an initiative designed to project global population demographics in response to climate change

We're excited to announce that, in collaboration with the School of Geographical Sciences at the University of Bristol and the Department of Social Statistics and Demography at the University of Southampton, we have secured funding from the Wellcome Trust for a new transformative research initiative: [FuturePop](#). Officially titled *Constructing high spatial resolution population projections and supporting the provision, access and updates of WorldPop spatial demographic datasets*, this project sits at the vital intersection of demography, health, and climate science. Building on WorldPop's essential role in epidemiological research, outbreak response, and healthcare planning, FuturePop uses cutting-edge geospatial and demographic modelling to produce high-resolution global population projections under five Shared Socioeconomic Pathways (SSPs) from 2030 to 2100. These new datasets will provide powerful insights for public health and climate adaptation strategies, helping to guide evidence-based policies for a changing world.

[Read more...](#)

Co-development and Capacity strengthening

Over the past year or so our co-development and capacity strengthening work has continued to grow. In addition to online engagement we delivered in-person workshops to national statistics offices, ministries of health, and UN agencies in low- and middle-income countries.

June 2024

Dr Winfred Dotse-Gborgbortsi and Dr Natalia Tejedor led workshops in Dakar, Senegal as part of Countdown to 2030 Fellows Analytical Training, in collaboration with the African Population Health Research Centre. The aim: to strengthen the analytical and research capacities of Fellows working on Reproductive, Maternal, Newborn, Child, and Adolescent Health and Nutrition (RMNCAH+N). The month-long programme combined global health, mortality analysis, equity, geospatial analysis, and scientific writing sessions to equip participants with advanced skills for data-driven research and publication. In August 2025 Natalia and Winfred returned to Dakar to run two more workshops.

[Read more...](#)



August 2024



Dr Sarchil Qader led a workshop with statisticians at the Institut National de la Statistique et de la Démographie, Benin - working to finalise and reproduce census enumeration areas using the preEA tool and ground data collected during previous census mapping. [Read more \(LinkedIn\)...](#)

September 2024

Deputy Director Ian Coady, Dr Chris Nnanatu and Dr Assane Gadiaga visited Addis Ababa in September to lead an 8-day technical workshop on population modelling for the Ethiopian Statistical Service and UNFPA as part of the FCDO-funded development programme to support improved decision-making and policy through the availability of modelled population data. Dr Nnanatu and Dr Gadiaga returned later in the year for a follow-up engagement.



Professor Andrew Tatem, Dr Sarchil Qader and Heather Chamberlain were in Cairo, Egypt to run a geospatial population modelling workshop with UNFPA Arab States Regional Office, and in collaboration with the UN Economic and Social Commission for West Asia

and The Arab Institute for Statistics, to support senior national statistical offices leaders in their census processes.

Deputy Director Ian Coady, Dr Somnath Chaudhuri and Dr Ortis Yankey held a high-level meeting on modelling approaches, followed by three days of technical discussions with senior leaders at the Statistical Institute of Jamaica (STATIN) to support modelling for Jamaica's 2031 census - facilitated by the UN Statistics Division and CIESIN at Columbia University.





Led by Senior Enterprise Fellow Graeme Hornby Implementation of Degree of Urbanisation (DEGURBA) workshops were run in Yaoundé, Cameroon with Research Technician, Iyanuloluwa Olowe and in Windhoek, Namibia with Enterprise Fellow Dr Thea Woods. The aim of the workshops was to develop a comprehensive knowledge and trust in

DEGURBA methods and the ability to produce informative population and settlement data to enhance decision-making and support policy development. The Cameroon workshop included participants from government bodies including the National Institute of Statistics and the Central Bureau of the Census and Population Studies.

