

# Geographisches Kolloquium



**Dienstag, 26.11.2024**

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## Urban Expansion and the Powerline Hazards in Nigeria

Urban expansion in Nigeria has led to building on the powerline corridors. These powerlines emit hazardous electric and magnetic field stresses which are detrimental to inhabitants. This assessment will identify potential danger zones and promote efficient development without compromising safety and sustainability. Descriptive statistics were used to describe the percentage of the frequency trend while figures and tables were utilized to show results. The Global Positioning System (GPS) was used to acquire the coordinates of the electric poles, imported into ArcGIS environment to enable the mapping of the powerlines. The powerline ROW obtained by buffering the powerlines with a distance of 11m to represent the stipulated ROW was overlaid on the digitized buildings and this enabled the capturing of the buildings that encroached into the powerline ROW. The result showed that powerlines cut across all parts of the study area and about 3.19% of the buildings encroached into the powerline right-of-way. The factors responsible for occupying the buildings on the setbacks from powerline were mainly ignorance (65%), poverty (46%) and proximity to work place (43%). The study disclosed the challenges faced by inhabitant of these buildings as shock (27%), electrocution (1%), burns (9%), ill health (11%), flashlights (94%) and powerline sagging (87%). It is therefore concluded that, as the study area continues to expand, there will be increase in encroachment and detrimental impacts on inhabitants. This study recommends that, educating residents on the powerline hazards, incentivizing compliance to regulations etc, the study area can achieve sustainable urban development.

**Erwin-Schrödinger Zentrum**

**Rudower Chaussee 26**

**Raum: 0'307**

**15:00 Uhr c.t. – Eintritt frei**

