The Republic of Rwanda

NATIONAL INSTITUTE OF
STATISTICS OF RWANDA

Compendium

Statistical Concepts and Definitions

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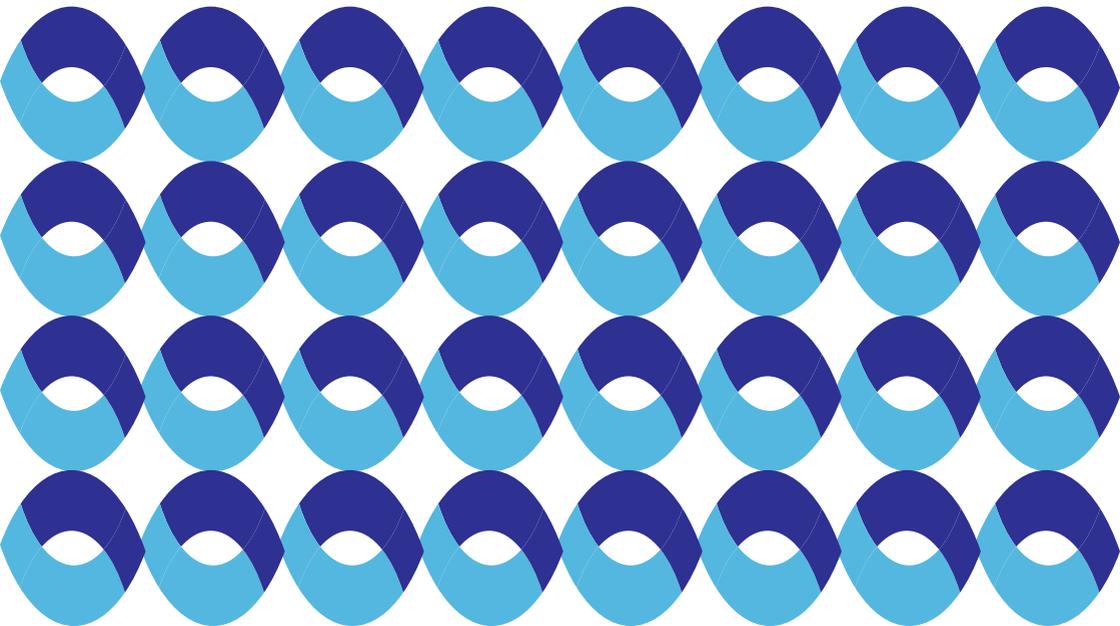
Compendium of Statistical Concepts and Definitions

First edition

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The Rwanda Compendium of Statistical Concepts and Definitions is produced by the National Institute of Statistics of Rwanda (NISR).

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Foreword

To be efficient and effective and well-coordinated, producers of official statistics should adhere to the same concepts and definitions so as to guard against the inconsistencies in data production, reporting and interpretation.

However, one major identified setback in the National Statistical System (NSS) is that definitions of concepts, variables and classifications used in data production tend to vary. This introduces discrepancies that are making comparison and trend analysis difficult or sometimes impossible.

NISR, as the coordinator of the National Statistical System, therefore, took the initiative to produce the Compendium of Statistical Concepts and Definitions for Rwanda with the contribution of several MDAs and Research Institutions.

As the demand of statistics is increasing continuously, we hope that this compendium will facilitate the production, dissemination and interpretation of statistics in Rwanda.

The National Institute of Statistics of Rwanda looks forward to continuing good collaboration with producers and users of statistics for evidence based decision making.
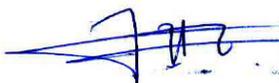
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Acknowledge

INTRODUCTION

The National Institute of Statistics of Rwanda (NISR), Line Ministries, Departments and Agencies (MDAs) and Research Institutions in the country produce statistics for evidence based decision making, planning, monitoring and evaluation of development policies, programs and projects.

For an effective coordination of the National Statistical System (NSS) and its development in general, there have been determined initiatives aiming at improvement of availability, accessibility and integration of reliable statistics into policy and decision making.

In this context, the National Institute of Statistics of Rwanda in collaboration with other members of NSS produced this compendium to harmonize the use of statistical definitions and concepts in Rwanda and it is an additional effort towards availing users and producers with relevant manuals to be used for statistical purposes. NISR, as the leader in the production of official statistics and coordinator of the National Statistical System, therefore, took the initiative to coordinate the development of the Compendium of Statistical Concepts and Definitions for Rwanda, in a workshop setting involving staff from NISR and several MDAs and Research Institutions.

The first edition of this compendium has attempted to outline the major concepts used in the broad subjects on which different types of data are usually collected. These include among others, General Statistical Concepts and Definitions, Population and Demography, Health, Education, Poverty, Labor force, Gender, Economic Statistics, Environment, Law and Order, Information and Communication Technology, and Tourism. Included also

are others such as Political Structure and Geographical and Administrative Division. It is a living document that will change as new concepts are developed and agreed upon. It is hoped that more inputs will be incorporated in future to make it more comprehensive for the needs of data production and use in Rwanda.

It is greatly acknowledged that most of the concepts and definitions were developed making reference to documents produced under the auspices of the international organizations such as: International Labor Organization (ILO), Food and Agricultural Organization (FAO), World Health Organization (WHO), United Nations Children Fund (UNICEF), United Nations Population Fund (UNFPA), United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Development Program (UNDP), United Nations Statistical Division (UNSD), Organization for Economic Co-operation and Development (OECD), United Nations Environmental Program, United Nations Industrial Development Organization (UNIDO) and UN woman.

Reference was also made to other authoritative regional and international organizations, with particular reference to compendiums of countries such as Uganda, South Africa, Malawi, Ghana, Sudan and Zimbabwe.

List of Acronyms

ASDR	:Age Specific Death Rate
BCG	:Bacille Calmette Guerin
BOP	:The balance of payments
CBR	:Crude Birth Rate
CPI	:Consumer Price Index
DHS	:Demographic and Health Survey
DPT	:Diphtheria, Pertussis (whooping cough), and Tetanus
FAO	:Food and Agriculture Organization
FPOS	:Fundamental Principles of Official Statistics
GDP	:Gross Domestic Product
GFR	:General Fertility Rate
GNI	:Gross National Income
GRR	:Gross Reproduction Rate
GRs	:Genetic Resources
Hib	:Haemophilus influenza type B
IDP	:Internal Displaced Persons
ISCED	:International Standard Classification of Education
ISCO	:International Standards Classifications of Occupation
ISIC	:International Standards Industrial Classification of All Economic
ITN	:Insecticide Treated Net
LT	:Life Table
M1	:Narrow Money
MDGs	:Millenium Development Goals
MDGs	:Millennium Development Goals
MICS	:Multiple Indicator Cluster Survey
MTEF	:Medium Term Expenditure Framework

NISR	:National Institute of Statistics of Rwanda
NPA	:National Planning Authority
NRR	:Net reproduction rate
OPV	:Oral polio vaccine
PGI	:Poverty Gap Index
PPI	:Producer Price Index
SDGs	:Sustainable development Goals
SNA	:System of National Accounts
TFR	:Total fertility rate
VAT	:Value-Added Taxes
WHO	:World Health Organization

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CHAPTER 1: General Statistical Concepts and Definitions

1.1. Census concepts and definitions

Census: It is the total count of elements of interest, along with their characteristics, at a given time in a given area or territory; examples (population census, Establishment census).

Census night: The night preceding the population census day – which is used as reference time point of the census data.

De facto: The collection of census data on persons who spend the census night in the specified household i.e. persons are counted according to their **actual** place of residence during the census reference time irrespective of their usual place of residence.

De jure: The collections of census data on persons

according to their usual place of residence irrespective of their current place of residence i.e. household visitors at census night are not counted; in contrast temporally absent household members are counted.

Enumerator: A person who collects data from respondents by direct interviewing

Enumeration Area: It is the smallest area with identifiableboundaries within which the enumeration takes place. Usually every enumerator is assigned an enumeration area as his/her workload.

Household: A household includes all the people who occupy a housing unit. (People not living in households are classified as living in group quarters or

institutions.) A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied (or if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other people in the building and that have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living quarters.

Institutional household: It is a legal body for the purpose of long-term inhabitation and provision of Institutionalised care given to a group of persons. Examples are hospitals, prisoners and dormitories.

Listing: It is the demarcation andmaking a list of all buildings, housing units and households in the census or survey enumeration areaand collection of requisite information on households and/or household residents.

Population and housing census: It refers to the collection of main demographic and socioeconomic information of population and housing characteristics of the country at a given time. It usually takes place every 10 years as recommended by the United Nations. Four population and housing censuses have been carried out in Rwanda so far; the latest one was the 2012 Population and Housing Census.

Post-enumeration survey: A sample survey conducted after census enumeration to evaluate the extent of census coverage and content errors

of important census variables.

Pre-test or pilot survey: It is a field survey conducted prior to the census or the survey under consideration to test the questionnaire design, interviewing problems and other operationsof the census or survey. Pilot surveys often help organizations determine the details of the survey. Respondents may be asked to provide feedback on the content of the survey, how long it took to answer the questions or other information. By presenting the pilot survey to a smaller group, the organization also may determine the best group size for the main survey.

Respondent: Respondent is any individual from whom data is collected in a census or survey.

Supervision Areas: It is an area comprising several enumeration areas assigned to enumerators under supervision.

1.2. Survey concepts and definitions

Survey: It refers to the statistical operation in which information is collected from a sample of population and generalized to the whole population. It differs from a census in that all information is collected on a sample basis and it is usually concerned with specific subject or limited number of subjects.

Case study: In the social sciences and life sciences, a case study (or case report) is a descriptive, exploratory or explanatory analysis of a person, group or event. An explanatory case study is used to explore causation in order to find underlying principles. Case studies may

be prospective (in which criteria are established and cases fitting the criteria are included as they become available) or retrospective (in which criteria are established for selecting cases from historical records for inclusion in the study)

Rapid assessment and sample survey: It is a cheaper and quicker method of collecting information. It is characterized by low cost, quick feedback results, short questionnaire and smaller sample size than would be expected.

Focus group: tis a small group of people whose response to something (as a new product or a politician's image) is studied to determine the response that can be expected from a larger population

Baseline survey: It is a statistical survey that is conducted to assess specific situation in the area of interest. It includes different indicators that are collected in thefollow-up surveys for the assessment purpose

Multipurpose survey: It is a survey that deals with a diversity of topics. For example DHS survey collects data on fertility, contraceptive knowledge and practice, child mortality and morbidity, disability and youth.

Panel survey: It refers to a statistical survey in which information is collected repeatedly over time from the same sampling unit to study trends or behaviors change.

Cross-sectional survey: It is a survey in which data are collected at a particular time from a national household sample.

Unit of analysis: The specified unit considered in the data collection.

Target population: The population with characteristics that of interest and for which estimates are required.

Survey population: It refers to the actual population from which the sample is selected. For example if a part of the target population is intentionally excluded from the sample frame, on the ground of operational considerations, such as nomadic population, the survey population does not precisely comply with the target population. The results in this case are only pertinent to the survey, rather than, target population.

1.3. Questionnaire concepts and definitions

Questionnaire: It is a structured form with questions leading to the required information.

Short Form questionnaire: A questionnaire with principal questions applied to all units in the census.

Long Form questionnaire: An extended questionnaire, including questions of the short questionnaire and other questions, applied to selected respondents through sampling operation in the specified areas.

Open questions: They are questions of questionnaires where responses are not specified by any options. The respondent is left to report whatever answer s/he think of (not recommended).

Closed questions: A question that is accompanied with a set of possible answers, some

questions must be closed with reference to the nature of the concerned variable, e.g. sex.

Semi-closed question: A question that is accompanied with a set of possible answers, the last of which is "other- specify" (recommended).

Multiple-answer questions: A question which implies selecting more than a single option as a response.

Self-coded question: It refers to a question which has an answer in the form of a number, e.g. age, income, etc.

Pre-coded question: It refers to a question which is accompanied by certain codes for its possible options. The interviewer has to report only the code indicating the answer.

Office-coded question: A question which must be coded in the office such for example occupation, industry, etc.

1.4. Sampling concepts

Sampling: The process of selecting a representative sample from the population.

Sampling unit: It refers to an element or a group of elements of the population that is considered for sample selection in the different stages of sampling. It can be a person, group of persons, administrative units, household, building, establishment …etc

Sample size: The number of sampling units selected in the sample.

Simple random sampling: The process of selecting a sample from a population in which each element, or a combination of elements,

has equal and known chance (probability) of being selected.

Stratification: A process of dividing the study population into a number of internally homogeneous strata.

Stratified sampling: it is the process of selecting a probability sample from each stratum of the population, after dividing the population into mutually exclusive homogeneous strata with respect to studied characteristics.

Cluster sampling: It refers to the process of selecting sample of clusters from a population that is divided into clusters. The more the population in the clusters is heterogeneous the more the sample is reliable.

Multi-stage Cluster sampling: It refers to the process of cluster sampling

in which the sample is generally selected in two or more stages. For example in the two-stage cluster sampling a first stage sample is selected from the Primary Sampling Units (PSU), which is usually the enumeration areas, the second stage sample is a sample of households selected from each PSU selected in the first sampling stage

Systematic sampling: It is the process in which the sample is selected through constant intervals after consecutive numbering of the sample elements. The first element is randomly selected.

Sampling frame: It is an exhaustive list of units within the population from which the sample is selected.

Sampling rate: It is the overall selection probability

of a specific population unit in the sample.

Self-weighted sample: A sample with equal selection probability for all population units irrespective of the stratum and/or the cluster

Sampling weight: It is the reciprocal of the selection probability. The sampling weight must be applied to survey data in order to compensate for the non-self weighted feature of the sample resulting from either the design itself or varying response rate over the survey strata in case of self-weighted design

Design effect (deff): It is the ratio of the variance of the current design to the variance of the simple random sample of the same size. This means that *deff* measures how worse the current design is compared

with simple random sample of the same size

1.5. Survey errors

Sampling errors: Errors resulting from drawing inference to the population understudy based on investigating only a part (sample) of this population.

Non-sampling errors: They are any other errors rather than sampling errors. It includes respondent errors, interviewer errors, coding errors…etc. They can also be divided into content errors and coverage errors.

Content errors: Non-sampling errors concern with data reporting, coding, or data entry, for example age data can be misreported or erroneously recorded on the questionnaire, or erroneously entered to the computer.

Non-sampling errors: Non-sampling errors concern with erroneously missing, duplication or addition of erroneous sampling units in the sampling frame

Non-response errors: This is the major source of non-sampling errors. Non-response can be for the whole questionnaire (unit non-response) or only for some questions (item non-response). Although there is some statistical methods to compensate for non-response errors, such as imputation or weighting, but none of them is perfect. If unit non-response exceeds certain level, say 10 percent, the survey results will be in doubt.

Frame errors: It refers to erroneously missing, duplication or addition of units in the list of units from which the sample is to be selected;this is also considered a coverage error

Statistical Indicators: They may be absolute number (population size), Ratio, Proportion, or Rate.

Ratio: A ratio between two mathematically unrelated number (a/b) example: Sex Ratio, Population Density, Per Capita Income...etc.

Proportion: It is a ratio between two numbers, for which the numerator is part of the denominator [a/(a + b)], example, proportion of illiterate persons commonly known as illiteracy rate.

Rate: It can be used to measure change over time, for example, population growth rate; in the sense of probability for example infant mortality rate, under five mortality; or central demographic rate such as Crude Death Rate.

1.6. International Standards and Classifications

ISCO: International Standards Classifications of Occupation developed by the International Labor Office to facilitate international comparisons of occupational statistics. It consists of codes for the different occupations classified into 10 major groups, 28 sub-major groups, 116 minor groups and 390 unit groups. The total number of digits for a complete detailed occupation sums up to 8 digits. It is revised from time to time; the first edition took place in 1958 and last edition was in 2008.

ISIC: International Standards Classifications of Industry developed by International Labor Office to facilitate international comparisons of industry (economic activity) statistics.

ISCED: International Standard Classification of Education is a classification structure for education maintained by the UNESCO to facilitate comparisons of education statistics and indicators across countries on the basis of uniform and internationally agreed definitions.

FPOS: Fundamental Principles of Official Statistics adopted by the UN Commission in 1994. It consists of 10 requisite principles for maintaining high quality official statistics for evidenced based decision making and policy formulations.

CHAPTER 2: Population and Demography

2.1. Population concepts and definitions

Population: In statistical terminology any collection of distinct elements may be called a population, a word that is synonymous with universe. However, in demographic usage, the term population refers to all of the inhabitants of a given area, though on occasion it may be used for part of the inhabitants only [e.g., the school age population, the marriageable population etc.] Such groups are properly called sub-populations.

Demography: Is the scientific study of human populations primarily with respect to their size, their structure and their development; it takes into account the quantitative aspects of their general characteristics.

Cohort: The term cohort denotes a group of persons who experience a certain event in aspecified period of time.

Generation: In demography, the term **generation** has been given a precise meaning and refers to a group of persons born within a specified period of time, generally taken as a calendar year.
The term cohort denotes a group of persons who experience a certain event in a specified period of time: thus birth cohort is a synonym for generation; a marriage cohort is a group of persons married within a defined period, etc.

Population size: It is the count (or an estimate of) the population number of a

specified area in specific reference time. (e.g: according to the 2012 population and Housing Census of Rwanda the Census count numbered 10,515,973 persons).

Population structure: It refers to the percent distribution of population by age, sex and other socioeconomic characteristics.

Population pyramids: A bar chart that shows the distribution of a population by age and sex. By convention, the younger ages are at the bottom, with males on the left and females on the right.

Urbanization: It is the process of increasing (or decreasing) the extent of living in urban areas. In the 2012 Population and Housing Census, urban areas were defined

administratively- by the Ministry of Local Government. (e.g: In the 2012 Census the number of urban and rural villages amount to 1606 and 13209 respectively).

Urban population: Population resides in urban areas.

Rural Population: Population lives in rural areas: any population-inhabited area which does not meet the definition of Ministry of Local Government as being urban is considered a rural area.

Special populations:

Nomads: Population with no permanent house, they are in continuous moving with their cattle towards sources of water and grass.

IDP: IDPs are Internal Displaced Persons who

leave their origin residence because of draught, war or other reasons and live in IDP camps.

Refugees: Refugees are population from other countries who leave their origin country because of fear of war, fear of persecution, because of race, religion, political opinion, opposition or other reasons that inhibit them from living in peace in their origin countries; they may seek asylum in the destination country

Population distribution: Distribution of population by geographical areas or administrative divisions, at a given time; for example distribution of population by urban/rural, by province or by districts

Population change: The increase or decrease of population size due to

fertility, mortality or migration factors.

Population density: The number of people per an area unit, usually square kilometer, the area may be limited to inhabited area; in such case the density is called population density of inhabited area.

