

PART 1 DIGITALIZING SARAWAK WITH BETTER CONNECTIVITY THROUGH SALURAN INITIATIVE



INTRODUCTION

In 2018, the Sarawak state government launched the Sarawak Digital Strategy as the plan to develop Sarawak Digital Economy. A comprehensive action plan to bring digital technology into all sectors of the economy was structured. However, being new in the digital world and realising our digital divide and communication gap, the Sarawak Government emphasized **digital inclusivity, talent development, and most importantly digital infrastructure** as its top priorities. Sarawak's government strategy is to build digital infrastructure to widen the coverage and provide connectivity, especially to rural communities. Thus the SALURAN initiative was implemented.

SALURAN is a Sarawak government initiative to provide connectivity to all Sarawakians. The acronym stands for Sarawak Linking Urban, Rural And Nation. The Sarawak government's commitment and drive to ensure Sarawakians in urban and rural areas can have connectivity and access to the internet.

The ultimate objective of SALURAN initiative is to extend the reach of the 4G network through the upgrading of existing infrastructure and expand the telecommunications coverage to all areas in Sarawak including the less viable areas of Sarawak, a function which was solely managed by the Federal government via MCMC in the past. MCMC together with SMA is helping to drive the state government's SALURAN

initiative. Under the initiative, four government agencies are implementing SALURAN projects which are SMART by SMA, Sarawak Rural Broadband Network (MySRBN) by SDEC, Digital Socio Economy (DSE) by SAINS, and Jendela by MCMC.

These agencies, SMA, SDEC, SAINS, and MCMC are working together through a Digital Infrastructure Development Committee overseeing the planning and monitoring of digital infrastructure rollout in the state. The respective agencies collaborate to optimise their resources to ensure synergy, avoid duplication of sites, and ensure seamless delivery of SALURAN initiative in Sarawak.

WHO ARE THE IMPLEMENTATION AGENCIES OF SALURAN

AGENCIES IMPLEMENTING SALURAN

These government agencies work together through the establishment of the digital infrastructure development committee overseeing the planning and monitoring digital infrastructure rollout in the state. The respective agencies collaborate to optimise their resources to ensure synergy, avoiding duplication of sites and ensuring seamless delivery of SALURAN in Sarawak.



Sarawak Multimedia Authority (SMA) - a regulatory body established pursuant to Section 3 of Sarawak Multimedia Authority Ordinance 2017 with the primary objective to spearhead, oversee and facilitate the development and implementation of the communication infrastructure, multimedia and the State's Digital Economy Initiatives.

Website: <https://www.sma.gov.my>



Sarawak Digital Economy Corporation (SDEC) - established as implementing agency and only operationalised in July 2020 with the objective to help escalate the growth of digital economy in the state with private sector participation and to continue reduce the connectivity gap especially in the rural areas.

Website: <https://sdec.com.my>



SAINS - established in 1996 and a leading ICT Systems Integrator and Solutions Provider in Sarawak and its major role is to help Digitalised all the State Government Department Services and Operations.

Website: <https://www.sains.com.my/>



Malaysian Communications and Multimedia Commission (MCMC) – regulator for the converging industries of telecommunications, broadcasting and on-line activities in accordance with the national policy objectives set out in the Communications and Multimedia Act 1998. MCMC also regulates postal and digital signature activities in accordance with Postal Services Act 2012 and Digital Signature Act 1997.

Website: <https://www.mcmc.gov.my>

WHAT ARE SALURAN INITIATIVES?

The Sarawak government's commitment is to build Sarawak Multimedia Authority Rural Telecommunication (SMART) towers apart from the existing 3100 towers and structures across the state. This will enable the telcos such as Celcom, Digi, Maxis, U Mobile, Sarawak Rural Broadband Network (MySRBN) by SDEC, etc to provide mobile broadband services. In some far-reaching areas where there are no terrestrial

backhaul such as relay towers and fibre, the agencies will install Very Small Aperture Terminal (VSAT) to provide broadband via Satellite as an interim solution. Apart from this, the SALURAN initiative also include JENDELA programs by MCMC.

The strategic planning, technical capability, and collaboration between the various Sarawak and Federal

government agencies will ensure that the people of Sarawak will have access to the internet which form the foundation of the digital economy.

To cover every settlement area, highway and other areas of economic activities in the state of Sarawak, we will need an estimated 7000 towers and structures.

WHAT ARE SALURAN INFRASTRUCTURE AND COMPONENTS

FACTORS AND REQUIREMENTS FOR CONSIDERATION BY IMPLEMENTING AGENCIES

HOW TO BRING CONNECTIVITY TO THE RURAL AREAS?

