# Map Revision of Small Scaled Topographic Sheet 303 Abakaliki South-West (SW), Nigeria

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**SUMMARY**

Up-to-date and accurate maps are basic tools for any meaningful planning, systematic development, and effective management of the natural resources of any nation. The importance of the utilization of spatially referenced data such as maps by professionals in the built environment has gained increased public awareness globally in recent times which will require routine revisioning as the need arises. The need for an update and revision of map sheet 303 Abakaliki South West (SW) highlights the need for relevant information from the existing map for ease of planning and future development. In this paper, the existing topographical map of sheet 303 Abakaliki S.W. was revised. This was possible through satellite imageries, the GRID3 Nigeria Infrastructural dataset, as well as evaluation of land use and land cover change between 1966 – 2019, and extraction of heights of the mapped area from the ASTER DEM datasets. To effectively pre-process the acquired satellite datasets and classify land cover features as mapped in the previous edition for the revised edition of map sheet 303 Abakaliki South West, it was necessary to create a current land-use map, adopting the layer concept for each feature in a geographical perspective. Results show a high concentration of human activities in major towns like Amuzu with an expansion rate of 0.99% in land use compared to that of 1966 while Echialike also had an expansion rate of 0.80% as regards the built-up area in the classification result. There was no school as of 1966 but in 2019, a total of 308 Primary schools, 143 Secondary schools, and 7 Tertiary schools were discovered. Based on the study of the map produced, it was discovered that the total number of roads on the revised map was 806 while that on the existing topographical map excluding minor paths was 104 implying that there is an additional 598 roads between 1966 and 2019. Also, the percentage of dual carriage roads, single lanes, and other roads show a considerable increase. Similarly, some areas have increased in elevation as a result of landfill and urbanized construction while there are some areas of decrease in elevation as a result of sand mining and mineral extraction. Furthermore, the result shows a high concentration of human activities in major towns like Amagu, Amuzu, Igbidu,

Akahufu, and Echialike as regards the built-up areas in the classification result. From the findings, there were many changes in the topographic information; settlements, road types, and road names in the mapped area for 2019 when compared to what was existing in the 1966 topographic sheet. It is recommended that the use of remotely sensed data should be adopted for mapping purposes, and revision of all categories of maps should be embarked upon as often as possible.