[Read more...](#);

As part of the [*Generation of Socio-Demographic Data for Evidence-Based Programming in South-Central Somalia*](#) project funded by the Gates Foundation, Dr Sarchil Qader and Amy Bonnie delivered an intensive 8-day Train the Trainers workshop in Nairobi, to enhance the geospatial capacity of the Somalia National Bureau of Statistics (SNBS) and United Nations Population Fund (UNFPA) Somalia country office. [Read more \(LinkedIn\)...](#)



June 2025



Dr Kristine Nilsen and Dr Winfred Dotse-Gborgbortsi were highly engaged at the annual Countdown to 2030 meeting in Nairobi, Kenya. They supported Ghanaian and Malawian delegates with comprehensive health

system analysis at the meeting that brought together health agencies across Africa. Delegates from the World Health Organisation, UNICEF, GAVI, the vaccine alliance, and academic institutions were also engaged in producing analytical products related to reproductive, maternal, newborn, child and adolescent health indicators.

September 2025

Dr Sarchil Qader and Dr Gianluca Boo delivered a two-week AI-assisted sampling workshop in Islamabad aimed at building the Pakistan Bureau of Statistics' capacity to integrate geospatial techniques, data, and artificial intelligence into its sampling design and strategy. A key takeaway - as parts of census data age or become outdated, there's an urgent need for high-resolution, modelled population estimates, especially for policy-making in disaster response, health, education, and urban planning. [Read more...](#)



In August 2025 Principal Enterprise Fellow Dr Natalia Tejedor Garavito presented *Apoyando a Los Países en la Estimación de Población y Dinámicas Demográficas* (Supporting Countries in Estimating Population and Demographic Dynamics) as a contribution to Crisis Ready's *Café Catastrófico* webinar series on using novel data and Artificial Intelligence for disaster response. *With English subtitles.*

Our Impact



Throughout most of 2024, African-led and Africa-based social-impact organisation, Dev-Afrique Development Advisors conducted an [in-depth qualitative impact assessment](#) of our activities. Following over forty interviews with government, humanitarian organisations, and the research community they found that our interventions are successfully reaching their targets - and changed lives. For example, thanks to WorldPop 800,000 people in Northern Ghana gained access to clean water, vaccination coverage improved in 67 regions in Nigeria, and census planning that once took up to three days to complete was reduced to 5 minutes. [Read the report...](#)

Our open population data are widely used by researchers and organisations around the world. Here are some recent examples:

- [Greenness and hospital admissions for cause specific mental disorders: multicountry time series study](#) (BMJ)
- [The 2025 report of the Lancet Countdown to 2030 for women's, children's, and adolescents' health: tracking progress on health and nutrition](#) (The Lancet)
- [Patterns and drivers of population in the borderlands of Mainland Southeast Asia](#) (Habitat International)
- [Mapping of regions with low tuberculosis notification and estimation of diagnostic gaps in Cameroon, evidence from OpenStreetMap and WorldPop data](#) (Scientific Reports)
- [Bi-decadal trends in land cover and ecological dynamics across the Korean Peninsula with implications for sustainable development](#) (Scientific Reports)

Conferences and workshops

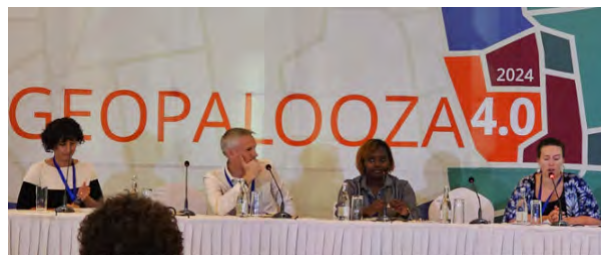
July 2024



Senior Enterprise Fellow Heather Chamberlain presented *Assessing the accuracy of national gridded population estimates: a case study from the Zambia 2022 Population and Housing Census* at the 12th ICPG conference on population geographies, Queen's University, Belfast. The ICPG is

a biennial gathering of population geographers, spatial demographers and others interested in presenting papers and sharing ideas on spatial population issues. The conference provides a great opportunity to network with colleagues from around the world, share research, and explore innovative ideas and new developments.

Professor Andy Tatem was on the panel discussing *Demographic Data Today: Challenges, Opportunities, and Solutions* at Geopalooza 4.0 in Nairobi, Kenya. Geopalooza 4.0 is a unique platform for knowledge exchange, networking, and in-depth discussions on the transformative potential of geospatial approaches. Over 200 attendees from 34 countries joined the conference in person, with an additional 455 joining online.



