

Sierra Leone is far from fiber optic cable poles



Overview

The Sierra Leone National Broadband Strategy_v5 21The deployment of submarine fiber cable in Sierra Leone in 2009 led to an increase in Internet penetratio.

Key Takeaways

Sierra Leone has a national fiber optic backbone and submarine cable connections, but much of the population remains far from direct access to high-speed fiber infrastructure.National Fiber Backbone

Sierra Leone's national fiber optic network, managed by Leonecom in partnership with the government, spans approximately 1,630 km and connects most districts, towns, and villages, with ring redundancy to ensure service continuity . The network links to neighboring countries Guinea and Liberia and integrates with the Africa Coast to Europe (ACE) submarine cable, providing high-speed international connectivity . Leonecom offers services such as dark fiber, IP VPN, and metro connectivity, with over 40 coverage points nationwide .

Submarine Cable Access

The ACE submarine cable, landing in Freetown, connects Sierra Leone to Europe and other West African countries, marking a major improvement over previous satellite-based internet services . This infrastructure enables faster, more reliable international bandwidth, supporting businesses, mobile operators, and internet service providers .

Connectivity Challenges

Despite the extensive backbone, a large portion of the population remains offline. About 60% of Sierra Leoneans are not connected to basic digital services, and only 25% use the internet regularly . Factors contributing to this include:

- Geographic distance from fiber nodes: Many rural and remote areas are far from fiber optic poles or landing stations, limiting direct access .
- High costs and low device penetration: Only 28.5% of adults owned smartphones in 2024, restricting internet adoption .
- Infrastructure and power issues: Frequent power outages and reliance on diesel generators or solar power affect network performance .
- Vandalism and accidental damage: Fiber cables are often damaged due to vandalism or construction activities, causing service disruptions .

Efforts to Improve Access

To address these gaps, Sierra Leone is promoting infrastructure sharing among telecom operators, allowing them to use existing towers, poles, and active network equipment to reduce deployment costs in underserved areas . The government and private partners are also expanding the fiber backbone and offering cost-effective connectivity solutions to reach more districts and communities .

Conclusion

While Sierra Leone has made significant strides in fiber optic deployment and international connectivity through the ACE cable, many citizens remain far from fiber access, particularly in rural regions. Bridging this digital divide requires continued investment in last-mile infrastructure, affordable devices, and shared network strategies to ensure broader internet adoption and equitable access.

Article Content

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(National Fibre Backbone Network)

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Submarine Cable Landing Station: Gateway to high-speed international bandwidth.
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