Marriage: A legal union between persons of opposite sex as spouses or husband and wife

Marital Status: The term describes whether the adult person is married or not. If not married, describes whether the person married before. Categories under marital status include:
  o Never married: Includes men and women beyond specific age (12 years in Rwanda) who have never been married,

o Currently married: refers to a person who is legally married according to prevailing law in Rwanda,

o Separated: Spouses are not living together although the marriage is not legally dissolved,

o Widowed: Refers to ever married person whose spouse is dead,

o Divorced: Final legal dissolution of marriage,

o Ever married: Includes currently married, divorced, separated and widowed.

Proportion of never-married persons: The number of single persons of age 12 years and over at a specific point in time relevant to the number of population 12 years and above at the same point in time, usually census or survey date.Source of data: population censuses and surveys.

Proportion of currently married persons: The number of currently married persons at a specific point in time, usually census or survey date   relevant to the number of population 12 years and above at the same point in time. Source of data: population censuses and surveys.

Proportion of widowed: It isthe number of widowed persons of age 12 years and over at a specific point in time, usually census or survey date, relevant to the number of population 12 and above at the same specific point in time.Source of data: population censuses and surveys.

Proportion of divorced: It is the number of divorced persons of ages 12 years and over at a specific point in

time, usually census or survey data, relevant to the number of population 12 and above at the same point in time. Source of data: population censuses and surveys

Orphan: An orphan is the child either whose biological parent or both parents are dead

Metadata: A set of information which indicates definitions of concepts, or measurements content, purpose, disaggregation, and other characteristics of data

2.2. Housing and Households concepts and definitions

Building: Any independent, freestanding structure comprised of one or more rooms covered by a roof with external walls or dividing walls that extend from the foundation to the roof. A building can be a house, a building with apartments, a store or an office building.

Compound: It consists of one or more buildings/huts with a common entrance enclosed by a wall or fence without a wall or fence enclosure. A compound can be hostel, family dwelling, NGO compound, hospital or school.

Household: One or more persons who live together and eat together irrespective of relations between them; they could be relatives or not, for example number of persons who work in the same company, not related to each other but they live and eat together

Head of household: A person acknowledged by household members to be in charge of the members of

households and responsible of their living

Nuclear household(family):
A household consists of a father, a mother or both with one or more of their children. The household with both spouses living together though has no children is considered nuclear

Extended household: A household includes other relatives more than those in nuclear household such as grandfathers, grandmothers, brothers of household head…etc

Institutions: Places occupied by unrelated persons together for a common purpose with shared facilities, e.g., prisons, hospitals, hostels, etc.

Homeless persons: persons without lodging or residence; these include

persons sleep in market places and street children.

2.3. Demographic concepts and definitions

Age: It is the interval between date of birth and date of interview usually expressed in complete years. For example a person aged 14 years and 10 months is recorded as having 14 years; A new born child of age 11 months is recorded as of 0 (zero) age.

Sex: The state of being either male or female

Sex ratio: It is the number of males in specific population or subgroup of population divided by corresponding number of females, conventionally multiplied by 100. Source of data is population censuses and surveys.

Live birth: The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which after such separation breaths or shows any other evidence of life.

Death: The permanent disappearance of any evidence of life after birth has taken place.

Infant mortality rate: The number of deaths before reaching one year of age from a cohort of 1000 live births born in the same period. The source of data: the population censuses and surveys. Indirect methods of calculation were used in some censuses and surveys. In recent surveys direct methods were used from data on birth history e.g DHS surveys or direct question eg, Mortality Assessment Survey(MAS).

Neo-natal mortality rate: The number of deaths before reaching the first month of age from a cohort of 1000 live births born in the same period. The source of data: the population censuses and surveys. Indirect methods of calculation were used in some censuses and surveys. In recent surveys direct methods were used from data on birth history, e.g. DHS surveys.

Post-neonatal mortality rate: It is the number of deaths between the first month and the month 12 of age from a cohort of 1000 live births born in the same period. The source of data: the population censuses and surveys. Indirect methods of calculation were used in some censuses and surveys. In recent surveys direct methods were used from data on birth history as in DHS surveys.

Under five mortality rate: It is the number of deaths before reaching five years of age from a cohort of 1000 live births born in the same date. The source of data: the population censuses and surveys. Indirect methods of calculation were used in some censuses and surveys. In recent surveys direct methods were used from data on birth history as in DHS surveys.

Child mortality rate: The number of deaths before reaching five years of age from a cohort of 1000 babies who survived from birth up to age one year. The source of data: the population censuses and surveys. Indirect methods of calculation were used in some censuses and surveys. In recent surveys direct methods were used from data on birth history as in DHS.

Life expectancy at birth: The average number of years a newborn infant expected to live under current mortality levels. The source of data: population censuses and surveys. It is usually calculated from life tables constructed by direct or indirect methods

Crude death rate: It refers to number of deaths during a year divided by number of population in mid-year. It is frequently multiplied by 1000. Source of data: population censuses and surveys.

Age specific death rate: It refers to number of deaths in a specific age or age group during a year divided by number of mi-year population of that age or age group in that year. Conventionally, it is calculated for five-year age groups of the population.

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Source of data is population censuses and surveys.

Life Table: In actuarial science and demography, a life table (also called a mortality or actuarial table) is a table which shows for each age, what the probability is that a person of that age will die before his next birthday (probability of death). From this starting point, a number of inferences can be derived: The probability of surviving any particular year of age and the remaining life expectancy for people at different ages.Life table may be constructed directly or indirectly. The data requirement for the former is Age Specific Death Rate (ASDR), and for the later approach the requirements is Under 5 and infant mortality rates as well as estimate of adult mortality (arrived at through orphanhood or widowhood

method). LT for Rwanda has been constructed for 2012 using the indirect approach. The abridged LT is based on five-year age groups. The data source for indirect method is censuses and/ or surveys.

Maternal Mortality Ratio: It is the number of deaths occurs among mothers due to pregnancy or delivery or during 42 days after labor during a specified period divided by number of live births occurred during that specified period, conventionally multiplied by 100000. Source of data: population censuses and surveys. In earlier surveys it was calculated by sisterhood method; in recent surveys of some countries it was calculated by direct method using data collected through listing operations or a direct Survey method, eg MAS in Rwanda.

Crude birth rate (CBR): It is number of live births during a year divided by number of population in mid-year. It is frequently multiplied by 1000. Source of data: population censuses and surveys.

Age specific birth rate: It is number of live births during a year for specific age or age group of women divided by number of mid-year females of that age or age group in that year. It is conventionally calculated for females in the seven five-year age groups from age group 15-19 years to age group 45-49 years. Source of data: population censuses and surveys especially DHS

General fertility rate (GFR): It is the number of live births occurred to women in age group 15-49 years during a year divided by number of mid-year women in that age group of that year. It is

frequently multiplied by 1000. Source of data: population censuses and surveys.

Total fertility rate (TFR): Theoretically it is defined as the average number of births per woman to a cohort of women born in the same date and survives up to the end of the reproductive period. Practically it is calculated as the sum of age specific fertility rates. It is usually calculated as a sum of five year age specific fertility rates multiplied by 5. Sometime indirect demographic techniques are used depending on the availability of the respective types of data. Source of data: population censuses and surveys especially DHS.

Gross reproduction rate (GRR): As for the GRR theoretically it is defined as the average number of female births per woman to

cohort of women born in the same date and survives up to the end of the reproductive period. Practically and approximately it is calculated by multiplying TFR with the proportion of female births relevant to total births. Source of data: population censuses and surveys.

Net reproduction rate (NRR): The same definition as GRR but the mortality factor from birth up to the reproduction ages is considered in the case of NRR; so it is calculated by multiplying the age specific fertility rates of female births by survival ratios from birth to the age group under consideration. Source of data: population censuses and surveys.

Migration: Movements of population across national or international borders for

the purpose of residence change.

Place of destination: The place where a migrant moves to for the purpose of residence

Place of origin: It refers to the place where the migrant moves from for the purpose of changing residence.

Migrant: It refers to a person who leaves his place of origin for the purpose of residing in the place of destination

Internal migration: It refers to movement of population across administrative borders for the purpose of residence change within the Country.

International (External) migration: Movement of population across international borders for the purpose of residence

In-migration rate: This rate is confined to internal migration. It is the number of migrants who enter the place of destination within the country during a year divided by the number of population in the place of destination at mid-year;frequently multiplied by 100. Source of data: Population censuses and surveys.

Out-migration rate: This rate is confined to internal migration. It is the number of migrants who move out the place of origin within the country during a year divided by the number of population of the place of origin at mid-year;frequently multiplied by 100. Source of data: Population censuses and surveys

Net-migration rate: The difference between In-migration rate and Out-migration rate

Gross migration rate: The summation of In-migration rate and out-migration rate

Pulling area: The area where the net migration rate value is positive

Pushing area: The area where the net migration rate value is negative

Immigration Rate. This rate is confined to international migration. It is the number of migrants who enter the country of destination during a year divided by the number of population in the country of destination at mid-year;frequently multiplied by 100. Source of data: Population censuses and surveys.

Emigration rate: Number of migrants who move out the country of origin during a

year divided by the number of population of the place of origin at mid-year;frequently multiplied by 100.

Life time migration rate: The number of persons resides in a place different from their birth place divided by the number of census/survey population of the current place of residence. Source of data: population censuses and surveys

Current migration rate: The number of persons resides in a place different from their previous residence place few years ago (usually five years ago) divided by the number of census/ survey population of the current place of residence. Source of data: population censuses and surveys.

Natural increase: The result of subtraction of the number of deaths from the number

of live births occurred in a specific time period

Natural increase rate: It is the number of births minus number of deaths during a year divided by total population in mid-year. Sources of data: Population censuses.

Population growth rate: It refers to the level of changing population number per year. It differs from natural increase rate in that it includes migration factor. It is usually measured between two consecutive population censuses. The annual growth rate can be measured in two ways: **Geometric or exponential**. The Geometric model is $p_t = p_0 (1 + r)^t$, where P_t *is the population in later census and* P_0 *is the population in earlier rate of population growth and t is the intercensal period in years.*

Solving above equation for (r) we get the average annual growth rate. The Exponential model is $p_t = p_0 e^{st}$, where P_t, P_0 and t are as define above and "*s*" the annual exponential rate of population growth. In an increasing population, s is slightly less than r. Again solving the above equation for s we get the annual exponential rate of population growth. Source of data: Population censuses.

Population Estimation: It is the process of estimating total population following any of the above mentioned mathematical methods. The basic assumption of applying the mathematical methods for population estimation is the applicability of intercensal annual population growth rate "r" or "s" in the period of estimation. Nonetheless,

the intercensal annual growth rate may be modified upward or downward depending on the researcher's justifiable assumptions. It is worth noting that both geometric and exponential methods produce identical population estimates. Generally the mathematical methods are limited to estimating total population; male and female populations; urban and rural populations and province population. It is important also not to apply mathematical methods for prolonged estimation period, say more than 5 years.

Population Projection: It is the process of estimating the sex/age distribution of the population in postcensal years, though it can be used for precensal years; i.e. backward projection. The method depends on

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assumptions about the levels of the three components of population growth: fertility, mortality and international migration throughout the projection period. This method is often labeled as age/sex component method. Unlike the mathematical methods, population projection can be carried out for much longer projection periods, say 30 years or even longer. Usually, three variants of the population projections are implemented: high, median and low variants corresponding to three variants of fertility assumptions: High, intermediate and low fertility assumptions. Supposedly, the set of median population projections is more likely to be closer to reality compared with the other two variants.

Doubling time: The number of years required for the

population of an area to double its present size, given the current rate of population growth.

Baby boom: It is a dramatic increase in fertility rates and in the absolute number of births due to loss of population in the War. It happened in the United States, Canada, Australia, and New Zealand during the period following World War II

Brain drain: The emigration of a significant proportion of a country's highly skilled, highly educated professional population, usually to other countries offering better economic and social opportunity (for example, physicians leaving a developing country to practice medicine in a developed country).

Demographic transition: It is the historical shift of birth

and death rates from high to low levels in a population. The decline of mortality usually precedes the decline in fertility, thus resulting in rapid population growth during the transition period.

Closed population: A population with no migratory flow either in or out, so that changes in population size occur only through births and deaths.

Stable population: A population with an unchanging rate of growth and an unchanging age composition as a result of age-specific birth and death rates that have remained constant over a sufficient period of time.

Replacement level: It is the level of fertility at which a couple has only enough children to replace themselves, or about two children per couple.

Population momentum: The tendency for population growth to continue beyond the time that replacement-level fertility has been achieved because of the relatively high concentration of people in the childbearing years.

Childbearing years: The reproductive age span of women, assumed for statistical purposes to be 15-49 years of age. In some countries it is taken as 15-44 years.

Life span: The maximum age human beings could reach under optimum conditions.

Cohort: It is a group of people sharing a common temporal demographic experience who are observed through time. For example, the birth cohort of 1900 is the people born in that year. There are also

marriage cohorts, school class cohorts, and so forth.

Completed fertility: It is the number of children born per woman to a cohort of women by the end of their childbearing years.

Parity: The number of children previously born alive to a woman; for example, "two-parity women" are women who have had two live births and "zero-parity women" have had no live births.

CHAPTER 3: Health Statistics

3.1. General Health Concepts

Antenatal care: The situation of pregnant women attended at least once during pregnancy by health professional for reasons related to pregnancy

Postnatal care: The situation of women attended at least once during postpartum by health professional for reasons related to postpartum (42 days after delivery)

Delivery attendance: It is the service given to pregnant woman during delivery

Discharged patient: He/she is the patient who is discharged from the health institution after being diagnosed and/or treated

Out-patient: He/she is the patient who receives examination and treatment without being admitted or occupying a bed in the health institution

In-patient: He/she is the patient who is admitted and occupied a bed in the health institution for diagnosis and treatment

Disease: It is the absence of health due to physical or mental disorder

Case Fatality: Death due to specific disease
Morbidity: It is the extent of illness, injury or disability in a population.

HIV/AIDS: It generally occurs when the CD4 count is below 200ml and it is characterized by the appearance of opportunistic infections which take

advantage of a weakened immune system

Vaccination: Any incurable agent or preparation containing bacteria or virus so treated as to give immunity from specific diseases when injected into the subject.

Under weight: It is a condition of low weight for age taking into consideration that a child has expected weight for his age.

Acute malnutrition: Acute malnutrition may be moderate or severe. Moderate acute malnutrition (MAM), also known as wasting, is defined by a weight-for-height indicator between -3 and -2 z-scores (standard deviations) of the international standard or by a mid-upper arm circumference (MUAC) between 11 cm and 12.5 cm.

Severe wasting is characterized by a massive loss of body fat and muscle tissue. Severe acute malnutrition (SAM) is the most dangerous form of malnutrition. Acute malnutrition is caused by a decrease in food consumption and/or illness resulting in sudden weight loss or edema.

Chronic malnutrition: A condition of nutrition deficiency of long term often combined with persistent ill health

Contraception: The intentional prevention of conception through the different contraceptive methods such as sexual practices, chemicals, drugs…etc.

Pandemic: It is the spread of an infectious disease that affect people or animals over

an extensive geographical area

Epidemic: It is an infectious disease that spread over wide area and affecting a large number of people.

Live birth: A live birth refers to the complete expulsion or extraction from the mother of a baby, irrespective of the duration of the pregnancy, which, after separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. In the case of multiple births, each product of such a birth is considered live born.

Still birth: It is a birth that does not show any sign of life.

Vital event: An event that is essential of the continuity of life; it includes live births, deaths, marriage and divorce.

Foetal death: Foetal death is the death of foetal prior to the complete expulsion or extraction from its mother

Maternal death: It is the death of woman during pregnancy, delivery, within 42 days after delivery or termination of the pregnancy, death due to accidents is excluded.

Disability: It is the un-ability to be active in the every- day life due to loss or limitation of functioning of a part of the body compared with a normal person.

Reproductive health: The state of complete physical, mental, and social well being in all matters related to reproductive process.

Risk of disease: Threats posed to population by actual or potential presence of a specific disease

3.2. Health assessment indicators (Nutrition)

Underweight prevalence: A: Moderate: The number of children under-five who fall below minus two standard deviation from the median weigh for age of the WHO standards, divided by the total number of children under age 5; usually expressed as percentage. (MDG indicator) Source of data: Demographic and Health surveys
B: Severe: The number of children under-five who fall below minus three standard deviation from the median weigh for age of the WHO standards, divided by the total number of children under age 5; usually expressed as percentage (MDG indicator). Source of

data: Demographic and Health surveys

Overweight prevalence: The numbers of children under-five who fall above two standard deviations from the median weigh for height of the WHO standards, divided by the total number of children under age 5; usually expressed as percentage. (MDG indicator) Source of data: Demographic and Health surveys

Prevalence of Children ever breastfed: Number of women with a live birth in a specific period (recommended 0-23 months) who breastfed the child at any time divided by total number of women with a live birth in the specified period; usually expressed as percentage. Source of data: Demographic and Health surveys

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Prevalence of Early initiation of breastfeeding: Number of women with a live birth in a specific period (recommended 0-23 months) who put the new born to the breast within one hour of birth divided by total number of women with a live birth in the specified period; usually expressed as percentage. Source of data: Demographic and Health surveys.

Prevalence of Exclusive breastfeeding under 6 months: The number of infants under 6 months (0-5 months) of age who are exclusively breastfed divided by the total number of children under 6 months (0-5 months) of age; usually expressed as percentage. Source of data: Demographic and Health surveys.

Prevalence of Continued breastfeeding at (one/two) years : The number of children in age (12-15/20-23) months who are currently breastfeeding divided by total number of children in age (12-15/20-23) months; usually expressed as percentage. Source of data: Demographic and Health surveys.

Duration of breastfeeding: The age in months when 50% of children age 0-35 months did not receive milk during the previous day. Source of data: Demographic and Health surveys

Iodized salt consumption: Number of households with salt testing 15 parts per million or more of iodide/iodated divided by total number of household in which salt was tested or with no salt; usually expressed as percentage.

Source of data: Demographic and Health surveys

Vitamin A supplementation for children: Number of children age 6-59 months who received at least one high dose vitamin A supplement in the specific preceding period (usually 6 months) divided by the total number of children aged 6-59 months; usually expressed as percentage. Source of data: Demographic and Health surveys

3.3. Health protection and levels

Immunization coverage against:
Tuberculosis: Number of children in age group 12-23 months who received BCG vaccine by their first birth day divided by total number of children in the specified age group; usually

expressed as percentage. Source of data: Demographic and Health surveys

Polio: Number of children in age group 12-23 who received the third dose of OPV vaccine (OPV3) by their first birthday divided by the total number of children in the specified age group; usually expressed as percentage. Source of data: Demographic and Health surveys

DPT: Number of children in age group 12-23 who received the third dose of DPT vaccine (DPT3) by their first birth day divided by total number of children in the specified age group; usually expressed as percentage. Source of data: Demographic and Health surveys

Measles: Number of children in age group 12-23

who received measles vaccine by their first birth day divided by total number of children in the specified age group; usually expressed as percentage. Source of data: Demographic and Health surveys

Hepatitis B: Number of children in age group 12-23 who received the third dose of Hepatitis B vaccine by their first birth day divided by total number of children in the specified age group; usually expressed as percentage. Source of data: Demographic and Health surveys.