August 2024



At a United Nation's Economic and Social Council Inter-Agency Working Group meeting held in Johannesburg, South Africa, Dr Sarchil Qader led a technical workshop on Learning and Adapting Lessons on Baseline Population, Displacement, and Refugee Data Interoperability in Ukraine, Mozambique and the Philippines.

Dr Winfred Dotse-Gborgborts and Dr Edson Utazi attended the first Countdown/GAVI annual multi-country analytical workshop on Immunization Coverage and Inequalities in Abidjan, Côte d'Ivoire. The workshop gathered over 50 experts, including researchers, academics, and public health professionals, from 26 countries across Sub-Saharan Africa to address the critical issues of vaccine coverage and inequalities.

The Countdown to 2030 initiative addresses persistent inequities in vaccination - such as lower coverage among rural, poorer, or less-educated populations - by enhancing local data capacity, enabling granular, contextual insights, and guiding evidence-driven policies to reach underserved groups.

[Read more...](#)



September 2024



Professor Andy Tatem gave the opening keynote speech at the GEOMED conference at Hasselt University, Belgium. He spoke on *Mapping last-mile populations* and presented an overview of efforts to quantify small area population distributions through geospatial data integration to support last mile healthcare and intervention

delivery. Dr Edson Utazi presented a *statistical comparison of geostatistical and machine learning techniques for mapping vaccination coverage*, and Dr Zhifeng Cheng spoke on his PhD research: *quantifying the heterogeneous effect of mobile health code in containing COVID-19 in China during the pandemic*.

Dr Somnath Chaudhuri presented the dissemination seminar of the *Application and Demonstration of Remote Sensing and GIS Technologies in Solid Waste Management: A Case Study of Maldivian Atolls* project. The project was funded by the Ministry of Climate Change, Environment and Energy of the Republic of the Maldives and the National University of the Maldives. Dr Chaudhuri says, "It's inspiring to see how these technologies can drive positive change in waste management and sustainability in the island nation of Maldives".



November 2024

Professor Andy Tatem spoke on *Small Area Population Estimation and Mapping* at GEOCOM 2024 conference. The conference theme was *Connecting Communities*;



the Geospatial Perspective, and Professor Tatem provided insights on how geospatial demographic modelling can assist data intelligence and analysis.

Deputy Director Ian Coady and Research Fellow, Dr Ortis Yankey took part in a combined effort with the Economic Commission for Latin America and UNFPA to support the Statistical Institute of Jamaica (STATIN) as they finalise Jamaica's 2022 census results.

Modelling teams from The Joint Research Centre, Oak Ridge National Laboratory, and WorldPop are now working closely with STATIN data experts to co-produce national population estimates for Jamaica. Learnings from activity this will be shared with statistical agencies around the world. [Read more \(CIESIN\)...](#)



March 2025



Senior Research Assistant Krishnaveni KS presented her work on modelling urban sprawl at the 40th International Symposium on Remote Sensing of Environment (ISRSE-40), at Farnborough, Hampshire. Urban sprawl is defined as low-density, non-contiguous, unplanned, unregulated, and uncoordinated outer expansion of

cities, and is associated with loss of arable land, environmental destruction, increased transportation costs, and deterioration of city centres. Krishnaveni spoke on *Spatiotemporal Modelling of Urban Sprawl in a Coastal City Using Modified SLEUTH Urban Growth Model*. She highlighted the relevance of her work in addressing the challenges of urban sprawl in Kochi Urban Agglomeration (KUA), India. Her research investigates urban expansion patterns in KUA using a modified SLEUTH urban growth model to aid in climate resilience and land-use planning.

