**TRAINING CURRICULUM FOR CAPACITY BUILDING**

**FOR ADVANCED DATA ANALYSIS –**

**RECAP**

The aim of this session is to refresh our understanding on data types/formats

* Variable types
* Data formats
* Descriptive statistics

**A COOL INTRODUCTION TO STATA**

* Explore the Capabilities
* Learn to use Stata: windows, commands, do-files, log files
* Overview of STATA syntax

**READING DATA**

* Inputting raw data files into STATA
* From variables to datasets - Import data in different formats into Stata
* Using and saving STATA data files
* From datasets to variables - Export data in Stata into different formats

**BASIC DATA MANAGEMENT IN STATA**

* Reading dates into STATA using date variables.
* Labelling data, variables and values
* Creating and recoding variables
* Missing Values in STATA.
* Sub-setting variables and observations.
* Subgroup analysis
  + “if” “by” “bysort” for sub-setting with STATA commands

**ADVANCED DATA MANAGEMENT IN STATA**

* Combining STATA data files
  + Appending, merging data from different sources
* Reshaping data from wide to long
* Reshaping data from long to wide
* Collapsing data across observations
* Working across variables using foreach

**BASIC AND INTERMEDIATE DATA ANALYSIS IN STATA**

* Introduction to descriptive statistics
* Descriptive information and statistics
* Overview of statistical tests in STATA
* Making sense of data: more descriptive statistics
* Plotting and manipulating graphs

**INTERMEDIATE DATA ANALYSIS IN STATA**

* Inferential statistics and meaning of differences
* Hypothesis testing, p-values and confidence intervals
* Parametric and no-parametric tests
* Chi-square, t-test, Wilcoxin test, correlation, and ANOVA
* Introduction to multivariate methods.
* Concepts in multiple regression: Theory and Practice
  + Linear regression models using Stata
  + Logistic regression models using Stata
    - Ordinary, Multinomial, Ordinal logistic regression model
* Understanding and interpreting outputs
* Unadjusted and adjusted models