Haemophilus influenza type B (Hib): Number of children in age group 12-23 who received the third dose of Hib vaccine (Hib3) by their first birth day divided by total number of children in the specified age group; usually expressed as

percentage. Source of data: Demographic and Health surveys

Yellow fever: Number of children in age group 12-23 who received yellow fever vaccine by their first birth day divided by total number of children in the specified age group; usually expressed as percentage. Source of data: Demographic and Health surveys

Neonatal tetanus protection: Number of women 15-49 years old with a live birth in the specified period who were given at least two doses of tetanus toxoid vaccine within the appropriate interval prior to giving birth divided by the total number of women of age 15-49 with a live birth in the specific period; usually expressed as percentage. Source of data:

Demographic and Health surveys

Oral rehydration therapy with continued feeding: Number of children under age 5 with diarrhea in the specified period who received ORT and continued feeding during the episode of diarrhea divided by total number of children under age 5 with diarrhea in the specified period; usually expressed as percentage. Source of data: Demographic and Health surveys

Households covered by vector control: Number of households with at least one insecticide treated net (ITN) divided by total number of households; usually expressed as percentage. Source of data: Demographic and Health surveys. Disaggregation level: State, urban/rural

Children under 5 sleeping under insecticide –treated nets (ITNs): Number of children under five who slept under an insecticide-treated mosquito net the previous night divided by total number of children under 5; Source of data: Demographic and Health surveys

Incidence rate: The number of total population/population in specific age group suffering from new cases of a disease during specific period divided by the number of total population/population in specific age group in the specific period; usually multiplied by 100000; Source of data: Demographic and Health surveys, health records.

Disease Prevalence rate: The number of total population/population in specific age group who are

suffering from a disease during specific period divided by the number of total population/population in specific age group in the specific period; usually multiplied by 100000; Source of data: Demographic and Health surveys, health records.

Admission as % of attended patients: Number of admitted patients relevant to total attended patients; usually expressed as percentage. Source of data: Health records.

The most prevalent 10 diseases: The most 10 diseases that affect the health of population; these can be known from the prevalence rate of different diseases. Source of data: Health records. Disaggregation level: State, Locality, urban/rural, age and sex.

3.4. Reproductive health

Adolescent birth rate: Number of births to women in age group 15-19 divided by number of women in this age group. Source: Population censuses and surveys.

Early child bearing: It is the Number of women in the age group 20-24 years who had at least one live birth before age 18 divided by total number of women in this age group. Source: Population censuses and surveys.

Contraceptive prevalence rate: It is the number of currently married women in age group 15-49 years who are using (or whose husband is using) a (modern or traditional) contraceptive method. The international definition includes all persons in union irrespective of legal marriage. Source:

Population censuses and surveys

Unmet need: It is the number of currently married women in age group 15-49 years who are fecund and want to space their births or limit the number of children they have and who are not currently using contraception divided by the total number of currently married women in age 15-49. The international definition includes all persons in union irrespective of legal marriage. Source: Demographic and health surveys.

Antenatal care coverage: Number of women in age group 15-49 years who were attended during pregnancy in the specific period at least once by skilled personnel or at least four times by any provider divided by the total number of women in this age group with a live birth,

in the specific period; usually expressed as percentage. Data source is household health surveys

Maternal mortality ratio of specific obstetrical complications: It is the number of maternal deaths due to pregnancy and delivery puerpurium relating to obstetrical complications (Sepsis, Hepatitis, Hemorrhage, PIH and Obstr. Libor) in the specific year divided by number of live births in the same year; usually multiplied by 100000. Source of data: demographic and health survey, health records.

3.5. Services and expenditure

Density of (physicians, Pharmacists, Nurses, Midwives) per 10000 population: The number of (physicians, Pharmacists,

Nurses, Midwives) in specific year divided by total number of population in that year and multiplied by 10000. It also referred to as physicians/ Pharmacists/ Nurses / Midwives population ratio. Source of data: population censuses & surveys and health records.

Density of (hospitals, Pharmacies, Nursing schools), per 100000 population: It is the number of hospitals, Pharmacies, Nursing schools in specific year divided by total number of population in that year and multiplied by 100000. Source of data: population censuses & surveys and health records.

 Number of hospital beds per 10000 population: It is the number of beds in all the hospitals in a specific year divided by total number of population in that year and multiplied by 10000. Source of data: population censuses & surveys and health records.

Health expenditure as percent of total government expenditure: It is the total government expenditure on health in a given year divided by total government expenditure in that year multiplied by 100. Source of data: National account and financial records.

Health expenditure as percent of GDP: It is the total government expenditure on health in a given year divided by total GDP in that year multiplied by 100. Source of data: National account and financial records.

CHAPTER 4: Education Statistics

4.1.1. Literacy concepts and definitions

Literacy: A person, beyond a certain age, is considered to be literate if he/she can read and write in any language; otherwise, he/she is considered illiterate.

Illiteracy rate: The number of population aged 7 years and above who are illiterates relevant to total population 7 years and above. The rate is usually expressed as a percentage. Source of data: Population censuses and surveys.

Illiteracy rate 15-24 years: It is the number of population in the age group 15-24 years who are illiterate relevant to the total population in this age group. The rate is usually expressed as a percentage. This is an MDG indicator. Source of data:

Population censuses and surveys.

4.1.2. School enrolment concepts and definitions

School enrolment: The number of pupils/students who are enrolled and attend various educational institutions in a specific year.

Out of school: Number of children of official primary or Secondary school age who are not enrolled in school, expressed as a percentage of the population of official primary or Secondary school age.

Gross enrolment rate (by stage): Total number of students enrolled in a specific level of education, regardless of age, expressed as a percentage of the official

school-age population corresponding to the same level of education in a given school-year (7-12)

$$GER = \frac{\text{Number of pupils at a level in year t}}{\text{Population of school age in year t}} \times 100$$

Net enrolment rate (by stage): Enrolment of the official age-group(7-12) for a given cycle of education expressed as a percentage of the corresponding population.

$$NER = \frac{\text{Number of pupils of specified age at a level in year t}}{\text{Population of related school age in year t}} \times 100$$

Gross intake rate: Total number of new entrants in the first grade of primary education, regardless of age, expressed as a percentage of the population at the official primary school-entrance age (6or 7).

$$GIR = \frac{\text{Number of the new entrant in } P_1 \text{ in school year t}}{\text{Population having 7 years in school year t}} \times 100$$

Net intake rate: The total number of new entrants in the first grade of primary

education who are of the official primary school-entrance age, expressed as a percentage of the population of the same age.

$$NIR = \frac{\text{Number of 7 year old pupils new entrant in } P_1 \text{ in school year t}}{\text{Population aged 7 years in school year t}} \times 100$$

4.2. Educational attainments concepts and definitions

Proportion of population by educational level: The proportion of population of 7 years of age and over who completed a specific level of education usually expressed as a percentage. Source of data: Population censuses and surveys.

Proportion of population completed Primary (basic) education in a specific year: The total number of pupils completed the final grade of basic education in the specific calendar year as a percent of the population in the age of completing

primary (basic) education (13 years). Source: Population censuses and surveys, educational statistics.

Proportion of population by educational qualification: The proportion of population of 7 years of age and over who carries a specific academic or specialized certificate relevant to number of population of 7 years of age and over, usually expressed as a percentage. Source of data: Population censuses and surveys.

Average years of schooling: Average number of years attended by a person 7 year of age and over in education ($\overline{X}$); it is calculated as the summation of number of years attended by population 7 years of age and over in the different educational stages divided by the total number of

population 7 years of age and over

$$\overline{X} = [\sum_{k=0}^{n}(p(k)\times k)]/P$$

where p(k) the number of population 7 years of age and over attended k years of education, k the number of years of education attended, k ranges from 0 to n, P the total number of population 7 years of age and over]. Source: population censuses and surveys.

4.4. Progression concepts and definitions

Proportion of pupils starting grade 1 who reaches grade 6 of basic education (survival rate from grade one to last grade): It is the proportion of pupils who reaches grade 6 of basic education relevant to those who were enrolled in grade 1 six years ago; usually expressed as a percentage.

Drop-out rate: The percentage of pupils who leave the school without completing the grade they were enrolled in during the school year. Dropout rate can also be obtained by subtracting the sum of promotion rate (PR) and repetition rate (RR) from 100 in a given school year.

$$DR^{t-1} = \frac{\text{Number of pupils who leave the school in a level in year t}}{\text{Number of pupils enrolled in that level in year t - 1}} \times 100$$

$$DR = 100\% - (PR + RR)$$

Where, PR is Promotion Rate and RR is Repetition Rate

Repetition rate: The proportion of pupils/students considered to repeat the specific grade at certain stage in a specific school year relevant to total number of pupils/students enrolled at that grade in that school year. It is usually expressed as a percentage. Source of data: education records and/or surveys.

Progression (Transition rate) rate from primary(P6) to lower(S1) secondary school and from lower (S3)secondary to upper (S4) secondary school: The number of new entrants in a given level of education as a percentage of the pupils who were enrolled in the previous level of education in the previous year. Only new pupils entering the next level of education are given consideration; repeaters at this level are eliminated.

$$TR^{t-1}_{Primary} = \frac{\text{Number of new pupils in } S_1 \text{ in year t}}{\text{Number of pupils in } P_6 \text{ in year } t-1} \times 100$$

$$TR^{t-1}_{Secondary} = \frac{\text{Number of new pupils in } S_4 \text{ in year t}}{\text{Number of pupils in } S_3 \text{ in year } t-1} \times 100$$

Progression rate from lower secondary to upper secondary school: It is the proportion of pupils completed lower secondary education in specific school year that entered the first grade of upper secondary stage in the following school year, usually expressed as a

percentage: Data source is Education records.

4.5. Services and Expenditure concepts and definitions

Pupils teacher ratio at different stages (PTR): The average number of pupils per teacher at a specific level of education in a given school year.

$$PTR = \frac{\text{Total number of pupils in a level of education in year t}}{\text{Total number of teachers in that level of education in year t}}$$

Proportion of trained teachers: It is the proportion of teachers who received pre-service or in-service organized training in the field of education and related subjects relevant to the total number of teachers in the specific educational stage. Source: Educational administrative records.

Proportion of qualified teachers: It is the proportion of teachers who hold academic certificates in the field of specialization relevant to the total number of teachers in the specific educational stage. Source: Educational administrative records.

Proportion of seated students: The proportion of pupils/students who have seats at the specific stage in the specific school year relevant to total number of pupils/students enrolled in that stage and that year. Source of data: Educational records.

Average number of pupils/students per class: Average number of pupils per class at a specific level of education in a given school year.
It is the total number of pupils/students in the specific educational stage divided by the number of classes in that stage. Source

of data: Educational administrative records.

Public spending on education, (% of GDP): It is the total public expenditure (current and capital) on education expressed as a percent of the Gross Domestic Product (GDP) in a given year. Public expenditure on education includes government spending on educational institutions (both public and private), education administration, and transfers/subsidies for private entities (students/households and other private entities).

Public spending on education, (% of government expenditure): It is the total public education expenditure (current and capital) expressed as a percent of total government expenditure for all sectors in a given fiscal year. Public

education expenditure includes government spending on educational institutions (both public and private), education administration, and subsidies for private entities (students/households and other private entities).

Expenditure per student, basic (% of GDP per capita): It is the total public expenditure per student in Basic education as a percent of GDP per capita. Public expenditure (current and capital) includes government spending on educational institutions (both public and private), education administration as well as subsidies for private entities (students/households and other private entities).

Expenditure per student, secondary (% of GDP per capita):

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It is the total public expenditure per student in secondary education as a percent of GDP per capita. Public expenditure (current and capital) includes government spending on educational institutions (both public and private), education administration as well as subsidies for private entities (students/households and other private entities).

CHAPTER 5: Poverty Statistics

Poverty: The poverty concept refers to a situation of pronounced deprivation where an individual cannot meet and satisfy his/her basic consumption needs; as well access to health facilities, basic education, human capital, adequate housing infrastructures, etc. Most of the studies on poverty focus on consumption rather than income as a preferred welfare indicator. In this sense, utility satisfaction indicators are chosen to determine the level of poverty. This methodology manages to combine individual indicators of welfare into aggregate measures of poverty.

Poverty Line: A poverty line is a money-metric welfare threshold that delineates or distinguishes the poor from the non-poor. A person whose consumption is below the poverty line is considered to be poor. In Rwanda, two poverty lines are used: the lower (food) poverty line and the upper poverty line. The lower poverty line is the standard measure at which the basic nutritional requirements, as measured by a certain fixed amount of calorie requirements per day are met: 2,500 kilo calories per adult person per day. The upper poverty line incorporates the lower (food) poverty line and additional essential consumption beyond calorie intake such as use of goods and services related to clothing, health and shelter.

Poverty head Count: The number of people classified as poor; that is the number of people whose standard of living is below the poverty line.

Poverty Head Count (Incidence) Index: It is the number of poor people expressed as a percentage of total population

Poverty-line based indices (p_α)**:** The measures, poverty-line-based (p_α) indices, are popularly used around the world because of its relative ease of estimation and were first developed by Foster, Greer and Thorbecke (1984). An (p_α) index can be defined as follows:

$$p_\alpha = \frac{1}{n} \sum_{i=1}^{q} \left(\frac{z - y_i}{z} \right)^\alpha \quad \text{(Equation 1)}$$

Where z is the poverty line, y_i Is the welfare level of the ith person (income or consumption level),

- q is the number of poor persons,
- n is the population size,
- α is a poverty aversion parameter

With the above index, individuals have been ranked from the poorest (*i*=1) to the richest (*i*=n) Where *n* is the population size, *q* is the number of persons designated as poor based on the poverty line. In the special case for which $\alpha = 0$, the index reduces to a measure of the incidence of poverty that is the proportion of the population defined as poor. In other words, for $\alpha = 0$ we have the head count ratio. The head count ratio (p_0) is defined as follows:

$$p_0 = \frac{q}{n} \quad \text{(Equation 2)}$$

Poverty Gap: A measure of the amount of money required to be given to a poor person to bring him or her to the poverty line, thus eliminating poverty for that individual.

Poverty depth: For $\alpha = 1$ in equation 1 above, we have

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an index measuring the depth of poverty. Equation 1 can be recast as Equation 3 when $\alpha = 1$. Equation 3 then defines the depth of poverty p_1.

$$p_1 = (q/n) \times ((z - \mu_q)/z) \quad \text{(Equation 3)}$$

Where μ_q is the mean welfare level of the poor (which can be designated as income or consumption level).

Poverty Gap Index (PGI): It measures the extent to which a poor person falls below the poverty line. The poverty gap index thus gives an indication of the depth of poverty. This index is often measured using the so-called average welfare or consumption of poor persons for a given society or a group.

We can designate the poverty gap index as the average amount by which poor people fall below the poverty line. The poverty gap index (PGI) is indicated in Equation 4.

$$PGI = (z - \mu_q)/z \quad \text{(Equation 4)}$$

PGI for the 2013/14 Integrated Household Living Condition Survey (EICV4) is estimated at 12% The index P_1 is the product of the headcount ratio (P_0) shown in Equation 2 and the poverty gap index (PGI) shown in Equation 4. Therefore Equation 3 is the product of Equation 2 and Equation 4. Thus P_1 incorporates both the incidence of poverty and the depth of poverty. A weakness of the p_1 index is that it does not incorporate the inequality of welfare or the distribution of welfare among those classified as poor.

Poverty Severity: A measure of poverty that explicitly takes into account the number of poor persons, the depth of poverty facing poor people and the variation in the level of poverty among poor people. An index of poverty severity is derived by placing more weight on the proportion of the poorest among the poor.

The weakness of the p_1 measure has given rise to another measure of poverty called the poverty severity p_2 index. This new index p_2 takes into account the depth of poverty and also the distribution of poverty among the poor.

$$p_2 = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{z-y_i}{z}\right)^2 \quad \text{(Equation 5)}$$

p_2 is equivalent to the mean squared proportionate poverty gap. This index enhances the measurement of the degree of inequality

among those classified as poor. In Rwanda, the severity of poverty is estimated, in the 2013/14 Integrated Household Living Condition Survey (EICV4), at 5.2 %.

An important property of the poverty-line-based (p_α) indices is that of decomposability. This implies that if the society is divided into several mutually exclusive and exhaustive subgroups, then the value of the relevant index for the population as a whole can be represented by the weighted sum of the values of the poverty indices.

GINI Coefficient: It measures the ratio of the area between the 45-degree line and the Lorenz curve to the area of the entire triangle; which indicates the inequality in household consumption per adult equivalent. As the coefficient

approaches zero, the distribution of income or consumption approaches absolute quality, thus absolute inequality is verified if it approaches 1. For the case of Rwanda, this Gini coefficient is estimated at 0.448 by the 2013/14 Integrated Household Living Condition Survey (EICV4).

Absolute Poverty: It refers to theabsolute state of the inability to meet the basic requirements of an acceptable level of a standard of living and welfare in terms of nutrition, health, literacy, shelter, etc.

Chronic Poverty/ ultra: The case is similar to absolute poverty but aggravated further by lack of the means of production and social support with an extended duration in ultra poverty.

Poverty Profile: A description of how the extent of poverty varies across sub groups of a given population characterized either by gender, geographical location, and type of activity or source of income.

Standard of living: It refers to the level of wealth, comfort, material goods and necessities available to a certain socio-economic class in a certain geographical area.

Welfare: It refers to the well-being of individuals or groups as to their health, happiness, safety, prosperity and fortunes.

CHAPTER 6: Labor Force Statistics

Currently Active Population (same as Labor Force): It refers to all persons above a specified minimum age (16 years in Rwanda) who, during a specified brief period (one week), fulfill the requirements for inclusion among the employed or unemployed.

Economic activity: This is the process that results in the production of specified types of goods and services for sale on the market or for own final use or consumption and gross fixed capital formation for own use.

Economically active population: All persons of either sex who furnish the supply of labor for the production of economic goods and services as defined by the United Nations System of National Accounts (SNA) during a specified reference period

Employment: All persons who, during a specified reference period, performed some work for wage or salary, or profit or family gain, in cash or in kind.

Future starts: Persons without work, who have made arrangements to take up paid employment or undertake self-employment activity at a date subsequent to a specified reference period.