1 TECHNOLOGY & INFRASTRUCTURE REQUIREMENTS

To match the right infrastructure requirements and technology with the unique landscape and population scarcity of Sarawak.

- Structure type
- Backhaul medium such as fiber/OPGW, microwave, VSAT

- Type of equipment
- Power requirement and solution

2 LAND AND WAY LEAVE

- Site search and identification
- Setback criteria as per telecommunication policy

- Siting approval
- Land acquisition

3 FULFILLING REGULATORY REQUIREMENTS & INDUSTRY STANDARD

- Spectrum and Apparatus Assignment
- Licenses

- Quality of Service compliant
- Service Level Agreement
- PDPA

4 CONNECTIVITY STRATEGY

To ensure long term project sustainability, service quality and affordability.

- Go to market strategy
- Product development
- Product awareness

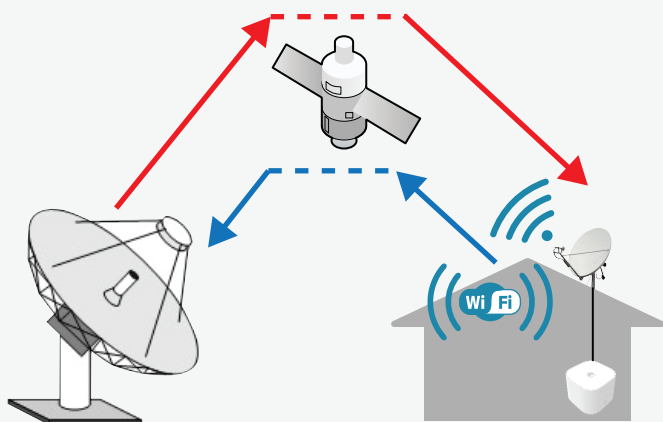
- Service management
- Customer management

Note: Detailed explanation in part 2

INTERIM SOLUTIONS: VSAT

Saluran VSAT interim solution is to provide connectivity for people and communities in remote areas that do not have sufficient infrastructure.

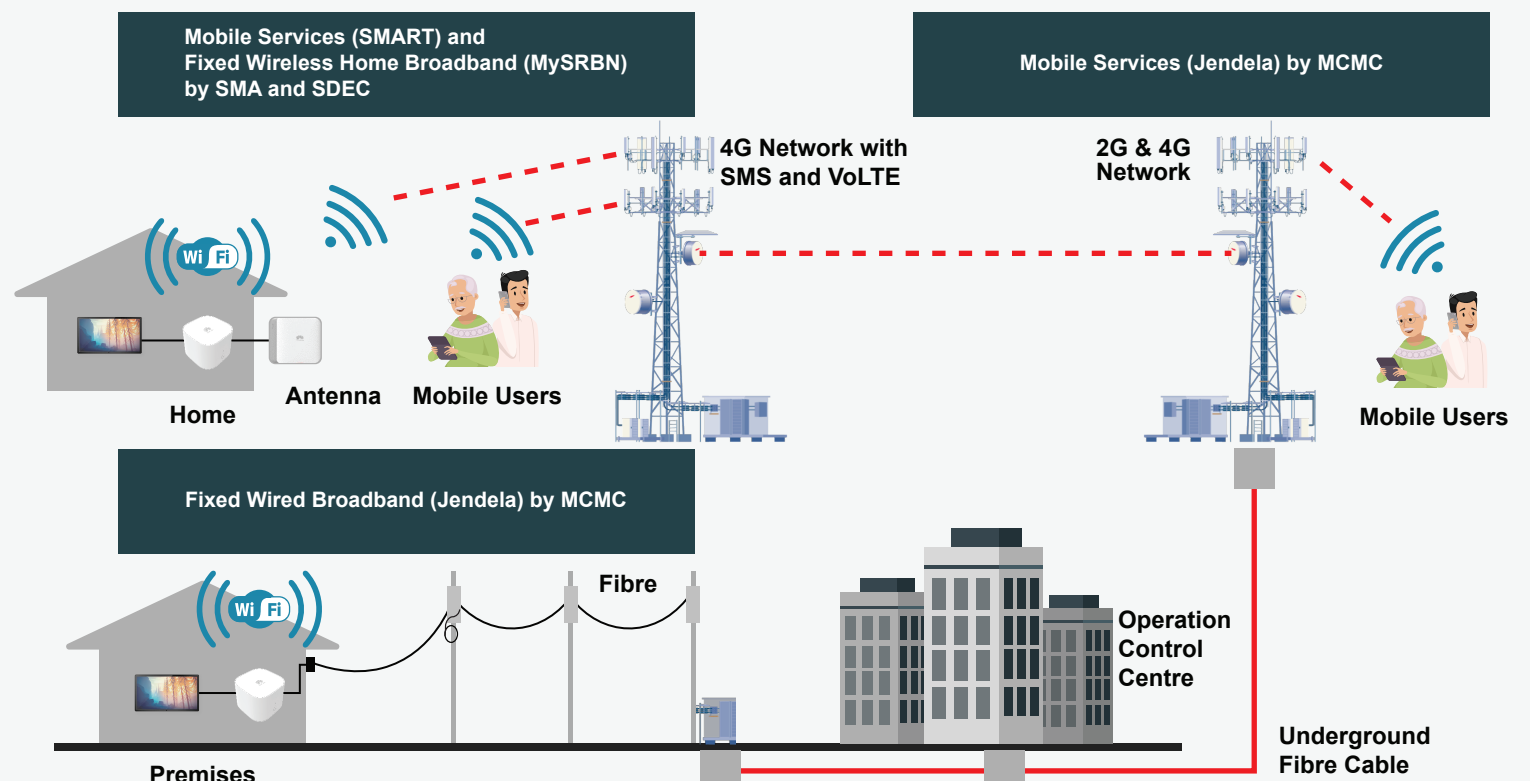
| Satellite Broadband Services | |
|------------------------------|---------------|
| MCMC | 523 locations |
| SMA | 200 locations |
| SAINS | 60 locations |



