

PRESS RELEASE

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Sierra Leone fights COVID-19 using innovative geospatial data and technology

Members of Sierra Leone's National COVID-19 Emergency Operations Centre partnered with leading data science and geospatial organisations to generate timely and accurate population and infrastructure data to enhance the government's response to COVID-19.

Freetown, Sierra Leone, 21 July 2020 --- Protecting Sierra Leoneans from COVID-19 will be more effective and evidence-driven, thanks to a groundbreaking new partnership that will deliver information on at-risk populations across the country.

The Government of Sierra Leone's National COVID-19 Emergency Operations Centre consisting of the Directorate of Science, Technology & Innovation (DSTI), Statistics Sierra Leone (Stats SL), Ministry of Information and Communication (MIC), Ministry of Health and Sanitation (MOHS) is collaborating with a coalition of international partners including GRID3, Esri, Maxar Technologies, Fraym, the Global Partnership for Sustainable Development Data and UN Economic Commission for Africa to produce crucial geospatial datasets, analyses, and tools under an open, non-commercial license to support the COVID-19 response in the country.

The most granular geospatial data in Sierra Leone's history centre around rapid population estimates based on the country's last census. These estimates predict how many people, as well as their age and sex, live within any given hectare area across the entire country. The data can help identify those most at risk, determine the implementation of the most efficient support and anti-COVID-19 strategies, including partial or total lockdowns, and resulting community needs. Evidence-based allocation of government resources, both at national and local levels, will particularly benefit the most vulnerable. To ensure that everyone can benefit from these groundbreaking geospatial data, the new findings are openly accessible in a national digital dashboard and <u>COVID-19 hub</u> which enable easy interaction and interpretation for experts and general public alike.

David Sengeh, Minister of Basic and Senior Secondary Education and Chief Innovation Officer at DSTI, explains: "These data will help us significantly to ensure the safety of Sierra Leone's population and minimize the social and economic hardships caused by a prolonged shutdown. It allows us to accurately identify densely populated and high mobility areas, and highlight at-risk spaces where it may not be possible to adhere to physical distancing recommendations."

The rapid population estimates are complemented by settlement information and high-resolution satellite imagery of metropolitan areas from <u>Maxar's Open Data Program</u>. Using the latest technologies and methods, the data provides the government and its partners with a comprehensive picture about where people live, and their access to key infrastructure like roads or health facilities. The geospatial datasets also include information about sex and age, and shed light on various risk factors for COVID-19 infection and socio-economic vulnerability, highlighting areas and populations that have limited resources to cope with health and economic shocks.

Osman Sankoh, Statistician General, Chief Executive Officer of Stats-SL and member of Sierra Leone's Presidential Scientific and Technical Advisory Group on Emergencies, notes: "I am proud of the role of the National Statistics Office. Upgrading our data to a higher resolution and including geospatial-temporal analyses increases the usability of our data, and ensures that Stats-SL remains the go-to national institution for credible data for national development."

"At a time when many governments are making decisions in the dark, based on poor or no data, Sierra Leone is engaged in ambitious work with partners who can support cutting-edge approaches," says GRID3 Sierra Leone Country Lead Annie Werner. Rhiannan Price, Maxar's Director of the Sustainable Development Practice, adds "Forward-leaning governments like Sierra Leone are leveraging high-resolution satellite imagery to accelerate their pandemic response and better support their citizens. We are proud to assist Sierra Leone in their efforts."

The COVID-19 response efforts build on the existing partnership between the Government of Sierra Leone, GRID3, and Maxar with the support of the Global Partnership for Sustainable Development Data the United Nations Economic Commission for Africa.

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Issued by: The Government of Sierra Leone in collaboration with GRID3, Esri, Fraym, Global Partnership for Sustainable Development Data, Maxar and UN Economic Commission for Africa

Notes for Editors

Visual example of datasets being produced



On the right, GRID3 population estimates show how many people live within any given hectare across the Freetown area. On the left, population counts are divided per administrative unit.



Maxar high-resolution images of Bo, Sierra Leone can be downloaded here.

Maxar's GeoEye-1 satellite captured these images of Bo, Sierra Leone on Jan. 4, 2020. The image on the left shows the town's Clock Tower in the middle of the roundabout.

These satellite images can be used by media upon following these attribution requirements:

- **Print/web:** Media may publish these images with cutline photo credit "satellite image ©2020 Maxar Technologies." The watermark may not be removed/cropped.
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- **Social media:** Images posted on social media must be credited on Twitter "[camera emoji]: @ Maxar" or "image: @Maxar" in each post. Or via Instagram "[camera emoji]: @MaxarTechnologies" or "image @MaxarTechnologies" in each post.