Inadequate employment: Persons who, during a short reference period, were willing to change their current work situation or to make changes to their work activities and/or environment, for any of a set

of reasons, chosen according to national circumstances

Labor Force framework: Framework composed of three basic categories: "employed", "unemployed" and "not in the labor force" by which persons are to be classified according to their activities, based on rules of priority and the activity principle – what a person was actually doing during a given reference period

Non-Economic Activity: Production for own final use or consumption of items not quantitatively important to total supply, volunteer services, domestic or personal services provided by unpaid household members.

Paid Employment: All persons who,
a) during a specified reference period, performed some work for wages or salaries, in cash or in kind, or
b) have already worked in their present job, but were temporarily not at work during a specified reference period and had a formal attachment to their job.

Population not economically active: All persons, irrespective of age, including those below the age specified for measuring the economically active population (16 years) who were not economically active.

Population not currently active (Persons not in the labor force): All persons not employed or unemployed during the brief reference period (a week) because of attendance at educational institutions; engagement in household duties; retirement or old age; other reasons such as infirmity or disablement.

Population not of working age: All persons below a specified minimum age (16 years).

Population not usually active: All persons whose main activity status during the longer specified period (usually the previous 12 months or calendar year) was neither employed nor unemployed, comprising: students, homemakers; income recipients; others.

Population of working age: All persons above a specified minimum age (16 years)

Labor Force Participation Rate: The number of persons in labor force expressed as a percentage of the working-age population. Data source is censuses and surveys.

Unemployment: All persons above the age specified for measuring the Economically

Active Population (16 years of age in Rwanda), who during a specified reference period were without work, currently available for work and seeking work. Data source is censuses and surveys.

Unemployment rate: The number of unemployed persons in the reference period expressed as a percentage of the labor force. The data sources are the population census or household surveys.

Permanent employees: Include salaried persons who are engaged in permanent and pensionable terms. They also include those on probation.

Temporally employees: These include paid employees who are engaged on short-term basis for varying periods. This category of workers is not

eligible for any benefit after the end of their contract/engagement.

Casual workers: These are Persons who are called upon once in a while to carry out specific assignments for a business. They may receive cash payment or payment in kind. They are not permanent employees but may be engaged during peak seasons for instance those picking tomato or oranges in plantations.

Employer: This is a person who operates his or her own economic enterprise or engages independently in an economic activity, and hires one or more employees. Other employers include institutions, organizations and government

Own account worker: This is a person who operates his or her own economic enterprise without

employing other people as helpers.

Self-employment: Comprises Employers and Own Account Workers

Unpaid family worker (helper): This is the person who helps in a family enterprise (farm or non-farm) or profession. He/she may not receive remuneration or payment for this work. Recently this category of workers is termed unpaid family helper.

Working proprietors: Owners including working partners of the enterprise who regularly work but do not get any salary or wage from the enterprise but if they receive salaries/wages, they should be classified as employees.

SNA Market Activity: Production of goods and

services normally intended for sale on the market at a price that is designed to cover their costs of production.

SNA Non-Market Activity: Production of goods and services for own consumption that are not normally sold on the market

Time-related underemployment: Persons who are willing and able to work beyond the hours worked in all the jobs they hold during a specified reference period and who work, during this period, fewer hours in all their jobs than a selected threshold 45 hours a week (in Rwanda).

Usually active population: All persons above a specified age whose main activity status, as determined in terms of number of weeks or days during a long specified

period (such as the preceding 12 months or the preceding calendar year), was "employed" or "unemployed".

Industry: The main type of activity carried out at person's place of work irrespective of what other work is done.

Occupation: The main type of task and duties performed by a person during the reference period preceding the interview by persons in paid employment, unpaid family work or self-employment jobs.

Child Work: These are the activities that children carry out, within or outside their households, for income, family gain or profit, including unpaid family work.

Child labor: Child labor comprising of: i) All children

involved in work aged 5-11 years; ii) All working children aged 12-14 years involved in work beyond their capacity or work which is not 'light work' as provided for in national legislation, or, they work for a total of 14 hours or more hours a week and; iii) All working children aged 15-17 involved in hazardous work and, or, they work an equivalent of 43 or more hours per week.

Worst Forms of Child Labor
This includes child trafficking, bondage, children in prostitution or pornography, children in drug smuggling or trafficking, children in armed conflict and children in work which is harmful to their health, safety and morals.

Employment- to - population ratio: It is defined as the proportion of

a country's working-age population that is employed.

Status in employment: The indicator of status in employment distinguishes between three categories of the total employed. These are:
(a) wage and salaried workers (also known as employees)
(b) Self-employed workers.
(c) Unpaid family workers

Part-time workers: The indicator on part-time workers focuses on individuals whose working hours total is less than "full time", as a proportion of total employment. Because there is no agreed international definition as to the minimum number of hours in a week that constitute full-time work, the dividing line is determined either on a country-by-country basis or

through the use of special estimations.

Hours of work: Working time statistics relate to statistics on the hours of work and on the scheduling of these hours. The hours of work relate to any period of time spent on activities which contribute to the production of goods and services. The scheduling of the hours of work relates to the periods during the day, week or month when work is done: whether in the morning, afternoon, evening, from Monday to Friday, on weekends, as overtime, etc.

Paid employment jobs: Those are jobs where the incumbents hold explicit (written or oral) or Implicit employment contracts which give them a basic remuneration which is not directly Dependent upon the revenue of the unit for

which they work (this unit can be a corporation, a Non-profit institution, a government unit or a household) Persons in 'paid employment jobs' are typically remunerated by wages and salaries, but may be paid by commission from sales, by piece-rates, bonuses or in-kind payments such as food, housing or training).

Working poor: The working poor or the number of employed persons living in households with incomes (or consumption) below the nationally-defined poverty line are based on real disposable income and refer to a nationally-defined real absolute poverty line, whenever possible.

Youth and adult unemployment: The term "youth" covers persons aged 15 to 24 years and "adult"

refers to persons aged 25 years and over.

Long-term unemployment: long-term unemployment looks at duration of unemployment, that is, the length of time that an unemployed person has been without work and looking for a job.

Inactivity rate: The economic inactivity rate is the proportion of the working-age population that is not in the labor force.

Labor productivity: Labor productivity is defined as output per unit of labor input (persons engaged or hours worked).

Informal Economy: The informal sector may be broadly characterized as consisting ofnonagricultural unitsengaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labor and capital as factors of production and on a small scale. Labor relations - where they exist - are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees. Typical informal sector activities (unpaid work in a family enterprise, casual wage labor, home-based work, street vending).

Informal employment: Informal employment encompasses persons in employment who, by law or in practice, are not subject to national labor legislation and income tax or entitled to

social protection and employment benefits. Informal employment can exist in both the informal and the formal economy.

Occupational injuries: An occupational injury is defined as any personal injury, disease or death resulting from an occupational accident; an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity. An occupational accident is an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work which results in one or more workers incurring a personal injury, disease or death.

Trade union and collective bargaining: A trade union is defined as a workers' organization, constituted for the purpose of furthering and defending the interests of workers. Trade union membership is defined as the total number of workers that belong to a trade union. Collective bargaining refers to all negotiations which take place between an employer, a group of employers or one or more employers' organizations

Strikes and lock outs: A strike is a temporary work stoppage carried out by one or more groups of workers with a view to enforcing or resisting demands or expressing grievances, or supporting other workers in their demands or grievances. A lockout is a total or partial temporary closure of one or more places of employment, or the hindering of the normal work activities of employees, by one or more employers with a view to

enforcing or resisting demands or expressing grievances, or supporting other employers in their demands or grievances.

Labor inspections: Labor inspectors are public officials or other authorities who are responsible for the following three key labor inspection activities: a) securing the enforcement of the legal provisions relating to conditions of work and the protection of workers while engaged in their work, such as provisions relating to hours, wages, safety, health and welfare, the employment of children and young persons, and other connected matters, in so far as such provisions are enforceable by labor inspectors; b) supplying technical information and advice to employers and workers concerning the most effective means of complying with the legal provisions; c) bringing to the notice of the competent authority defects or abuses not specifically covered by existing legal provisions. Labor inspectors have the authority to initiate processes that may lead to legal action.

CHAPTER 7: Gender Statistics

Gender: Gender refers to socially constructed differences in attributes and opportunities associated with being female or male and to the social interactions and relations between women and men. Gender determines what is expected, allowed and valued in a woman or a man in a given context. In most societies, there are differences and inequalities between women and men in roles and responsibilities assigned, activities undertaken and access to and control over resources, as well as in decision-making opportunities. These differences and inequalities between the sexes are shaped by the history of social relations and change over time and across cultures.

Sex: It refers to the biological and physiological differences between males and females.

Gender roles: Gender roles are social and behavioral norms that, within a specific culture, are widely considered to be socially appropriate for individuals of a specific sex. These often determine differences in the responsibilities and tasks assigned to women, men, girls and boys within and outside the private sphere of their household.

Gender roles stereotyping: These are widely held beliefs about the characteristics and roles of women and men in different communities or societies. It is the portrayal in media and books or conversations of socially

assigned gender roles as normal and natural.

Gender relations: They describe how women and men relate to each other and the roles they are expected to play. These relations are considered uneven if men have more power in making far reaching and binding decisions

Sex disaggregated statistics: Sex-disaggregated statistics are data collected and tabulated separately for women and for men. They allow for the measurement of differences between women and men in various social and economic dimensions and are one of the requirements for obtaining gender statistics. Gender statistics are more than data disaggregated by sex, however. Disaggregating data by sex does not guarantee, for example, that concepts,

definitions and methods used in data production are conceived to reflect gender roles, relations and inequalities in society.

Gender Statistics: Gender statistics are defined as statistics that adequately reflect differences and inequalities in the situation of women and men in all areas of life. Gender statistics are defined by the sum of the following characteristics: (a) data are collected and presented disaggregated by sex as a primary and overall classification; (b) data reflect gender issues; (c) data are based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives; and (d) data collection methods take into account stereotypes and social and cultural factors that may induce gender biases.

Gender equality: Gender equality means equal opportunities, rights and responsibilities for women and men, girls and boys. Equality does not mean that women and men are the same but that women's and men's opportunities, rights and responsibilities do not depend upon whether they are born female or male. It implies that the interests, needs and priorities of both women and men are taken into consideration. While gender equality is an important goal in itself – an issue of human rights and social justice – steps towards greater equality can also contribute to the achievement of other social and economic objectives.

Gender equity: Gender equity refers to the process of being fair to women and men, girls and boys, by taking into account the different needs of women and men, cultural barriers and past and present discrimination against a specific group. Gender equity may involve the use of temporary special measures of differential treatment to compensate for historical or systemic bias or discrimination against one sex in order to obtain equality of outcomes and end results. It is a means to ensure that women and men, girls and boys, have an equal chance not only at the starting point but also when reaching the finish line.

Gender Mainstreaming: Gender mainstreaming (general) is defined as the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's

concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.

Gender analysis: Gender analysis is a critical examination of how differences in gender roles, activities, needs, opportunities and rights/entitlements affect women, men, girls and boys in certain situations or contexts. Gender analysis examines the relationships between females and males and their access to and control of resources and the constraints they face relative to each other. Gender analysis may be conducted on the basis of qualitative information or on the basis of quantitative information provided by gender statistics.

Gender responsive Indicators: In general, indicators are items, conditions or an event that is useful in measuring performance, change, outcome or impact of a given action, plan, project, policy, program, etc. Indicators that are related to gender issues or with a gender perspective are known as gender responsive indicators and further categorized into two types, namely; gender inclusive and gender-specific indicators.

Gender inclusive indicators: They are aimed at measuring and providing comparable information on women's relative to men's benefits, participation and other gains from a given

activity or project within a sector. Examples include: income levels amongst male-headed compared to female-headed households or percentage of female compared to male workforce skilled in gender planning at National Planning Authority (NPA).

Gender-specific indicators: These focus on measuring progress or the impact that an activity or project has made in addressing needs that are peculiar to women, girls, boys, the disabled, the elderly or men. For instance, proportion and location of health centers with facilities for testing cervical cancer applies to women whereas on the side of men the indicator would track health centers that can ably handle cases of prostate cancer.

In general Gender responsive indicators are manipulated on a sector basis. The most common sector-specific gender responsive indicators are presented subsequently for Education and Health sectors.

Pupil latrine stance ratio for girls relative to boys: It is calculated as the number of pupils divided by the number of latrine stance. Data sources for both numerator and denominator are the administrative records of Ministry of Education. It is recommended to be disaggregated by province and lower administrative division as well as type of residence (urban/rural) and school type (public/private), and be reported annually.

Percentage of qualified female compared to male teachers in primary education: The percentage of qualified teacher (male or female) is calculated as the

number of qualified teachers (male or female) divided by total number of teachers (qualified and unqualified) for (males or females). The data source is the administrative records of Ministry of Education. It is recommended to be disaggregated by province and lower administrative division as well as type of residence (urban/rural) and school type (public/private), and be reported annually.

Proportion of female compared to male repeaters at Primary level: It is calculated for both males and females as the number of repeaters divided by total number of enrolled pupils. The data source is the administrative records of Ministry of Education. The indicator may be disaggregated by schooling grade, province and lower administrative level as well as type of residence

(urban/rural and school type (public/private), and be reported annually.

Average travel time to school and constrained faced by boys relative to girls: The average travel time and constrained faced by boys and girls are calculated based on reported information in household or school survey. The indicator may be disaggregated by schooling grade, province and lower administrative level as well as type of residence (urban/rural) and school type (public/private), and be reported annually.

Proportion of girls to the total enrolment at Tertiary levels: The indicator is calculated as the number of girls enrolled in tertiary education divided by total number of students (boys and girls) enrolled in tertiary education. Data source is the administrative records of

tertiary education**.** The indicator may be disaggregated by college and university and be reported annually.

Tertiary Tutors/Lecturers Qualification by sex: The distribution of tutors/lecturers of either sex by qualification level provides an indication of the prevalence of appropriately qualified male Tutors/lecturers compared with that of female. Data source is the administrative records of tertiary education**.** The indicator may be disaggregated by college and university and be reported annually.

Student Lecturer/Tutor Ratio (Female and Male): It is calculated as the number of students of either sex divided by the number of lecturers/tutors. Data source is the administrative records of tertiary education. The

indicator may be disaggregated by college and university and be reported annually.

Proportion of men relative to women gaining productive employment within 2 years after school completion: It is calculated as the number of graduates in a specific school year of either sex who gained productive employment within 2 years after graduation divided by total number of graduates in the same school year. Data source is school or household survey which is recommended to be carried out once every five years

Maternal Mortality Ratio (per 100,000 live births): It is calculated as the number of maternal deaths occurred within a specified period (1 year if vital registration is almost complete or 2 years if specially designed

household survey is employed) divided by total number of live births occurred in the same period scaled up to 100000 live births. Data source is vital registration or household surveys. It is recommended to be disaggregated by province and residence type (urban/ rural) and be carried out every five years.

Infant Mortality Rate by sex: It is the probability that a new born baby will die within the first year of life. Data source is household surveys (DHS or MAS), usually the reference period for measuring the indicator is five years for DHS and two years for MAS prior to the survey date. It is recommended to be disaggregated by province and residence type (urban/ rural) and be carried out every five years.

Under five Mortality Rate by sex: It is the probability that a new born baby will die before reaching age five. Data source is household surveys (DHS or MAS), usually the reference period for measuring the indicator is five years prior to the survey date. It is recommended to be disaggregated by province and residence type (urban/ rural) and be carried out every five years**.**

Percent of female relative to male-headed households with a pit latrine: Data source is household surveys (DHS or Population Census, It is recommended to be disaggregated by province and residence type (urban/ rural) and be carried out every five years**.**

Percent of U5 children with height /age below lower line (stunting) (m/f): Data source is household surveys

(DHS), It is recommended to be disaggregated by province and residence type (urban/ rural) and be carried out every five years**.**

Percent of U5 children with weight /age below lower line (wasting) (m/f): Data source is household surveys (DHS or MICS), it is recommended to be disaggregated by province and residence type (urban/ rural) and be carried out every five years**.**

Percent of clients expressing satisfaction with health services (waiting time) by sex: Data source is user satisfaction survey to be carried out by Ministry of Health. It is recommended that the survey be carried out biannually and the indicator be disaggregated by province and residence type (urban/ rural).

Adolescent fertility rate (births per 1,000 women ages 15-19) Adolescent fertility rate:
It is the number of births per 1,000 women ages 15-19.

Children out of school, primary, male:
Out-of-school children of primary school age (male), is the total number of male primary-school-age children who are not enrolled in either primary or secondary schools.

Children out of school, primary, female: Out-of-school children of primary school age (female), is the total number of female primary-school-age children who are not enrolled in either primary or secondary schools.

Persistence to last grade of primary, female (% of cohort): It is the share of female children enrolled in

the first grade of primary school who eventually reaches the last grade of primary.

Persistence to last grade of primary, male (% of cohort): It is the share of male children enrolled in the first grade of primary school who eventually reaches the last grade of primary.

Primary completion rate, female (% of relevant age group):
It is the total number of new female entrants in the last grade of primary education, regardless of age, expressed as percentage of the total female population of the theoretical entrance age to the last grade of primary. This indicator is also known as "gross intake rate to the last grade of primary." The ratio can exceed 100% due to over-aged and under-aged children who enter primary

school late/early and/or repeat grades.

Primary completion rate, male (% of relevant age group): It is the total number of new male entrants in the last grade of primary education, regardless of age, expressed as percentage of the total male population of the theoretical entrance age to the last grade of primary. This indicator is also known as "gross intake rate to the last grade of primary." The ratio can exceed 100% due to over-aged and under-aged children who enter primary school late/early and/or repeat grades.

Progression to secondary school, female (%): It is the number of new female entrants to the first grade of secondary education (general programs only) in a given year, expressed as a percentage of the number of female pupils enrolled in the

final grade of primary education in the previous year.

Progression to secondary school, male (%): It is the number of new male entrants to the first grade of secondary education (general programs only) in a given year, expressed as a percentage of the number of male pupils enrolled in the final grade of primary education in the previous year.

Ratio of female to male primary enrollment (%): It is the percentage of girls to boys enrolled at primary level in public and private schools.

Ratio of female to male secondary enrollment (%): It is the percentage of girls to boys enrolled at secondary level in public and private schools.

Ratio of female to male tertiary enrollment (%): It is the percentage of girls to boys enrolled at tertiary level in public and private schools.

Economically active children, female (% of female children ages 10-14): Children in employment refer to children involved in economic activity for at least one hour in the reference week of the concerned household survey.

Economically active children, male (% of male children ages 10-14): Children in employment refer to children involved in economic activity for at least one hour in the reference week of the concerned household survey.

Proportion of seats held by women in national parliaments (%): It is the percentage of parliamentary

seats in a single or lower chamber held by women.