Note: VSAT, an interim solution due to cost and stability challenges.

PERMANENT SOLUTION: TOWER AND FIBRE

SALURAN provides Permanent Solution to provide long term connectivity for communities all over Sarawak.



More information in Part 2 of SALURAN advertorial

STATUS OF SALURAN INITIATIVES TO DATE

WHAT IS THE PROGRESS SO FAR?

ESTIMATED **7000** TOWERS
NEEDED TO PROVIDE COVERAGE
TO ALL SETTLEMENTS AREAS IN SARAWAK

3471 TOWERS
COMPLETED TO DATE SINCE
INCEPTION OF MOBILE NETWORK IN SARAWAK

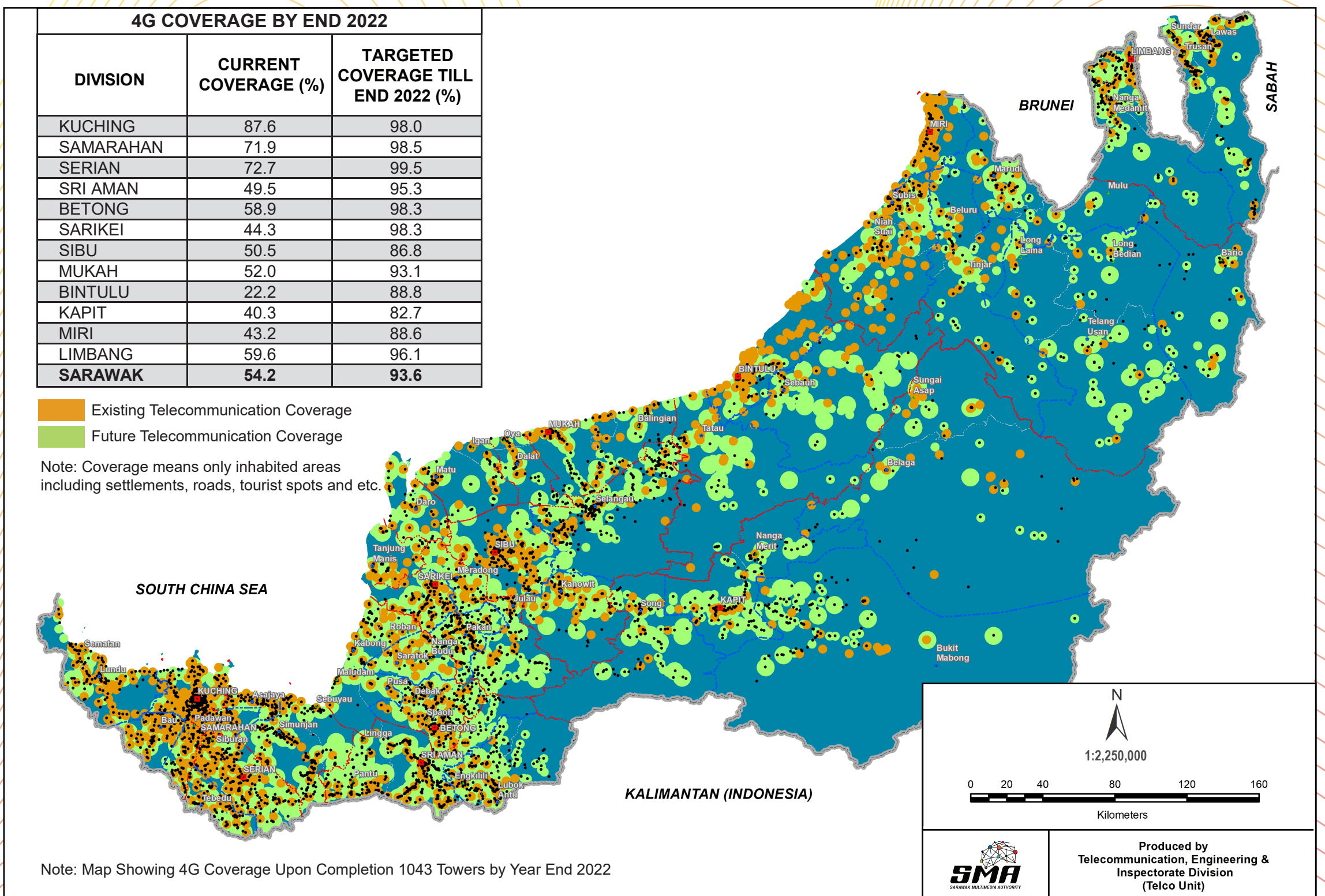
1043 TOWERS
TO BE COMPLETED
END 2022

BALANCE OF AN ESTIMATED
2486 TOWERS
ARE PLANNED TO BE
COMPLETED FROM 2023 ONWARDS

Note: The figures above are based on the current technology

Note: Towers include structures on land and on buildings.

EXISTING 4G COVERAGE IN SARAWAK AND BY YEAR END 2022



EXISTING AND FUTURE TELECOMMUNICATION 4G COVERAGE OVER SETTLEMENT AREA BY DISTRICT

| DISTRICT | CURRENT COVERAGE (%) | TARGETED COVERAGE TILL END 2022 (%) | DISTRICT | CURRENT COVERAGE (%) | TARGETED COVERAGE TILL END 2022 (%) | DISTRICT | CURRENT COVERAGE (%) | TARGETED COVERAGE TILL END 2022 (%) |