Ian Coady represented WorldPop at the Humanitarian Networks and Partnerships Week 2025 (HNPW). Co-hosted by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and the Swiss Agency for Development and Cooperation. The event provided a great opportunity to connect with the international

humanitarian community. During networking events he discussed how the new global WorldPop data can be integrated into preparedness. [Read more \(UNOCHA\)...](#)



April 2025



Dr Edson Utazi presented his VaxPop research work at the Guinea Worm Eradication Program Research Review Meeting in Atlanta, Georgia, USA. He is focused primarily on mapping the risk of Guinea worm disease in all the endemic countries in sub-Saharan Africa, identifying hotspot areas using the maps and estimating the sizes of human (and potentially, animal)

populations at risk within these areas. The project also involves analyses to determine the impact of population mobility, climate change and various interventions such as water treatment and dog tethering on the spatial distribution of the disease. [Read more...](#)

July 2025

Professor Andy Tatem presented WorldPop's impactful work in India at the Indian High Commission in London at an India-UK Education Collaboration event. He highlighted the challenges of the nations' large, densely packed, and diverse population, and explained why detailed, current small-area population data are crucial for election planning, GDP calculation, disaster preparedness, and health system planning. [Read more...](#)



Dr Chris Nnanatu shared cutting-edge research at the High-Level Engagement and Advocacy Meeting on the Harmonization and Improvement of Statistics in West and Central Africa (HISWACA) in Dakar, Senegal. He focused on the importance of small-area population estimates, stressing their critical role in tracking Sustainable

Development Goal indicators where census data are lacking or outdated. [Read more...](#)

August 2025

Dr Nnanatu also took centre stage at the 2025 Joint Statistical Meeting (JSM) in Nashville, Tennessee. His talk, *Integrating Satellite-Based Human Settlement Detection Probability in Spatial Population Modelling*, highlighted how the Spatial Statistical Population Modelling (SSPM) team at WorldPop is transforming the way we map populations, especially in remote or data-scarce regions. [Read more...](#)



September 2025



Research Fellow Dr Somnath Chaudhuri visited Dhaka to participate in a key stakeholder engagement meeting for the Gates Foundation-funded project *Blue Line Tracing and Wastewater Surveillance* in Dhaka. The initiative aims to strengthen public health surveillance in densely populated urban settings. Dr Chaudhuri presented cutting-edge population modelling

techniques, including the WorldPop Global 2 datasets. These high-resolution tools are designed to help policymakers better estimate population denominators, map vulnerable groups, and plan for emergency responses. [Read more...](#)

October 2025

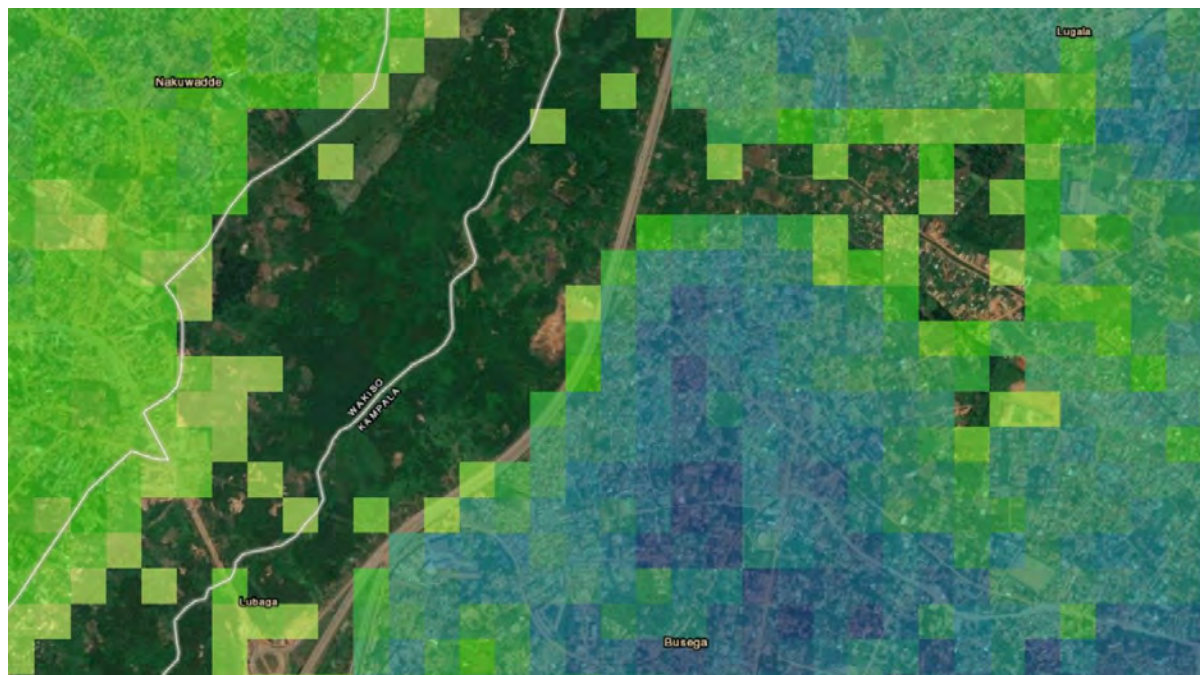
Deputy Director (Research) Dr Jessica Espey delivered a keynote address at the Africa Evidence Network Evidence 2025 conference in Cotonou, Benin foregrounding how Africa's Regional Economic Communities (RECs) are using data and research to shape smarter policy decisions across the continent.

