Introduction: CLTS is an innovative methodology for mobilizing communities to conduct their own appraisal and analysis of open defecation (OD), stimulating a collective sense of disgust and shame among community members as they confront the crude facts about mass OD and its negative impacts Objective: To assess Community Led Total Sanitation in achievement of Open Defecation Free Status in Nwoya district.

Methods: The study used cross sectional study design that involved 358 respondents (household heads) in Nwoya district. The sample size was determined using Yamane's formula at 5% precision. Multi stage sampling method was used and data was collected by structured questionnaire, key informant interview guide and observation check list. It was entered in Excel entry sheet for cleaning and exported to IBM SPSS version 21 for statistical analysis at 95% confidence level. Chi-square test was used to analyze the relationship between the dependent and independent variables. Relationships with probability values less than 0.05 were deemed statistically significant for logistic regression analysis into odds ratios with 95% confidence intervals. Meanwhile, qualitative variables were analyzed via content analysis into themes.

Results: 196(54.7%) of the respondents were females compared to males 162(45.3%. The mean age was 38.3 years with standard deviation of 12.34; 1 in 6 that is 17 % (60) out of 358 with 95%CI 13%-21%) respondents were from ODF and 83% from Non ODF villages. At bivariate analyses, occupation education level at socio-demographic were significant. CLTS triggering (uOR 3.8, 95%CI 0.11-0.867 P=0.01), follow up by CLTS facilitators (uOR=4.05 95%CI (2.22-7.38 P=0.001) and (uOR=1.97 95%CI 1.12-3.48 p=0.019) follow up by community leaders, community participation, training, involvement of children and women (uOR 2.30 95%CI 1.31-4.028 P=0.04) were statistically significant in ODF status achievement. At multivariate analysis, occupation, education CLTS triggering and follow up by facilitators had statistically significant variables associated to achievement of ODF in Nwoya district.

Conclusion and Recommendations: Scale up triggering and follow ups, involve children and women, encourage full participation from every community member, ensure children both boys and girls go to school beyond secondary education, organize CLTS training for key community leaders and influential members.