|------------|----------------------|-------------------------------------|---------------|----------------------|-------------------------------------|--------------|----------------------|-------------------------------------|
| KUCHING | 90.8 | 99.1 | MARADONG | 46.5 | 100.0 | BELAGA | 23.6 | 63.0 |
| LUNDU | 81.6 | 94.8 | JULAU | 25.6 | 95.6 | SONG | 25.6 | 88.4 |
| BAU | 87.9 | 100.0 | PAKAN | 41.5 | 99.7 | BUKIT MABONG | 10.1 | 77.5 |
| SAMARAHAN | 97.7 | 99.7 | SIBU | 75.8 | 91.7 | MIRI | 61.2 | 86.4 |
| ASAJAYA | 91.8 | 100.0 | KANOWIT | 59.1 | 88.5 | MARUDI | 38.6 | 94.0 |
| SIMUNJAN | 59.6 | 97.9 | SELANGAU | 32.7 | 83.1 | SUBIS | 68.8 | 94.2 |
| SERIAN | 72.0 | 99.4 | MUKAH | 56.2 | 88.8 | BELURU | 32.7 | 89.1 |
| TEBEDU | 74.5 | 100.0 | DALAT | 40.4 | 92.8 | TELANG USAN | 15.0 | 81.4 |
| SRI AMAN | 55.2 | 97.5 | MATU | 50.8 | 97.4 | LIMBANG | 48.5 | 98.4 |
| LUBOK ANTU | 39.7 | 91.6 | DARO | 50.6 | 97.3 | LAWAS | 72.4 | 92.1 |
| BETONG | 58.1 | 98.8 | TANJUNG MANIS | 58.9 | 98.6 | TOTAL | 54.2 | 93.6 |
| SARATOK | 67.4 | 99.7 | BINTULU | 63.1 | 91.5 | | | |
| PUSA | 68.3 | 92.5 | TATAU | 20.5 | 86.6 | | | |
| KABONG | 50.6 | 97.8 | SEBAUH | 33.0 | 87.9 | | | |
| SARIKEI | 67.3 | 98.1 | KAPIT | 30.1 | 92.2 | | | |

More information in Part 2 of SALURAN advertorial