Share of women employed in the nonagricultural sector (% of total nonagricultural employment): It is the share of female workers in the nonagricultural sector (industry and services), expressed as a percentage of total employment in the nonagricultural sector.

Gender bias: Favoring one sex over/against the other

Gender parity index: This is a social-economic index designed to measure the relative access to education of male and female pupils or students. It is calculated as the quotient of the number of females by the number of males enrolled in a given level of education.

Gender gap: It is the disparities between

socioeconomic characteristics of males and females. Pro-male gender gap is the gap that favors males; pro-female gender gap is the gap that favors females.

Empowerment: It is defined as strengthening the political, spiritual and socioeconomic levels of individuals or communities. Women empowerment is strengthening these levels for women.

Gender issues: Gender issues refer to questions, problems and concerns related to all aspects of women's and men's lives, including their specific needs, opportunities and contributions to society. Gender equality issues should be the centre of analyses and policy decisions, medium-term plans, program budgets and institutional structures and

processes. From a statistics perspective, gender issues should also be at the core of plans and programs for developing gender statistics by national statistical systems.

Gender Discrimination: Discrimination against women and girls(gender discrimination) is defined according to article 1 of the Convention on the Elimination of All Forms of Discrimination Against Women (1979) as "any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field". Statistics

disaggregated by sex, age and other demographic, social and economic characteristics are useful in showing whether disparities between women and men on various social and economic dimensions are explained by gender discrimination or by other factors.

Gender norms: Gender norms are the accepted attributes and characteristics of being a woman or a man (ideas of how men and women should be and act) at a particular point in time for a specific society or community. They are internalized early in life through the process of gender socialization, are used as standards and expectations to which women and men should conform and result in gender stereotypes.

Gender Balance: Gender balance is commonly used in

reference to human resources and the equal participation of women and men in all areas of work, projects or programmes. In a scenario of gender equality, women and men are expected to participate in proportion to their shares in the population. In many areas, however, women participate less than what would be expected according to the sex distribution in the population (underrepresentation of women) while men participate more than expected (overrepresentation of men).

Gender blindness: Gender blindness is the failure to recognize that the roles and responsibilities of men/boys and women/girls are given to them in specific social, cultural, economic and political contexts and backgrounds. Projects,

programs, policies and attitudes which are gender blind do not take into account these different roles and diverse needs, maintain the status quo and will not help transform the unequal structure of gender relations.

Gender neutral: Gender neutral means not being associated with either women or men and may refer to various aspects such as concepts or style of language. What is perceived to be gender neutral, however, including in areas of statistics or dissemination of data collected in reference to a population, is often gender blind (a failure to recognize gender specificities)

Gender roles: Gender roles are social and behavioral norms that, within a specific culture, are widely considered to be socially appropriate for

individuals of a specific sex. These often determine differences in the responsibilities and tasks assigned to women, men, girls and boys within and outside the private sphere of their household.

Sex bias in data production: Sex bias in data collection refers to the underreporting or misreporting of demographic, social or economic characteristics associated with one of the sexes. Some examples of sex bias in data collected include the underreporting of women's economic activity, the undercounting of girls, their births or their deaths and the underreporting of violence against women.

Gender mainstreaming in national statistics: Gender mainstreaming in national statistics means that gender issues and gender-based

biases are taken into account, systematically, in the production of all official statistics and at all stages of data production.

Gender Parity: Gender parity (or more accurately, sex parity) is a numerical measure. Gender parity concerns relative equality in terms of numbers and proportions of women and men, girls and boys. Gender parity is often calculated as the ratio of female-to-male values of a given indicator. When males-to-females ratios are calculated instead, the label "sex ratio" is used instead of "gender parity". Gender (or sex) parity does not necessarily imply gender equality. For example, in terms of health, men and boys are biologically more vulnerable to diseases and health conditions and they are expected to have higher mortality levels than women

and girls. Therefore, equal levels of mortality for women and men (girls and boys) should be interpreted as discrimination against women (and girls) in terms of nutrition, care and access to health services.

Gender Indicator: Gender indicators are a useful tool in monitoring gender differences, gender-related changes over time and progress towards gender equality goals. In general, indicators are statistics with a reference point (a norm or a benchmark) against which value judgments can be made. Indicators have a normative nature, in the sense that a change from the reference point in a particular direction can be interpreted as "good" or

"bad". In the case of gender statistics, the status of women in a particular country is usually evaluated by reference to (comparison with) the situation of men in that country.

Gender-sensitive concepts and methods of data production: Gender-sensitive concepts and methods of data collection take into account the diversity of various groups of women and men and their specific activities and challenges and aim to reduce sex and gender bias in data collection, such as the underreporting of women's economic activity, the underreporting of violence against women and the undercounting of girls, their births or their deaths.

CHAPTER 8: Economic Statistics

8.1. Macro-Economic Indicators

National Accounts: National accounts are comprehensive accounting framework giving detailed account of the total economic activities of the nation in terms of output production, expenditures and income.

Gross Value Added: It is the value of gross output at basic prices less the value of the intermediate consumption at purchasers' prices.

Net value Added: It is the Gross value added less consumption of fixed capital (depreciation).

Gross Domestic Product (GDP): GDP is the standard measure of the value of the goods and services produced by a country during a period .The GDP concept connects the value added indicators with the aggregates of the system.

GDP at basic Prices: It is the value of goods and services excluding indirect taxes on production such as sales tax, excise duties etc.

GDP at factor Cost: The sum total of the gross value added of all resident producers at producers' prices, less subsidies on imports, plus all non-deductible value added tax or similar taxes;

Net GDP at factor cost: GDP at factor cost less depreciation of fixed assets.

GDP at Market Prices: Equal the sum of the gross value added of all resident producers at producers' prices, plus taxes less

subsidies on imports during an accounting year:

a) GDP by type of income:

GDP classification by factor income equals compensation of employees plus consumption of fixed capital plus gross operating surplus, plus taxes subsidies on production and imports;

b) GDP by kind of expenditure: GDP by expenditure is classified by household and public final consumption expenditures, capital formation expenditure, and inventories, including net exports. Statistical classification is available from Household budget surveys, analysis of government economic and functional calcification, and foreign trade statistics.

GDP at Constant Prices: It equals GDP at current prices divided by the price deflator.

Price Deflators: They are economic metrics that account for inflation by converting output measured at current prices into constant GDP. The GDP deflator shows how much a change in the base year's GDP relies upon changes in the price level.
Because it isn't based on a fixed basket of goods and services, the GDP deflator has an advantage over the Consumer Price Index (CPI) and the Producer Price Index (PPI). Changes in consumption patterns or the introduction of new goods and services are automatically reflected in the deflator.

Gross National Income GNI: It Equals GDP plus net factor income from abroad.

Net Factor Income from Abroad: It equals the difference between compensation of employees and property income payable to the rest of the world on one side and the corresponding items receivable from the rest of the world on the other.

Gross National Disposable Income: Equals gross national income plus current transfers in cash or in kind received by resident institutional units from non-residents units, and subtracting all current transfers in cash or in kind payable by resident institutional units to non-resident units.

Per Capita GDP: GDP upon per person basis equals the total GDP at market prices divided by the population of a specified period. The concept is often used as an indicator reflecting on a country's standard of living.

Producer's Prices: The amount receivable by the producers from the purchasers for a unit of goods and services produced as an output. They do not include VAT or any similar taxes, and it excludes any transport charges invoiced separately by the producer.

Market Prices: Market prices equal producer's plus transport margins. They are the price paid by the purchaser to obtain a good or a service in the time and place he chooses. They include transport charges and separately by the purchaser to take delivery at the required time and place. **Purchaser's Prices:** The price paid by the purchaser to obtain a good or a service plus transport charges.

Intermediate Consumption:
The value of goods and services consumed as an input in the production process.

Government final consumption expenditure:
It Consist of government expenditure; including imputed expenditure incurred by general government on both, individual consumption of goods and services, and collective consumption services.

Household Final Consumption Expenditure:
It consists of all household expenditure, including imputed expenditure incurred by resident households on individual consumption of goods and services.

Exports of Goods and services: They includes the transfer of ownership of

goods from the residents of the country, to those residing in other countries, and also the transfer of services provided by resident producers to the residents in the other countries.

Imports of goods and Services: They include the transfer from those residing abroad to those residing inside the country, and also the transfer of services provided by the producers residing abroad to those residing inside the country.

Compensation of employees: It is the remuneration, in cash or in kind, payable to an employee in return for work done. In addition to wages and salaries, compensation of employees includes social insurance contributions made by a general government unit on behalf of its employees. Excluded is

any compensation of employees related to own-account capital formation.

Consumption of fixed capital: It is a reduction of the value of fixed assets used in production, during the accounting period, resulting from physical deterioration, normal obsolescence, or normal accidental damage

Gross Fixed Capital Formation: It measures the total value of a producer's acquisition less disposal of fixed assets during the accounting period, plus certain additions to the value of non-produced assets; it is also equal to the gross value of capital goods of residential and non-residential buildings, land improvement and plantation development, transport equipment, and machinery equipment, change in Stocks including Livestock net

increase to animal population at the end of the period; agriculture stocks, stocks in commerce, stocks in manufacturing; etc.

Operating Surplus: Operating surplus measures the surplus accruing from production before taking into account any interest, rent or similar charges payable or financial or tangible non-produced assets borrowed or rented by the enterprise, or any interest, rent or similar receivable on financial or tangible non-produced assets owned by the enterprise.
Money

Money: Any object or record that is generally accepted as payment for goods and services and repayment of debts in a given country or socio-economic context.
Narrow Money (M1): Currency outside

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commercial banks and the local currency denominated demand deposits of the resident private sector.

Broad Money (Money Supply) (M2): Money Supply (M2), broadly defined, comprises currency with the public, demand deposits, quasi-money (margins on documentary letters of credit, and letters of guarantee, time deposits and investment deposits).

Monetary Base (Reserve Money): The monetary base consists of currency in circulation outside the Central Bank of Rwanda (currency with the public and currency with commercial banks), commercial banks' reserves and demand deposits with the Central Bank of Rwanda.

Net Foreign Assets: They are the External Assets less Foreign Liabilities for both the central bank and commercial banks.

Net claims on the Central Government: The amount advanced to Government by the commercial banks and the Central Bank, plus the Central Bank's and commercial banks' holdings of Government securities and less Government deposits at the commercial banks and at the Central Bank.

Domestic Credit: It is the net claims on Government by the Central Bank and the commercial banks, plus loans to public entities, and the private sector.

Net domestic Assets: It is Net claims on Government by the Central Bank and the commercial banks, plus loans to public entities, and the private sector, and Other Items Net (OIN).

Balance of Payment: The balance of payments can be defined as a statistical statement summarizing systematically all economic transactions that took place between residents of the country and non-residents during a specific period of time usually one year. The balance of payments (BOP) statistics is compiled according to the Fifth Edition of the Balance of Payments Manual issued by the International Monetary Fund in September, 1993. It consists of the current account, the capital and financial account in addition to errors and omissions item.

Current Account: Balance on transactions in goods, income, services and current transfers, between residents and non-residents.

Trade Balance (visible transactions): It is the difference between the value of total exports and total imports of a nation during a specified period.

The balance of services, income and transfers (invisibles transactions): It records all transactions related to services, income and transfers, such as transportation, corporate profits, workers' remittances, grants, gifts … etc.

Net current transfers: It is the difference between receipts from and payments to the external world. Such transfers directly affect the level of disposable income and consumption.

Reserves Assets: It is foreign financial assets available to, and controlled by the monetary authorities of an economy for funding payments imbalances and, in some instances, financial needs.

Capital and Financial Account: Includes the capital account and the financial account, where the merits of non-resident treated as assets and the liabilities for them as liabilities, usually the two parts of the transaction in assets and liabilities are resident and non-resident, and it includes two sub-accounts

Capital Account: It includes the capital movements and capital transfers that lead to the change in the ownership of the fixed assets, or by the creditor to write - off the external debt without charge. Also includes the acquisition or disposal of non – produced, non – financial assets, such as intellectual property rights, brand or goodwill, patent, copyright and other intangible assets.

Financial Account: It registers the economy transactions in foreign financial assets and liabilities ,it includes foreign direct investments , portfolio investments (1) as well as other investments which includes net commercial facilities and loans, flows in non- reserve assets and the liabilities of the Central Bank and the commercial banks and the general government and the other sectors.

Errors and omissions item: It is a balancing item between the net current account and the capital and financial account from the one hand, and the net overall balance from the other hand, imbalances result in practice either due to imperfections in sources of data or a compilation methodology, Therefore, a positive value of net errors

and omissions indicates a non – recorded unclassified receipts, and a negative value indicates unclassified payments.

Banking: A function where a licensed institution provides services of storing deposits (savings or current/checking deposits) on behalf of its customers, extending credit facilities to individuals, firms or government.

Currency: It is a legal tender used to facilitate exchange of goods and services in a country or group of countries.

Loan: It is the amount of money or securities supplied by one party (the lender) to a second party (the borrower) in a transaction in return for a promised future payment by the other.

Asset: It is durable item that can be used for more than one year. It can appreciate or depreciate in value.

Fixed Assets: They are the tangible items of a business that are central to its operation, not traded, and they are of long term in nature. They include land, buildings, plant and machinery, motor vehicles, work in progress and other office equipment.

Current Assets: They are tangible or intangible items owned by a business and are disposed or used within one year. They include stocks, raw materials, cash at hand and debtors, among others.

Securities: Securities include government debt, both long and short term, company shares, and company debt.

Trade: It is the transfer of ownership of goods &

services from one person or entity to another.

Government units: They are unique kinds of legal entities established by political processes that have legislative, judicial or executive authority over other institutional units within a given area. The general government sector, which consists of entities that fulfill the functions of government as their primary activity.

General government: It refers to institutional units which, in addition to fulfilling their political responsibilities and their role of economic regulation, produce principally non-market services (possibly goods) for individual or collective consumption and redistribute income and wealth.

Medium Term Expenditure Framework (MTEF): It is an annual rolling three year expenditure agenda and plan designed by Government that underlines the medium term expenditure priorities and budgets against which sector plans are developed and refined in the country.

Budget Framework Paper: It is a macro-economic framework through which the Government implements its policies. It forms the basis for resource projections and indicative expenditure allocations.

Government accounts: They comprise government spending on compensation of employees and the purchases of goods and services.

Statement of Government Operations: It is a summary of the transactions of the general government sector in a given accounting

period. It presents details of transactions in revenue, expense, the net acquisition of nonfinancial assets, the net acquisition of financial assets, and the net incurrence of liabilities. Revenue is defined as the increase in net worth resulting from transactions, and expense as the decrease in net worth resulting from transactions. The net acquisition of nonfinancial assets equals gross fixed capital formation less consumption of fixed capital plus changes in inventories and transactions in other nonfinancial assets. The net operating balance is a summary measure of the ongoing sustainability of government operations, excluding gains and losses resulting from changes in price levels and other changes in the volume of assets.

Revenue: All transactions that increase the net worth of the general government sector are classified as revenue. Governments receive three major types of revenue from their fiscal operations: taxes, social contributions, and other revenue.

Taxes: Taxes are compulsory transfers received by the general government sector. They include fees that are clearly out of all proportion to the costs of providing services, but exclude compulsory social contributions, fines, and penalties. They are rates of fees that are charged (levied) by Government on a product, income, or activity.

Social contributions: They are actual or imputed receipts from either employers on behalf of their employees or from employees, self-employed,

or non-employed persons on their own behalf that secure entitlement to social benefits for the contributors, their dependents, or their survivors. The contributions may be compulsory or voluntary.

Other types of revenue: All other types of revenue are frequently combined into a heterogeneous category of nontax revenue. Other types of revenue are separately identified and include social contributions, grants, property income, sales of goods and services, and miscellaneous other revenue.

Value-Added Taxes (VAT): It is a tax on goods or services collected in stages by enterprises but which is ultimately charged in full to the final purchasers.

Sales taxes: This category includes all general taxes levied at one stage only, whether at manufacturing or production stages or on wholesale or retail trade.

Turnover and other general taxes on goods and services: This category includes multistage cumulative taxes, which include a tax each time a transaction takes place without deduction for taxes paid on inputs and all general consumption taxes where elements of value-added, sales, or multistage taxes are combined.

Excises: Excises are taxes levied on particular products, or on a limited range of products, that are not classifiable under general taxes on goods and services; profits of fiscal monopolies; customs and other import duties; or taxes on exports. Excises may be imposed at any stage of production or distribution and are usually assessed by

reference to the value, weight, strength, or quantity of the product. Included are special taxes on individual products such as sugar, beetroot, matches, and chocolates; taxes levied at varying rates on a certain range of goods; and taxes levied on tobacco goods, alcoholic drinks, motor fuels, and hydrocarbon oils. If a tax collected principally on imported goods also applies, or would apply, under the same law to comparable domestically produced goods, then the revenue from there is classified as arising from excises rather than from import duties. This principle applies even if there is no comparable domestic production or no possibility of such production. Taxes on electricity, gas, and energy are regarded as taxes on goods and are included under excises rather than taxes on specific services.

Profits of fiscal monopolies: This item covers that part of the profits of fiscal monopolies that is transferred to the government. Fiscal monopolies are public corporations or public quasi-corporations that exercise the taxing power of government by the use of monopoly powers over the production or distribution of a particular kind of good or service. The monopolies are created to raise government revenues that could otherwise be gathered through taxes on private sector production or distribution of the commodities concerned. Typical commodities subject to fiscal monopolies are tobacco products, alcoholic beverages, salt, matches, petroleum products, and agricultural products.

Taxes on specific services: All taxes levied on payments

for specific services, such as taxes on transport charges, insurance premiums, banking services, entertainment, restaurants, and advertising charges, are included here. Also included in this item are taxes levied on gambling and betting stakes for horse races, football pools, lotteries, and so forth. Taxes on entry to casinos, races, etc. are also classified as selective taxes on services.

Taxes on use of goods and on permission to use goods or perform activities: One of the regulatory functions of government is to forbid the ownership or use of certain goods or the pursuit of certain activities unless specific permission is granted by issuing a license or other certificate for which a fee is demanded. If the issue of such licenses involves little or no work on the part of government, the

licenses being granted automatically on payment of the amounts due, it is likely that they are simply a device to raise taxes, even though the government may provide some kind of certificate, or authorization, in return.

Other types of nontax revenue: that might be received are fines, penalties, forfeits, settlements arising from judicial processes, voluntary transfers other than grants, and sales of existing goods, including used military items.

Grants: Grants are noncompulsory transfers received by government units from other government units or international organizations. When statistics are compiled for the general government sector, grants from other domestic government units would be eliminated in

consolidation so that only grants from foreign governments and international organizations would appear. Grants may be classified as capital or current and can be received in cash or in kind.

Expense: All transactions that decrease the net worth of the general government sector are classified as expense. The major types of expense are compensation of employees, use of goods and services, consumption of fixed capital, interest, subsidies, grants, social benefits, and other expense.