About the Data

All geospatial outputs produced by the partnership are anonymized and do not contain individuallevel data. They are high-resolution data layers produced from statistical models or extracted from satellite imagery.

About the Partnership

GRID3 produced rapid population estimates, settlement extents, and provided technical support; Maxar released high-resolution imagery of Freetown, Bo, Kenema, and Makeni; Fraym developed rapid risk layers for Exposure to COVID-19 and Socioeconomic vulnerability at 1km resolution; and through the Disaster Response Program, Esri provided technical assistance and deployed a COVID-19 hub and platform for data hosting and analysis, enabling the Government to rapidly update and share data on active COVID-19 cases, create maps, dashboards, and applications to track the status of recovery of their citizens. The partnership was supported by 'COVID-19: Data for a resilient Africa' an initiative led by United Nations Economic Commission for Africa and the Global Partnership for Sustainable Development Data.

About Statistics Sierra Leone

Statistics Sierra Leone (Stats SL) is the central authority in Sierra Leone for the collection, processing, analysis and dissemination of accurate, clear, relevant, timely and high quality statistical information on social, health, demographic, economic and financial activities to serve the needs of users including government and the general public.

About Directorate of Science, Technology and Innovation

The Directorate of Science, Technology and Innovation (DSTI) sits in the Office of the President and has a visiont to use science, technology and innovation to support the Government of Sierra Leone to deliver on its national development plan effectively and efficiently; and to help transform Sierra Leone into an innovation and entrepreneurship hub.

About GRID3

GRID3 (Geo-Referenced Infrastructure and Demographic Data for Development) works with countries to generate, validate and use geospatial data on population, settlements, infrastructure, and boundaries. It is implemented by Columbia University's Center for International Earth Science Information Network (CIESIN), the United Nations Population Fund (UNFPA), WorldPop at the University of Southampton, and the Flowminder Foundation.

About Esri

Esri, the global market leader in geographic information system (GIS) software, location intelligence, and mapping, offers the most powerful geospatial cloud available, to help customers unlock the full potential of data to improve operational and business results. Founded in 1969, Esri software is deployed in more than 350,000 organizations including 90 of the Fortune 100 companies, all 50 state governments, more than half of all counties (large and small), and 87 of the Forbes Top 100 Colleges in the U.S., as well as all 15 Executive Departments of the U.S. Government and dozens of independent agencies. With its pioneering commitment to geospatial information technology, Esri engineers the most advanced solutions for digital transformation, the Internet of Things (IoT), and advanced analytics.

About Fraym

Fraym is a geospatial data company that uses proprietary machine learning algorithms to deliver precise, local-level information about people in Africa, Asia, and Latin America. The company helps fast-growing companies, government agencies, and development organizations succeed in places where data has been traditionally hard to access. Fraym's granular data adds an entirely new dimension to strategic and operational planning discussions, and answers questions like, 'where are my target populations?', and 'what services are they interested in?'. For more information, visit www.fraym.io or contact info@fraym.io. 4

About the Global Partnership for Sustainable Development Data

The <u>Global Partnership for Sustainable Development Data (GPSDD)</u> is a global network including governments, businesses, and civil society organizations working around the world to harness the data revolution for sustainable development. Since it was created in 2015, the Global Partnership has elevated data issues at a political level, launched a multi-million-dollar Collaborative Data Innovations for Sustainable Development funding initiative, and supported the advancement of country-led Data Roadmaps for Sustainable Development.

About Maxar

<u>Maxar</u> is a trusted partner and innovator in Earth Intelligence and Space Infrastructure. We deliver disruptive value to government and commercial customers to help them monitor, understand and navigate our changing planet; deliver global broadband communications; and explore and advance the use of space. Our unique approach combines decades of deep mission understanding and a proven commercial and defense foundation to deploy solutions and deliver insights with unrivaled speed, scale and cost effectiveness. Maxar's 4,000 team members in 20 global locations are inspired to harness the potential of space to help our customers create a better world. Maxar trades on the New York Stock Exchange and Toronto Stock Exchange as MAXR.

About the UN Economic Commission for Africa

Established by the Economic and Social Council (ECOSOC) of the United Nations (UN) in 1958 as one of the UN's five regional commissions, the <u>United Nations Economic Commission for Africa</u>'s (ECA's) mandate is to promote the economic and social development of its member states, foster intraregional integration and promote international cooperation for Africa's development. ECA is made up of 54 member states and plays a dual role as a regional arm of the UN and as a key component of the African institutional landscape.