[Read more...](#)



Dr Chris Nnanatu delivered a keynote presentation at the 2025 Data Science Nigeria AI Bootcamp, where he spoke on a topic shaping Africa's digital future: *The Future is Geospatial: Powering Africa's Growth with Location Intelligence*. He explored how geospatial and artificial intelligence technologies are transforming decision-making and economic growth across the continent. His message was clear, Africa's path to sustainable development runs through data, maps, and collaboration. [Read more...](#)

Our latest publications



Our team have recently authored or co-authored significant papers on:

- [Tackling public health data gaps through Bayesian high-resolution population estimation: A case study of Kasai-Oriental, Democratic Republic of the Congo](#)
- [Geostatistical and machine learning approaches for high-resolution mapping of vaccination coverage](#)
- [Integrating vulnerability and hazard in malaria risk mapping: the elimination context of Senegal](#)
- [Future heat-related mortality in Europe driven by compound day-night heatwaves and demographic shifts](#)
- [Global gridded multi-temporal datasets to support human population distribution modelling](#)
- [A stochastic approach to integerize floating-point estimates in gridded population mapping](#)
- [Disappearing people: A global demographic data crisis threatens public policy](#)

See our [publications list](#) and search more than 300 highly cited papers published since 2004.

Online training

We have recently published two new training resources on GitHub - the [Book of Methods](#) describes our open methods and is aimed at our mainly academic and wider community, and the [Population Modelling Training Manual](#) is a full start-to-finish course for statisticians working for National Statistics Offices.

A 'how to' video on using our [QGIS pypopRF plugin](#) for population prediction and dasymetric mapping using machine learning techniques has also been recently published (see below).



QGIS plugin for population prediction and dasymetric mapping.

In collaboration with our colleagues at GRID3 we manage a series of open online courses hosted on the [GRID3 Learning Hub](#). As of June 2025, the Hub continues to expand its global reach, with more than 2,600 registered learners and 681 active participants over the previous 12 months. The platform's self-paced GIS training programmes - including [GIS Foundations](#) (English and French) and courses on [microplanning](#) and [data management](#) - have collectively certified hundreds of learners, underscoring our growing role in strengthening geospatial skills for development and health planning worldwide.

WorldPop Winners



And the winners are...the WorldPop SDI Team! Dr Wenbin Zhang, Borys Nosatiuk, Professor Mark E. Smith (Vice Chancellor), Dr Elena Vataga, and Dr Maksym Bondarenko (Head of SDI) receive their well-earned reward.

Finally, we are very proud to announce that the WorldPop Spatial Data Infrastructure (SDI) Team - led by Dr Maksym Bondarenko with Dr Elena Vataga, Borys Nosatiuk, Dr Rhorom Priyatikanto, Tom McKeen, and Dr Wenbin Zhang - has won the University of Southampton's 2025 Vice-Chancellor's Award for Knowledge Exchange and Enterprise. Announced early last month at the Southampton's Utilita Bowl, this annual award event celebrates staff whose creativity and dedication make an extraordinary impact across the University. Congratulations to the SDI team for their outstanding innovation and collaboration in advancing our spatial data infrastructure!

[Read more...](#)

We hope you enjoyed our newsletter.

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

Our next edition will be published in Spring, 2026.

Subscribe to our newsletter



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.



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