

NRA Enhances Revenue Analytics Capacity Through Advanced Training

The Government of Sierra Leone is strengthening domestic revenue mobilization by enhancing its capacity to measure the impact of revenue administration reforms through data-driven methodologies, with technical support from SICPA Sierra Leone (SICPA SL), a subsidiary of Swiss-based SICPA SA, globally known for its secure traceability and authentication technologies.

A hands-on training session led by Jérôme Duperrut, SICPA SA’s Lead Economist, brought together officials from the National Revenue Authority’s Compliance, Risk Management, Data Management, Monitoring, Research and Planning functions. Representatives from the Ministry of Finance and other government institutions involved in revenue administration and policy development also participated.

Participants explored forecasting and impact-assessment methods ranging from trend analysis to advanced econometric techniques. The training covered data quality, outlier detection and the use of economic indicators such as gross domestic product, inflation and exchange rates in revenue analysis.

The programme focused on assessing how systems such as the Product Tracking System (PTS) and Fuel Integrity Solution (FIS) contribute to stronger revenue performance. Participants examined the contribution of PTS to import-duty revenue and how the same analytical approach could be applied to excise duties, withholding tax and overall customs collections.

Dr. Philip M. Kargbo, Senior Director of Monitoring, Research and Planning at the National Revenue Authority, said the training had significantly strengthened participants' technical capacity.

"The training significantly enhanced participants' capacity in revenue forecasting through the application of advanced multi-model forecasting techniques and trend analysis, including the Autoregressive Integrated Moving Average and Autoregressive Distributed Lag models. Participants were also equipped with practical skills in the use of specialized analytical software, including Microsoft Excel, STATA and JDemetra+, for time-series data cleaning, outlier detection and seasonal adjustment, thereby improving the quality and reliability of revenue analysis."

The World Bank's 2025 Sierra Leone Economic Update highlighted improvements in domestic revenue collection and referenced SICPA's support to the NRA's product-marking programme. The initiative also supports the broader objective of strengthening tax administration and building the analytical capacity required to evaluate revenue reforms.

By transferring these capabilities to NRA officials, SICPA SL is helping strengthen the Authority's ability to conduct independent impact assessments, undertake regular monitoring and evaluate the performance of revenue-administration initiatives. The training also supports future revenue-reform planning and evidence-based policymaking.

Dr Kargbo said the programme had established a practical framework for assessing the fiscal impact of the Product Tracking System.

"The training established an objective and evidence-based framework for estimating baseline revenue in the absence of the Product Tracking System. This framework enables the National Revenue Authority and the Ministry of Finance to accurately assess the net revenue gains attributable to the PTS across excise duties, Goods and Services Tax, import duties and other levies. By strengthening the analytical capacity of the Revenue and Tax Policy Division and NRA technical teams through the adoption of standardized econometric models, the training contributes to more informed policy analysis and supports the Government's domestic revenue mobilization efforts under the Medium-Term Revenue Strategy."

Maxwell Massaquoi, General Manager of SICPA SL, emphasized the importance of sustainable capacity transfer.

"This training goes beyond a single analytical exercise. It equips the NRA with the tools and methodologies to independently assess revenue reforms, strengthen evidence-based decision-making and support continuous improvements in domestic revenue mobilization."

Participants applied the analytical framework to Sierra Leone's operational revenue data, enabling them to identify product-specific trends across several revenue streams.

Dr. Kargbo noted that the preliminary analysis had generated valuable insights, while further assessment would be undertaken as additional data became available.

"Participants applied the analytical frameworks to Sierra Leone's operational revenue data, enabling the identification of key product-specific trends. The analysis revealed notable revenue increases in petroleum products and imported beverages, while imported cigarettes and soft drinks recorded declining revenue performance. However, the excise-duty data for alcoholic beverages had not yet been made available for analysis. Consequently, a comprehensive assessment of the Product Tracking System's full impact on domestic revenue mobilization remains pending."

Through this partnership, SICPA SL continues to support Sierra Leone's efforts to strengthen domestic revenue mobilization by building analytical capacity, promoting evidence-based policy and contributing to a more transparent and effective revenue-administration system.

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