Use of goods and services: It is the total value of goods and services purchased by the general government sector for use in a production process or acquired for resale less the net change in inventories of those goods and services. Goods and services acquired

for use as in-kind transfers to households or as grants without being used in a production process are excluded. Any goods and services used in own-account capital formation are treated as acquisitions of nonfinancial assets.

Consumption of fixed capital: It is the decline in the value of the stock of fixed assets during the accounting period as a result of physical deterioration, normal obsolescence, and normal accidental damage. It is always a noncash expense. Because of the difficulty in estimating this expense, the gross operating balance is sometimes computed in place of, or in addition to, the net operating balance.

Interest: It is an expense incurred by a debtor for the use of another unit's funds. An interest-bearing financial

instrument can be classified as deposits, securities other than shares, loans, or accounts receivable/payable.

Subsidies: They are current transfers that government units pay to enterprises either on the basis of the levels of their production activities or on the basis of the quantities or values of the goods or services that they produce, sell, or import. Included are transfers to public corporations and other enterprises that are intended to compensate for operating losses

Paid Grants: They are non-compulsory transfers, in cash or in kind, paid to another general government unit or an international organization.

Social benefits: They are current transfers to households to provide for

needs arising from events such as sickness, unemployment, retirement, housing, or family circumstances. The benefits may be paid in cash or in kind. The costs of social benefits in kind produced by a general government unit are recorded against the relevant expenses that were incurred to produce the goods and services rather than included in this category.

Other expense: It includes all expense transactions not elsewhere classified. Transactions recorded here include property expense other than interest; taxes, fines, and penalties imposed by one government on another; current transfers to nonprofit institutions serving households; capital transfers other than capital grants, and non-life insurance premiums and claims.

Net lending (+)/borrowing (–): It is a summary measure indicating the extent to which government is either putting financial resources at the disposal of other sectors in the economy or abroad, or utilizing the financial resources generated by other sectors or from abroad.

Government accounts: They comprise government spending on compensation of employees and the purchase of goods and services.

8.2. Agricultural and Livestock Statistics

Land area (sq. km) : Land area is a country's total area, excluding area under inland water bodies, national claims to continental shelf, and exclusive economic zones. In most cases the definition of inland water bodies includes major rivers and lakes.

Forest area (sq. km): Forest area is land under natural or planted stands of trees of at least 5 meters in situ, whether productive or not, and excludes tree stands in agricultural production systems (for example, in fruit plantations and agro forestry systems) and trees in urban parks and gardens

Arable land (% of land area) :
Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Arable land (Hectares per person) : Arable land

(hectares per person) includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Agricultural land (% of land area) : Agricultural land refers to the share of land area that is arable, under permanent crops, and under permanent pastures.

Agricultural irrigated land (% of total agricultural land): Agricultural irrigated land refers to agricultural areas purposely provided with water, including land irrigated by controlled flooding.

Permanent cropland (% of land area): Permanent cropland is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. This category includes land under flowering shrubs, fruit trees, nut trees, and vines, but excludes land under trees grown for wood or timber.

Crop Water Requirement: Corresponds to the amount of water enabling the actual evaporate transpiration of a crop to be equal to its potential evaporate transpiration.

Crop calendar: It is a tool providing information about the type of crops that are cultivated in a specific area, as well as their corresponding agronomic practices and crop cycles such as sowing/planting,

growing and harvesting season.

Land under cereal production (hectares) : Land under cereal production refers to harvested area, although countries report only sown or cultivated area. Cereals include wheat, rice, maize, barley, oats, rye, millet, sorghum, buckwheat, and mixed grains. Production data on cereals relate to crops harvested for dry grain only. Cereal crops harvested for hay or harvested green for food, feed, or silage and those used for grazing are excluded.

Cereal yield (kg per hectares) : Cereal yield, measured as kilograms per hectare of harvested land, includes wheat, rice, maize, barley, oats, rye, millet, sorghum, buckwheat, and mixed grains.

Crop production index : Crop production index shows agricultural production for each year relative to the base period. It includes all crops except fodder crops. Regional and income group aggregates for the FAO's production indexes are calculated from the underlying values in international dollars, normalized to the base period.

Food production index: Food production index covers food crops that are considered edible and that contain nutrients. Coffee and tea are excluded because, although edible, they have no nutritive value.

Agriculture, value added (% of GDP): Agriculture corresponds to ISIC divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock

production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3.

Employment in agriculture (% of total employment) : Employees are people who work for a public or private employer and receive remuneration in wages, salary, commission, tips, piece rates, or pay in kind. Agriculture corresponds to division 1 (ISIC revision 2) or tabulation categories A and B (ISIC revision 3) and includes hunting, forestry, and fishing.

Agriculture value added per worker : Agriculture value added per worker is a measure of agricultural productivity. Value added in agriculture measures the output of the agricultural sector (ISIC divisions 1-5) less the value of intermediate inputs. Agriculture comprises value added from forestry, hunting, and fishing as well as cultivation of crops and livestock production.

Fertilizer consumption (kilograms per hectare of arable land) : Fertilizer consumption measures the quantity of plant nutrients used per unit of arable land (hectare).

Agricultural machinery, tractors per 100 sq. km of arable land : Agricultural machinery refers to the number of wheel and crawler tractors (excluding garden tractors)

in use in agriculture at the end of the calendar year specified or during the first quarter of the following year.

Livestock production index : Livestock production index includes meat and milk from all sources, dairy products such as cheese, and eggs, honey, raw silk, wool, and hides and skins.

Annual growth rate: Measures the increase/decrease in the number of animals during a specific period (normally on year)

Birth Rate: Ratio of the number of births of animals during a specicified period over the number of mothers;

Death Rate: Ratio of the number of death of animals during a specicific period over the total number of animals by kind;

Ratio of export of live animals over total number of animals by kind: Ratio of export of live animals over number of animals designated for exports by kind.

Contribution of livestock to GDP: The ratio of output of the livestok sector to the overall contribution of all sectors to total GDP:

Ratio of exported slaughtered animals to total livestock exports (by kind): Ratio of exported slaughtered animals to total slaughtered livestock exports

Milk consumption to production Ratio: Ratio of milk consumption relevant to milk production

Expenditure on livestock sector: Expenditure on livestock sector as a ratio of

expenditure of all economic sectors;

Medical drugs availability: Ratio of imported veterinary drugs to total domestic requirements and needs;

Vetrinary Specialists availability: Ratio of vetrinary specialists (doctors,skilled labour) to total employees in livestck sector

 Proportion of workers with vetrinary education : It is the ratio of vetrinary technical and professional staff (doctors, technocrats, university degree, diploma) to the total number of staff of the livestock sector;

Per capita consumption of livestck products: It is the ratio of consumption value of livestock products in a specified period to the mid-period population estimate.

Per capita consumption of meat: It is the ratio of consumption value of meat in a specified period to the mid-period population estimate.

Per capita consumption of poultry: It is the ratio of consumption value of poultary in a specified period to the mid-period population estimate.

Per capita consumption of dairy products: It is the ratio of consumption value of dairy products in a specified period to the mid-period population estimate.

Per capita consumption of fish and fishery products: It is the ratio of consumption value of fish and fishery products in a specified period to the mid-period population estimate.

Per capita consumption of eggs: It is the ratio of

consumption value of table eggs in a specified period to the mid-period population estimate.

Animal tenure: It is the economic or social advantage that for the purposes of animal production and which fall under one department and include all animals owned by a person or entity regardless of the legal form.

Holder: Is defined as a person ora legal personorlegal entityexercisingadministrative controlon the operation oftenure andtakemajor decisionsregarding theuseof available resources

Pastoral labor: It is the factor that works possession either be permanent or temporary.

Animal husbandry systems:

They include:

Traditional style / pastoral nomadic: The most important types of livestock production and represents a full and Bedouin nomadic depends on the continued captivity of all their requests for water and pasture in the geographical space known.

Traditional style / pastoral Portable: Shepherds move from fixed centers are characterized by seasonal movements Palace distance compared with traditional sedentary and herd size is small. These patterns characterized by the practice of traditional rain-fed agriculture and grazing where they send their herds with traditional sedentary pastoral sector demand for pasture and feed the animals on agricultural residues, this pattern includes nomads whose led in villages where farmers and their representatives raise small

ruminants and valleys along the banks of the canals.

Traditional style/ Family: This includes the style back yard poultry and goats for milk and depends on household waste and spreads in the country side and around urban centers.

Modern style/condensation integrated: It is one of the most important production patterns in irrigation projects and is available in this style production of food crops and irrigated agricultural and industrial wastes for breeding strains with high production infrastructure and ancillary services.

Modern style/trade: Carried out by specialized companies, cooperatives and individuals and is characterized by the presence of high-yield strains with the adoption of

modern methods of feeding, breeding and care.

Nomadic: Nomadic pastoral tribes are primitive living by hopping from place to place to follow up on a request for both the animals and the water, carry tents with them.

Overgrazing: Grazing by livestock or wildlife to the point where the grass cover is depleted leaving bare & unprotected patches of soil, it is a consequence of over stocking beyond the current carrying capacity of an area lack of rotational grazing.

Genetic Resources (Genetic resources (GRs): Intended to genetic resources total members, which include genetic heritage: plants, animals, microbes. It represents the idea of intellectual property on these different aspects of living resources.

Gap feed: The amount of the needs of livestock during the

year of dry fodder, green waste (agricultural and industrial) and concentrates on the table of feed available for the same year.

Aquaculture PISCI-Culture: Means that aquaculture fish breeding fish of various kinds, both saltwater fish or freshwater, which are used as food for humans under the conditions of the court and under the control of the human, and in certain areas, whether ponds or cages, with a view to the development of production and install the ownership of the farm products.

Slaughtered (heads): It refers to the number of animals that have been slaughtered within national borders during the year for domestic consumption.

Livestock off-take: It is the number of animals that have been withdrawn from the herd during the year for

slaughtering and exports of live animals.

Net Increase of the herds: It refers to the total stock of herds by kind at the beginning of the year less the death of old animals and during the weaning stage less the livestock off-take during the year. The annual net increase is considered as capital formation of the livestock sector according to national accounting formulation.

Marketing Information System: Briefly known as MIS, is information systems upon which departments and institutions in the management take decisions, especially decisions that have to do with marketing

8.3. Manufacturing Statistics

Manufacturing industries: It is the physical or chemical transformation of materials into new products.

Intermediate Production consumption: The goods and services used up in the production process. It can be either intermediate or final.

Index of physical volume of manufacturing production: It is a statistical measure of the change in the volume of production. The production index of a major group is the ratio between the volume of production of a major group in a given period and the volume of production of the same major group in the base period.

Market production activities: These are activities associated with production of goods and services for sale.

Production: The process, carried out under the responsibility, control and management of an institutional unit, in which labor and assets are used to transform inputs of goods and services into outputs of other goods and services. All goods and services produced as outputs must be such that they can be sold on markets, or at least be capable of being provided by one unit to another, with or without charge.

Sales: Sales are the total value of sales and transfers-out of all own manufactured products/articles and the amounts received for installation, erection or assembly or other servicesrendered.

Gross output: It is the total amount of a homogeneous commodity manufactured from an establishment in a given period of time, expressed in standard units of measurement; value in the market of all goods and services produced during a period of account valued at producers' prices.

Value added growth indicator: It is the annual (quarterly) percentage change of value added.

The share ratio indicator: It is the share of value added of manufacturing (industrial) activities in the total value added of the whole economy.

The employment share ratio: It is the ratio of the total number of persons employed in manufacturing (industrial) activities to the total number of persons employed in the total economy.

Weight (manufacturing major group): The overall index for manufacturing is the ratio of the value addedof the major group (i.e. outputof a major group minus intermediate consumption) to the total value addedof the manufacturing industry. The weight reflects the importance of the major group in the total. The weightschange over time due to changes in the relative performance of industries, due to factors such as quality changes, changes in relative prices, and changes in customer preferences. New weights need to be calculated from time to time.

Percentage utilization of production capacity: It is a measure of the use of manpower, plant and machinery in manufacturing.

Percentage under-utilization of production capacity: The percentage ender-utilization of production capacity is calculated by deducting the percentage utilization ofproduction capacity from a hundred.

Industrial Production Index: It is an economic

indicator that measures real output for all facilities located in the country, such as manufacturing, mining, and electrical and gas utilities, etc. It allows computing the average change over time in quantities produced.

Stocks change: In principle, it reflects the physical change in stocks of materials, supplies, and work-in- progress (except for construction projects) held by resident industries.

Establishment: An establishment can be defined as an economic unit that engages , under a single ownership or control - that is, under a single legal entity – in one, or predominantly one, kind of economic activity at a single physical location – for example, a mine, factory or workshop.

Enterprise: An institutional unit in its capacity as a producer of goods and services is known as an enterprise. An enterprise is an economic entity with autonomy in respect of financial and investment decision-making, as well as authority and responsibility for allocating resources for the production of goods and services. It may be engaged in one or more economic activities at one or more locations. An enterprise may be a sole legal unit.

8.4. Mining, quarrying and oil production statistics

Mine: A collection of (cost-effective) mineral deposits, machinery, and facilities established for exploration, equipment, exploitation, and dressing of minerals. Dressing refers to all physical and chemical operations for separating some of waste materials from ores or separating ores from one another.

Mineral production: All minerals obtained from a series of extraction activities which make them marketable. It should be mentioned that in some mining activities, minerals are supplied to the market without undergoing dressing process, whereas in others, minerals are supplied to the market after a series of physical and/or chemical treatments for separating some of the waste from ores, separating ores from one another, or increasing fineness of raw material. In addition, in one industry, several minerals may be produced. For example, copper ore mining activity includes minerals of copper ore and copper and molybdenum concentrates production.

Production line skilled workers: They are employed persons capable of performing a part of technical activities related to production line due to their know-how and experience. Engineers, technicians, craftsmen, foremen, skilled laborers, fitters, and drivers, are some examples.

Production line unskilled workers: They are persons working in production line whose jobs do not require any specific training or experience; such as laborers and porters.

Other workers (administrative, financial and service): They are employed persons engaged in clerical, administrative, financial and service activities in mines or their central offices but not engaged directly in extraction and production activities.

Public management: It is the management exercised by the ministries, government organizations, banks,

municipalities and other public institutions.

Private management: It is the management exercised by individuals or private institutions.

Value added: It is the value of receipts (outputs) less the value of payments (inputs).

Value of payments (inputs): It is the value of purchased materials and non- durable tools and instruments, fuel consumed, water and electricity, and other payments including payments on contracts, minor repairs of building and office equipment, minor repairs of machinery, laboratory, etc.

Value of products: It is the value of extracted ores and value of saleable mineral waste products at producer's prices; that is, the price of sale to customers at the mine.

Value of receipts (outputs): It is the value of mineral products, value of saleable mineral waste products, manufacture and major repairs of capital goods by mine workers and other receipts of the mine including receipts from contracts, minor repairs of buildings and office equipment, minor repairs of machinery, laboratory, etc.

OIL Product: OIL means condensate or crude oil, or a constituent of raw gas, condensate or crude oil that is recovered in processing, which is liquid at the conditions under which its volume is measured or estimated

Crude Oil: It is a naturally occurring unrefined petroleum product composed of hydrocarbon deposits. It is a mixture mainly of pentanes and heavier hydrocarbon that may be contained with

sulphur compounds. It is recovered from underground reservoirs. For production measurement and reporting purposes crude oil is deemed to be "heavy" if it has density of 900kg/m3 or greater.

Crude Bitumen: It is oil based substance, naturally occurring viscous mixture mainly hydrocarbon that may contain sulphur compounds.

Synthetic Crude Oil: It is a term applied to oil recovered from coal, oil shale and tar sands. This is mainly a mixture of pentanes and heavier hydrocarbons that may contain sulphur compounds that is derived from crude bitumen. Its property depends on the process used in upgrading and mainly low in sulphur and API around 30 degree. It is also known as "upgrade crude".

Condensate: It is a low density, high API liquid hydrocarbon (API gravity of 50 to 120) phase that generally occurs in association with natural gas. It is mainly a mixture of pentanes and heavier hydrocarbon that may be contained with sulphur compounds, that is recovered or is recoverable at a gas well from underground reservoir and that may be gaseous in its virgin reservoir state but is liquid at conditions under which its volume is measured.

Pentanes Plus: It means a mixture mainly of pentanes and heavier hydrocarbons that ordinarily may contain some butanes and which is obtained from processing of raw gas, condensate or crude oil.

Skim Oil: It refers to produced oil that is carried over with produced water

and accumulates in water storage tanks at an injection facility. This is oil recovered from a water disposal injection facility. This oil is usually skimmed off the tank, treated, and then sold.

8.5. Energy Statistics

Electric power: Energy produced by hydro-electric, geothermal, nuclear and conventional thermal power stations, excluding energy produced by pumping stations, measured by the calorific value of electricity (3.6 TJ/GWh). In the electric power industry, energy is more narrowly defined as electricity supplied over time, express in kilowatt-hours.

Electricity Generation: The process of producing electric energy or the amount of electric energy produced by transforming other forms of energy, commonly expressed in kilowatt hours (kWh) or megawatt hours (MWh).

Electricity/Energy Loss: The amount of electricity generated but not accounted for.

Electricity Tariff: The price of a unit of electricity consumed.

Electricity Use per Capita: The average amount of electricity used per person per year.

Grid: It is the matrix of an electrical distribution system.

Hydroelectric: It is an electric generating station in which a water wheel is driven by falling water, thus generating electricity.

Interconnected System: It is a system consisting of two or more individual power systems normally operating with connecting tie lines.

Interconnection (Electric Utility): In a competitive power producer context, the point at which the transmission lines carrying the electricity output of a power facility connects with the utility grid, usually the local utilities nearest substation.

Installation: The whole of any plant or equipment under one ownership designed for the supply or use of electrical energy.

Kilovolt ampere (kVA): It is the practical unit of apparent power, which is 1,000 volt-amperes. The volt-amperes of an electric circuit are the mathematical products of the volts and amperes of the client.

Kilowatt (kW): It is the electrical unit of power equal to 1,000 watts.

Kilowatt-Hour (kWh): It is the basic unit of electric energy equal to one kilowatt

of power supplied to or taken from an electric circuit for one hour.

Megawatt: It is one million watts.

Megawatt-hour: It is one thousand kilowatt-hours or one million-watt hours.

National Grid Electrification Rate: The rate (in percentages) at which Electricity customers are connected to the National Grid.

Public Lamp: An electric lamp used for the lighting of a street or a public place.

Plant: It is a facility containing prime movers, electric generators, and other equipment for producing electric energy.

Power: It is the rate at which energy is transferred.

Power Grid: A network of power lines and associated equipment used to transmit

and distribute electricity over a geographic area.

Power Plant: It is a generating station where electricity is produced.

Primary Energy: Energy in the form that it is first accounted for in a statistical energy balance, before any transformation to secondary or tertiary forms of energy.

Production: It is the act or process of generating electric energy.

Public Utility: A utility operated by a non-profit governmental or quasi-governmental entity. Public utilities include municipal utilities, cooperatives, and power marketing authorities.

Ratepayer: It is a retail consumer of the electricity distributed by an electric utility. This includes residential, commercial and industrial users of electricity.

Renewable Energy: Energy that is capable of being renewed by the natural ecological cycle.

Staff Ratio: It is the number of staff divided by thousands of connections for main utility in the specified city.

Collection Rate: Collections divided by billings for main utility in the specified city.

Consumer: Any person supplied or entitled to be supplied with electrical energy for personal, industrial and commercial use but does not include a person supplied with electrical energy for delivery to another person.

Distribution: It refers to the ownership, operation, management or control of distribution facilities for the movement or delivery of electricity to consumers.

Distribution System (Electric utility): It is the substations, transformers and lines that convey electricity from high-power transmission lines to ultimate consumers.

Electrical Energy Distribution: The delivery of electricity to the retail customer's home or business through low voltage distribution lines.

Energy: This is broadly defined as the capability of doing work.

Energy to GDP ratio: The total value of energy produced as a proportion of the national GDP.

Fossil Fuel: Fuel, such as oil, coal, natural gas and their by-products, formed in the earth from remains of living-cell organisms.

Fuel: It is a substance that can be burned to product heat.

Transmission: It refers to the ownership, operation, management or control of electricity transmission facilities for whatever purpose.

Transmission and distribution losses: They are the technical and non-technical losses. They include electricity losses due to operation of the system and the delivery of electricity as well as those caused by unmetered supply. This comprises all losses due to transport and distribution of electrical energy and heat.

8.6. Building and Construction Statistics

Building: It is a built structure with a roof and walls.

Dwelling, house: It is a freestanding, complete structure on a separate stand or a self-contained dwelling unit.

Collective living quarter

They consist of:

1) Structurally separate and independent places of abode intended for habitation by large groups of individuals or several households.

Such quarters usually have certain common facilities, such as cooking and ablution facilities, lounges or dormitories, which are shared by the occupants. Collective living quarters may be further classified into hotels, rooming houses and other lodging houses, institutions and camps.

2) Living quarters where certain facilities are shared by groups of individuals or households. They can be divided into: (a) hotels, motels, guest houses, etc.; (b) workers' hostels and student residences; and (c) institutions.

Domestic worker's quarters: A Physical structure on the same plot as main property intended as living quarter for a domestic worker.

Dwelling under construction: It is a dwelling unit that has not been built completely.

Flat: It is a dwelling, usually on one floor, with at least one wall shared with another such dwelling, within a block of flats.

Block of flats: It is a structure, usually multi-storey, consisting of a number of dwellings sharing the same residential address, and usually sharing a common entrance, foyer or staircase.

Camp: It is a premises originally intended for the temporary accommodation of persons with common activities or interests, e.g. military camps, refugee

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camps and camps established for the housing of workers in mining, agriculture, public works or other types of enterprises.

Hostel: It is a collective form of accommodation for workers or students, but not including boarding school hostels.

Hotel: It is an establishment providing accommodation and meals for pay.

Semi-detached House: One of two houses joined together with one common wall. Each house usually has its own private ground and no other dwelling below or above it.

Housing unit: It is a unit of accommodation for a household, which may consist of one structure, or more than one structure, or, part of a structure. Examples are a house, and a flat. It may be vacant, or occupied by one or more than one

household. A housing unit usually has a separate entrance from outside or from a common space, as in a block of flats.

Hut: It is a structure made of materials such as mud walls and thatch or grass roofs.

Living quarters: This is a general term meaning the place where people stay. Living quarters can be divided into two main groups: housing units and collective living quarters.

Residential buildings: These are the buildings that are used primarily as residences.

Non-residential building: It is a building where the major part of the floor space is not intended for dwelling but for other purposes such as commercial or industrial.

Other residential buildings: These include institutions for the disabled, boarding

houses, old-age homes, hostels, hotels, motels, guest-houses, holiday chalets, bed-and-breakfast accommodation, entertainment centers and casinos.

Traditional dwelling: It is a dwelling made of clay, mud, reeds or other locally available materials.

This is a general term that includes huts and similar structures. Such dwellings can be found as single units or in clusters.

Room: It is a space in a housing unit or other living quarters enclosed by walls reaching from the floor to the ceiling or roof covering, or to a height of at least two meters, of an area large enough to hold a bed for an adult.

Other structures: A structures other than buildings includes

highways, streets, roads, bridges, etc.

8.7. Transport statistics

Road Transport

A-level roads: They are roads outside urban areas and other roads outside urban areas that are not motorways but belong to the top-level road network. A-level roads are characterized by a comparatively high quality standard, either non-divided roads with oncoming traffic or similar to motorways. In most countries, these roads are financed by the federal or national government.

All-season road: An all-season road is a road that is motorable by the prevailing means of rural transport (often a pick-up or a truck which does not have four-wheel-drive) all year round. Predictable interruptions of short duration during inclement weather (e.g.

heavy rainfall) are permitted, particularly on low volume roads.

Capital investment: Refers to the total amount of investment in the road sector to maintain sufficient capacity as well as increase capacity per year.

Maintenance expenditure: It refers to the total expenditure for keeping roads in working order per year. This includes maintenance, patching, and running repairs (work relating to roughness of carriageway's wearing course, roadsides, etc.).

Motorways, highways, main, or national roads: Motorways include roads specifically designed and built for motor traffic, which does not serve properties bordering on it, and which is provided, except at special points or temporarily, with separate carriageways for

the two directions of traffic, separated from each other, either by a dividing trip not intended for traffic, or exceptionally by other means does not cross at level with any road, railway or tramway track, or footpath · It is especially sign-posted as a motorway and is reserved for specific categories of road motor vehicles. Entry and exit lanes of motorways are included irrespectively of the location of the signposts.

Number of Fatalities from Road Accidents: Refers to the number of people who were involved in any injury accident with at least one motor road vehicle in motion on a public road or private road to which the public has right of access, resulting in at least one person killed as a result of the accident and within 30 days of its occurrence. Included are collisions

between road vehicles; between road vehicles and pedestrians; between road vehicles and animals or fixed obstacles and with one road vehicle alone. Included are collisions between road and rail vehicles.

Other urban roads: It refers to roads within the boundaries of a built-up area, which is an area with entries and exists especially sign-posted as such.

Road maintenance requirement: Refers to the amount of financing required per year to keep roads in working order. This includes maintenance, patching, and running repairs (work relating to roughness of carriageway's wearing course, roadsides, shoulder, drains, structures, slopes, signs, etc.)

Secondary or regional roads: It refers to roads that are the main feeder routes

into, and provide the main links between highways, main or national roads.

Total paved roads: It refers to total length of all roads that are surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete or with cobblestones.

Total road network: It refers to length of the road network. The road network includes all roads in a given area.

Total roads in "good" or "fair" condition: It refers to total length of roads that are in "good" or "regular" condition. 'Roads in good condition' Paved roads, largely free of defects, requiring only routine maintenance and perhaps surface treatment; unpaved roads which need only routine grading and localized repairs; 'Roads in

regular (or fair) condition' paved roads with defects and weakened structural resistance. They require resurfacing of the pavement, but without the need to demolish the existing pavement; and unpaved roads, which require grading and additional new gravel, plus drainage repair in some places.

Freight coverage: It refers to travel measured in units of one metric ton by one kilometer.

Freight tariff revenue: It refers to revenue raised in charging for freight.

Main lines: It refers to main inter-city and other main passenger and freight routes available for public services

Passenger fare revenue: It refers to revenue raised from travelling passengers.

Passenger travel: It refers to total passenger travel

measured in units of one passenger by one kilometer.

Secondary lines: It refers to the remaining passenger and freight routes available for public services.

Single lines: Route length of network consisting of single tracked lines

Total Network: It refers to total length of railway route open for public passenger and freight services (excluding dedicated private resource railways). Air transport

Airport: A defined area of land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aircraft: It refers to any machine that can derive support in the atmosphere from the reactions of the air

other than the reactions of air against the earth's surface. Dirigibles and surface effect vehicles such as hovercraft are excluded.

Aircraft Movement: An aircraft take-off or landing at an airport. For airport traffic purposes one arrival and one departure is counted as two movements

Commercial Air Transport Flight: The operation of an aircraft on one or more flight stages on a scheduled or non-scheduled basis where the aircraft is available to the public for the transportation of passengers and/or freight and mail, for remuneration and for hire.

Direct Transit Traffic: Traffic, which continues its journey on the same aircraft on a flight having the same flight number as the flight on which it arrived. Direct transit traffic is not

unloaded and reloaded at an airport it directly transits.

Domestic Airport: Any airport not designated to handle international air traffic.

Domestic Flight: It refers to a flight having exclusively domestic flight stages (airport), using the same flight number.

International Airport: Any airport designated by the State in the territory of which it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, agricultural quarantine and similar procedures are carried out, whether such facilities are provided on a full time or part time basis.

International Flight: A flight having one or more international flight stages,

where all its flight stages use the same flight number.

Non-scheduled Commercial Air Transport: Commercial air transport flights other than scheduled service flights.

Transfer or Indirect Transit Passengers: They are passengers arriving and departing on a different aircraft within 24 hours, or on the same aircraft bearing different flight numbers. They are counted twice: once upon arrival and once on departure.

Inland, sea and coastal transport

Port: A sheltered harbor where marine terminal facilities are provided, consisting of piers or wharves at which ships berth/dock while loading or unloading cargo, transit sheds and other storage areas where ships may discharge incoming cargo, and warehouses where goods may be stored for longer periods while awaiting distribution or sailing.

Navigable inland Waterways: A stretch of water, not part of the sea, over which craft of a carrying capacity not less than 50 tones can navigate when normally loaded.

This term covers both navigable rivers and lakes (natural water courses, whether or not they have been improved for navigation purposes) and canals (water ways constructed primarily for the purpose of navigation).

Length of waterways: The length of rivers and canals is measured in mid channel and length of lakes, as well as lagoons, is counted as the length between the most distant points between

which the transport is performed.

National waterways:
National Waterways means an Inland Waterway of Sudan designated as a National Waterway by the Government.

Vessels: Vessel includes any ship or boat or any description of a vessel or boat, or any artificial contrivance used or capable of being used as a means of transportation on water.

Freight: It denotes goods which are in the process of being transported from one place to another.

Freighter: A ship designed to carry general cargo (with a limited passenger accommodation) operating on fixed routes with fixed sailing schedules and serving a group of ports.

Tanker: A cargo ship constructed or adopted for

carriage in bulk of liquid cargoes of an inflammable nature.

Passenger ship: It is a ship carrying more than twelve passengers.

Cargo ship: It is a ship which is not a passenger ship.

Cellular container: It refers to a container comprising of one or more parallel and modular rows of cells capable of housing and supporting fragile products.

Dead weight tonnage (DWT): Deadweight tonnage (often abbreviated as DWT for deadweight tons) is the displacement at any loaded condition minus the lightship weight. It includes the crew, passengers, cargo, fuel, water, and stores. It is often expressed in long tons or in metric tons. This presents the actual carrying capacity of a ship. Lightship or

Lightweight measures the actual weight of the ship with no fuel, passengers, cargo, water, etc. on board.

Gross Registered Tonnage (GRT): It applies to the vessel and not to cargo. It is the weight of the volume occupied by the closed in space of a ship taking 100 cubic feet of such closed-in-spaces as equivalent to one vessel ton. It thus refers to the cubic capacity of the vessels.

Overseas traffic: The traffic between ports in two different countries, with the inward movement of goods termed 'Imports' and outward movements termed 'exports', both movements comprising the country's foreign trade.

Coastal Traffic: It refers to the traffic between different ports of the same country.

Transit traffic: It refers to the traffic physically passing through a port in one country (without entering into that country's foreign trade) having originated in a second foreign country, and being consigned to a third country. The transit traffic may leave the country by sea or any other mode of transport (rail, canal, road, pipeline or air).

Inward movement: This is the navigation time taken by a ship for moving from anchorage or reporting station to an operational Jetty/Berth/Mooring as the case may be. In case the navigation is first to non-working berth, Inward Movement will be the time taken from anchorage point to nonworking berth and time taken for shifting from non-working berth to operational berth/jetty/mooring.

Outward movement: This is the navigation time taken by a ship from the time of

unearthing from the last berth till the vessel reaches reporting station.

Voyage and time charter rates: A voyage charger is a contract for a specific voyage while a time charter is one for a period of time which may cover several voyages.

A voyage charter rate is thus a short term rate and the time charter rate is a long term one.

Clearance: It refers to the completion of custom measures necessary to allow goods to enter to or exit from the country.

Custom storehouse: It means any place in a custom port or station designated to store goods for investigation until due duties are paid.

8.8. Price Statistics

Consumer Price Index (CPI): CPI is a weighted average of the price changes for the goods and services included in the CPI basket. In general, three types of price indices are usually calculated; for high, medium, and low income groups.

Laspeyres Price Index (LP): The (Lp) index measures the changing cost over time of Purchasing the

Same basket of the commodities purchased during the stated   base period. Most studies use Laspeyres formula for the calculation of the index as Laspeyresindex tends to register a large increase over time than other indices.

Laspeyres Volume Index (Lq): The (Lq) index is a weighted average of the quantity relatives.

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Paasche Price Index: Paasche used the same formula of Laspeyres except for using the present period as the base period.

Edgeworth Price Index: It is defined as the arithmetic mean of the Laspeyers and Paache indices.

Fisher Price Index: It is defined as the geometric mean of the Laspeyers and Paache indices.

Commodity basket: It is a selected national set of goods and services whose prices are surveyed for the purpose of calculating indexes such as consumer price index or producer price index.

Weights: The weights reflect the relative importance or contribution to total expenditures of all households. Generally from household expenditure surveys different types of weights are identified

reflecting on the share of households' expenditure within a specific geographic region (such as urban/rural).

Producer Price Index (PPI): The index measures changes in the level of prices of domestic

Producers of goods and services and is used as one of the economic Indicators for measuring inflation.

Cost of Living Index: An index measuring the cost of purchasing sets of bundles of goods and

Services necessary for living expense compared with the cost of the samebasket at a similar point in time.

Base Period: It is any point in time used as a reference point for comparison with future periods.

Inflation: The annual inflation rate is calculated as

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the percentage change in the index on an annual basis.

Headline inflation rate:
The measure of inflation based on relative changes in prices of all goods and services in the basket.

Underlying inflation rate:
This is a measure of inflation based on relative changes in prices for all goods and services excluding items that depict volatility in prices such as food crops (excluding food crops minimizes the effects of irregular long-term price fluctuations that are mainly induced by weather conditions).

Creeping inflation rate: It is inflation at moderate rates but persisting over a long periods. It is regarded as abnormal state of affair in many countries.

Chain-linked index: A linked index is a series that has undergone expenditure weight revisions, commonly at regular intervals. It is then necessary to update the base period and to link the old series to the series on the new base period.

Foreign Trade Statistics

General Trade System:
Foreign trade data is recorded as goods crossing the frontiers of the recording statistical territory. General imports and exports are flows of goods entering/leaving the statistical territory of the country.

Imports: Goods which on direct importation into statistical territory, upon leaving a depot transit area or after trans-shipment, are: declared for home use; accepted on temporary admission; accepted on temporary importation for onward processing; placed in industrial warehouse or industrial free zone; placed

in customs bonded manufacturing plants or export processing zones; imported after temporary exportation for outward processing; imported after temporary exportation for return in unaltered state; and Placed in customs bonded warehouse or commercial free zone.

Exports: Goods which are: of national origin and declared for single exit; exported after temporary admission; exported after temporary importation for inward processing; exported after release from industrial warehouse or industrial free zone; exported after release from customs bonded manufacturing plants or export processing zones; on temporary exportation for outward processing; on temporary exportation for return unaltered state; and released from customs

warehouse or commercial free zones.

Re-exports: Re-exports are exports of foreign goods which were previously recorded as imports.

Goods included in the external trade statistics: These are: Non-monetary gold; Banknotes and securities, and coins not in circulation; Goods traded in accordance with barer agreements; Goods traded on government account; Humanitarian aid, including emergency aid; Goods on consignment; Media, whether or not recorded; Goods for processing with or without change of ownership; Goods which cross border as a result of transactions between relater parties; Returned goods; Gas and oil; Goods dispatched or received through postal or courier services; Migrants' effects; goods transferred from or to a buffer stock

organization; Goods under financial lease; Ships and aircrafts; Fish catch, minerals from the seabed and salvage; Gift and donations; Used goods; Waste and scrap; and Goods received or sent abroad by international organizations.

Goods excluded from external trade statistics: These are: Goods simply being transported through the country; Goods temporarily admitted or dispatched; Monetary gold; Issued banknotes and securities and coins in circulation; Non-financial assets, ownership of which has been transferred from residents to non-residents, without crossing borders; Goods under merchanting; Goods under operating lease; Goods functioning as means of transport; and Content delivered electronically.

Coverage: Declaration forms of exports, imports and re-exports captured through Customs Administration System.

Valuation: Imports are based on CIF (Cost, Insurance and Freight).

Exports are based on FOB (Free on Board).

Commodity Classification: Commodities are classified according to the Harmonized Commodity Description & Coding System Nomenclature (HS).

Trading Partner Country: The trading partner country in case of imports is the country of origin, and in the case of exports is the country of last known destination.

Quantities: The quantity measurement is the net weight in kilogram.

The term "supplementary unit" means a unit of

measurement of quantity other than kilogram.

The allocation of supplementary units to tariff heading are based on the recommendation of WCO.

8.9. Household Expenditure and Income Statistics

Household Expenditure: It refers to amount spent by the household in cash, kind or through barter. The household expenditure is subdivided into consumption and non-consumption expenditure.

Consumption Expenditure: It refers to expenditure accruing to the household in a specified period. It includes expenditure on frequently purchased items of food, beverages and tobacco, non-durable goods and frequently purchased services and semi-durable goods and services.

Non-consumption Expenditure: It refers to the expenditure on items such as taxes and duties paid by the household, remittances and contributions to members of other households.

Household Final Consumption: This refers to consumption, which includes all cash expenditure on goods and services, incurred by the household for consumption purposes. It also includes imputed value for own produced items consumed by the household.

Total Household Expenditure: This refers to the summation of household consumption expenditure and household non-consumption expenditure.

Household Enterprise: It is an economic activity taking place in the household but which does not have a

physical address (cannot be easily seen) e.g. backyard chicken rearing, hand crafts, etc.

Household Income: These are regular receipts by households in both cash and kind. It consists of receipts that accrue to the members of the household from their employment and/ or enterprises, gifts, etc. Regularity of receipts means that they occur at least once a year.

CHAPTER 9: Environment Statistics

Environmental Impact Assessment: It is a systematic examination undertaken to find whether or not a project, policy, program, etc, will have any adverse impacts on the environment.

Environmental protection: It is any activity done to maintain the quality of the environment, through preventing the degradation of air, land, water and any other ecosystem and, where possible, reversing its degradation.

Air pollution: The presence of contaminants or pollutant substances in the air at levels that interfere with the health or welfare of human and other organisms or can produce other harmful environmental effects.

Land Degradation: The physical, chemical or biological impairment of the attributes of land.

Weather: The changes of atmospheric conditions of a given area in a short period of time.

Climate: It is the average weather condition at a particular area over a long period of time, usually 30 years or more.

Climate change: Any systematic change in the long-term statistics of climate elements sustained over several decades.

Land area covered by forest: It is defined as the proportion of forest area to total land area and expressed as a percentage.

Total CO2 emissions: Estimates of total carbon

dioxide (CO_2) emissions include anthropogenic emissions, less removal by sinks, of carbon dioxide (CO2). The term "total" implies that, emissions from all national activities are considered. The typical sectors for which CO2 emissions/removals are estimated are energy, industrial processes, agriculture, waste, and the sector of land use, land-use change and forestry.

Consumption of all ozone-depleting substances: This indicator is used to monitor the reduction in the usage of Ozone Depleting Substances (ODSs) as a result of the Montreal Protocol. Therefore only ODSs controlled under the Montreal Protocol are covered by the indicator.

Proportion of total water resources used: Proportion of total renewable water resources with drawn is the total volume of groundwater and surface water withdrawn from their sources for human use (in the agricultural, municipal and industrial sectors), expressed as a percentage of the total actual renewable water resources. The terms water resources and water withdrawal are understood as freshwater resources and freshwater withdrawal.

Proportion of population using an improved drinking water source: The proportion of the population using an improved drinking water source, (total, urban, and rural) is the percentage of the population who use any of the following types of water supply for drinking: piped water into dwelling, plot or yard; public tap/standpipe; borehole/tube well; protected dug well; protected spring; rainwater collection and bottled water (if a secondary available source is also improved).

Proportion of population using an improved sanitation facility: The proportion of the population using an improved sanitation facility(total, urban, rural) is the percentage of the population with access to facilities that hygienically separate human excreta from human contact. Improved facilities include flush/pour flush toilets or latrines connected to a sewer, -septic tank, or -pit, ventilated improved pit latrines, pit latrines with a slab or platform of any material which covers the pit entirely, except for the drop hole and composting toilets/latrines.

Proportion of population using solid fuels: The percentage of population using solid fuels is the percentage of the population that relies on solid fuels as the primary source of domestic energy for cooking and heating. Solid fuels include biomass fuels, such as wood, charcoal, crops or other agricultural waste, dung, shrubs and straw, and coal.

Actual evapotranspiration: It is the total actual volume of evaporation from the ground, wetlands and natural water bodies and transpiration of plants. According to the definition of this concept in Hydrology, the evapotranspiration generated by all human interventions is excluded, except non-irrigated agriculture and forestry. The 'actual evapotranspiration' is calculated using different types of mathematical models, ranging from very simple algorithms (Budyko, Turn Pyke, etc.) to schemes that represent the hydrological cycle in detail.

Actual occupation (volume): It is the average daily volume of wastewater

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that treatment plants actually treat.

Air Pollution: It is the presence of contaminants or pollutant substances in the air that do not disperse properly and that interferes with welfare of organisms, or produces other harmful environmental effects.

Alkalization: Soil degradation caused by the accumulation of alkaline water-soluble salts. Alkalinity is the capacity of aqueous media to react with hydroxyl ions and is the factor representing the acid neutralizing capacity of the aqueous system**.**

Annual mean concentration: It is the arithmetic mean over all valid measurements for the respective year. If not available, please provide alternative measures such as the median value or

estimates and indicate this in the footnotes.

Arid areas: They have a precipitation to potential evapotranspiration ratio equal to or greater than 0.05 and less than 0.20, and mean annual precipitation values up to approximately 200 millimeters/year. Inter-annual precipitation variability is between 50 per cent and 100 percent

Background site: It is a monitoring station remote from any industrial and densely populated area.

Biochemical Oxygen Demand (BOD5): It is the amount of dissolved oxygen required by organisms for the aerobic decomposition of organic matter present in water. This is measured at 20 degrees Celsius for a period of five days. The parameter yields information on the degree of

water pollution withorganic matter.

Brackish water: It is water that is saltier than freshwater and less salty than sea water. Technically, brackish water contains between 0.5 and 30 grams of salt per liter, but most brackish water have a concentration of total dissolved salts in the range of 1,000-10,000 milligrams per liter (mg/l).

Built-up and related land: It is land under houses, roads, mines and quarries and any other facilities, including their auxiliary spaces, deliberately installed for the pursuit of human activities. Included are also certain types of open land (non-built-up land), which are closely related to these activities, such as waste tips, derelict land in built-up areas, junk yards, city parks and gardens, etc. Land occupied by scattered farm buildings, yards and their annexes is excluded. Land under closed villages or similar rural localities are included.

Composting: A biological process that submits biodegradable waste to anaerobic or aerobic decomposition, and that results in a product that is recovered and can be used to increase soil fertility.

Conservation: It is the management of human use of organisms or ecological systems (eco-systems) to ensure that such use is sustainable.

Controlled land filling: It is the final placement of waste into or onto the land ina controlled landfill site.
Desertification: The process of land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations (e.g.

drought) as well as direct and indirect human activities (e.g. overgrazing, intensive agricultural cultivation deforestation, veld fires)

Desalinated water: Total volume of water obtained from desalination of (i.e., removal of salt from) seawater and brackish water)**.**

Design capacity (BOD): The quantity of oxygen-demanding material that wastewater treatment plants are designed to treat daily with certain efficiency. For secondary treatment plants the BOD5-capacity is mostly limited by the oxygenation capacity, i.e., the quantity of oxygen that can be brought into the water to keep the oxygen concentration on a suitable level.

Design capacity (volume): It is the average daily volume that a treatment plant or

other facility is designed to treat e.g. Water and sewage.

Dry open land with special vegetation cover: Non-wooded land which is covered by low vegetation less than 2 meters in height

Dry sub-humid areas: Dry sub-humid areas have a precipitation to potential evapotranspiration ratio of between 0.50 and less than 0.65, with highly seasonal rainfall regimes and less than 25 per cent inter annual rainfall variability. Such areas are very susceptible to degradation, probably enhanced by the seasonality of rainfall, drought periods and the increasing intensity of human use.

Environment: It is the totality of all the external conditions (physical, chemical, biological and socio-economic) affecting the life, development and survival of an organism (any

living plant, animal or human being) or likely to have direct or indirect, immediate or long term effects on the development of an area.

Environmental media: Are abiotic (non-living) components of the natural environment namely water, air and land.

Environmental statistics: These are statistics that describe the state and the trends of the environment covering the media of the natural environment the biota within the media and human settlements.

Erosion: It is wearing away and transport of soil by wind or running water, glaciers or waves. Erosion occurs naturally but is often intensified by human land-clearing activities related to farming, residential or industrial development.

Erosion – extreme: Terrain is un-reclaimable and beyond restoration. Original biotic functions are fully destroyed.

Erosion – strong: Terrain is not reclaimable at farm level. Major investments - engineering works are required for terrain restoration. Original biotic functions are largely destroyed.

Erosion – light: Terrain, with net annual soil loss that may or may not have somewhat reduced agricultural productivity, that is suitable for local farming systems. Restoration to full productivity is possible by modifications of the management systems. Original biotic functions are largely intact.

Exports of water: Total volume of bulk freshwater that is exported to other

countries as a commodity through pipelines or on ships or trucks, Excluded bottled water.

Forest: Land under forestry or no land use, spanning more than 0.005 km2 (0.5 hectares); with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. This includes mangroves and forests on wetlands according to the above height and canopy coverage.

Freshwater: It is water that contains only minimal quantities of dissolved salts, especially sodium chloride, thus distinguishing it from sea water or brackish water**.**

Fresh surface water: Freshwater which flows over, or rests on, the surface of a land mass; natural watercourses such as rivers, streams, brooks, lakes, etc.,

as well as artificial watercourses such as irrigation, industrial and navigation canals, drainage systems and artificial reservoirs. Sometimes water obtained through bank filtration is included under (fresh) surface water. Sea-water, and transitional waters, such as brackish swamps, lagoons and estuarine areas are not considered fresh surface water.

Fresh groundwater: Freshwater which is being held in, and can usually be recovered from, or via, an underground formation. All permanent and temporary deposits of water, both artificially charged and naturally, in the subsoil, of sufficient quality for at least seasonal use. This category includes phreatic water-bearing strata, as well as deep strata under pressure or not, contained in porous or fracture soils.

Gross freshwater abstracted: It is water removed from any source, either permanently or temporarily. This includes abstraction by the water supply industry (ISIC 36) and direct abstraction by other activities, and water abstracted but returned without use, such as mine water and drainage water.

Hazardous waste: Hazardous waste refers to the categories of waste to be controlled according to the Basel Convention on the control of Trans-boundary Movements of Hazardous Waste and their Disposal.

Imports of water: Total volume of bulk freshwater that is imported from other countries as a commodity through pipelines or on ships or trucks. This excludes bottled water.

Incineration: It is any controlled burning of solid, liquid or gaseous waste at high temperature.

Incineration with energy recovery: It is the incineration in which evolving thermal energy is used for the production of steam, hot water or electric energy.

Independent wastewater treatment: It is the collection, preliminary treatment, treatment, infiltration or discharge of domestic wastewater from dwellings generally between 1 and 50 population equivalents, not connected to a wastewater collection system e.g. septic tanks. Excluded are systems with storage tanks from which the wastewater is transported periodically by trucks to a wastewater treatment plant.

Inflow of surface and ground waters: It is the total volume of actual external inflow of rivers and groundwater, coming from neighboring countries. Boundary waters should be divided 50/50 between the two riparian countries, unless other water sharing agreements exist.

Internal flow: Total volume of river run-off and groundwater generated over the period of a year, in natural conditions, exclusively by precipitation into a territory. The internal flow is equal to precipitation less actual evapotranspiration and can be calculated or measured. If the river run-off and groundwater generation are measured separately, transfers between surface and groundwater should be netted out to avoid double counting.

Land Degradation: Reduction or loss of biological or economic productivity and complexity of rain fed cropland, irrigated cropland, rangeland, forest or woodland resulting from the natural processes, land use or other human activities and habitation patterns such as land contamination, soil erosion and the destructionof the vegetationcover.

Land filling: It is the final placement of waste into or onto the land in a controlled or uncontrolled way. The definition covers both land-filling in internal sites (i.e., where a generator of waste is carrying out its own waste disposal at the place of generation) and in external sites.

Losses during transport: The volume of freshwater lost during transport between a point of

abstraction and a point of use, and between points of use and reuse, Including leakages and evaporation.

Municipal waste: Municipal waste collected by or on behalf of municipalities, by public or private enterprises, includes waste originating from households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings). It also includes bulky waste (e.g., white goods, old furniture, mattresses) and waste from selected municipal services, e.g., waste from park and garden maintenance, waste from street cleaning services (street sweepings, the content of litter containers, market cleansing waste), if managed as waste. The definition excludes waste from municipal sewage network and treatment, municipal construction and demolition waste.

Net freshwater abstracted: Gross freshwater minus water returned without use.

Non-methane volatile organic compounds (NM-VOCs): It is a group of solvent-like organic compounds that easily evaporate at normal temperatures. They are produced mainly in fuel combustion and in processes that use solvents or solvent-based products such as painting, metal degreasing etc. Several of these chemicals are harmful to human health if inhaled, ingested, drunk, or get in contact with skin. NM-VOCs are significant precursors to ground level ozone formation. NM-VOCs are the sum of all hydrocarbon air pollutants except methane.

Open land without, or with insignificant, vegetation cover: Non-built up land the

surface of which either is not covered at all by vegetation or scarcely covered by some vegetation, which precludes its inclusion in other categories of the classification.

Other wooded land: Land under forestry or no land use, spanning more than 0.005 km2 (0.5 hectares); with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 percent. They also include mangroves and forests on wetlands according to the above height and canopy coverage.

Outflow of surface and ground waters: It is the actual outflow of rivers and groundwater into neighboring countries and/or into the sea.

Precipitation: It is rain or snow falling from the atmosphere and deposited on land or water surfaces.

Wastewater treatment (sewerage): This simply implies the process to render waste water fit to meet environmental standards or other quality norms. Main treatment types are: Mechanical, Biological and advanced.

Primary wastewater treatment: It is the treatment of wastewater by a physical and/or chemical process involving settlement of suspended solids, or other process in which the Biological Oxygen Demand (BOD5) of the incoming wastewater is reduced by at least 20% before discharge and the total suspended solids of the incoming wastewater are reduced by at least 50%.

Secondary wastewater treatment: Post-primary treatment of wastewater by a process generally involving biological or other treatment with a secondary settlement or other process, resulting in a Biological Oxygen Demand (BOD5) removal of at least 70% and a Chemical Oxygen Demand (COD) removal of at least 75%.

Tertiary wastewater treatment: Treatment (additional to secondary treatment) of nitrogen and/or phosphorous and/or any other pollutant affecting the quality or a specific use of water microbiological pollution, color etc. The different possible treatment efficiencies ('organic pollution removal' of at least 95% for BOD5, 85% for COD, 'nitrogen removal' of at least 70%, 'phosphorus removal' of at least 80% and 'microbiological removal') cannot be added and are

exclusive. To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.

Recycling: Processing and use of waste in production andconsumption processes e.g. melting of scrap iron so that it can be converted into new iron products.

Renewable freshwater resources: Internal flow plus Inflow of surface and ground waters

Reused water: Used water directly received from another user with or without treatment. Excludes water discharged into a watercourse and used again downstream, excluding recycling of water within industrial sites.

Salinization: It is the net increase in salt concentration in the top soil leading to

declining productivity or biodiversity. Salinization can be a result of the clearing of native vegetation, the overuse of irrigation, or the evaporation of saline groundwater.

Semi-arid areas: Semi-arid areas have a precipitation to potential evapotranspiration ratio of equal to or greater than 0.20 and less than 0.50, with distinctly highly seasonal rainfall regimes and mean annual values up to 800 millimeters/year in summer rainfall areas and 500 millimeters/year in winter regimes. Inter-annual variability ranges between 25 per cent and 50 per cent, so despite the apparent suitability for grazing in semi-arid grasslands, this and sedentary agricultural activities are susceptible to seasonal and inter annual moisture deficiency.

Sewage sludge production (dry matter): The accumulated settled solids, either moist or mixed, with a liquid component as a result of natural or artificialprocesses that have been separated from various types of wastewater during treatment.

Suspended Particulate Matter (SPM10): It is finely divided solids or liquids, less than 10 µm (micrometers) that may be dispersed through the air from combustion processes, industrial activities or natural sources.

Sustainable Use: It is the present use that meets the present needs and which does not compromise the ability to use the same resource (e.g. land, forest, water etc.) by future generations. It assumes the conservation of natural assets for future growth and development.

Total freshwater available for use: Net freshwater abstraction + Desalinated water + Reused water + Imports of water -Exports of water.

Total area of the country: Total area (of country) including area under inland water bodies, but excluding offshore territorial waters. (= Total land area + waters).

Total emissions: They are emissions from human activities in the country. Emissions from international aviation and maritime transport are excluded.

Total land area: It is the total area of the country minus area under inland or tidal water bodies. (Assuming the inland water bodies are at their net capacity).

Water returned without use: Water discharged into freshwaters without use, or before use. It occurs

primarily during mining and construction activities. Excludes discharges into the sea.

Waters: It relates to the part of the national territory, which is covered by surface waters. The national territory is defined as the surface enclosed by all inland borders and, if applicable, the normal base-line (low-water mark) on the seaward side.

Water supply industry: The water collection treatment and supply industry includes water collection, treatment and distribution activities for domestic and industrial needs. This includes abstraction of water for distribution from various sources (mainly surface water and groundwater), natural water treatment for distribution and the actual distribution of natural water by pipes, channels and other means. The operation of

irrigation canals is also included; however the provision of irrigation services through sprinklers, and similar agricultural support services, is not included.

Waste: Is any substancewhethersolid, liquid or gaseous resulting from household activities, from manufacturing plants or any abandoned movable or immovable property, and which may be harmful.

Wastewater: It is water which is of no further value to the purpose for which it was used because of its quality, quantity or time of occurrence. However, wastewater from one user can be a potential supply to a user elsewhere.

Wet open land: It is non-wooded sites partially, temporarily or permanently water-logged, the water of which may be fresh, brackish or saline, on blanket or raised peat lands. The water may be either stagnant or running, and is usuallyshallow, especially if it is saline.

CHAPTER 10: Law and Order Statistics

Crime: It refers to an act or an omission that is forbidden by law may be prosecuted by the state and has a punishment that is prescribed by law.

Crime Prediction: It refers to predicting the crime level in a limited future period. For this purpose a statistical model based on past and current information is used.

Social Phenomenon: It is a widely spread human behavior which prevails in a certain community in a specific time.

Area of duty: It refers to a delimited land area designated to a specified police authority, so as to perform its duty in usual times.

Crime rate (CR): It refers to the incidence of social violence which is usually associated with social, economic and political circumstances of the population. It is measured per 100000 people such as:

$$CR = \frac{Nr(t)}{Pop(t/2)} \times 100,000$$

Where Nr is the number of registered crimes in a certain period of time and Pop(t/2) is the population number in them mid period of time.

Homicide crime rate (H): It is an indicator measuring the incidence of homicide crime among the population in a certain period of time. It is measured as:

$$H = \frac{Nr(t)}{Pop(t/2)} \times 100,000$$

Where Nr is the number of registered crimes in a certain period of time and Pop(t/2) is the population number in them mid period of time.

Crime Rate change (CRc): It measures change in the number of reported cases of crimes including armed robbery and murders using the baseline (year) figure. That is Percentage Change in reported cases of overall crimes level over a given period of time. It is computed for a year as:

$$CR_c = \frac{\text{Nrep(t)} - \text{Nrep(t-1)}}{\text{Nrep(t-1)}} \times 100$$

Where Nrep(t) is the number of reported crimes in a certain period of time and Nrep(t-1) is the number of reported crimes in the previous period of time.

Average number of population per a policeman: It measures the number of people served by a policeman in average. When compared with international standards, the adequacy of police service in Rwanda can be assessed.

Indictment: It refers to the allegation of committing a crime; this includes any of individual branches of a composite crime.

Immature: It refers to a person between 7 and 18 years of age, in case of committing a punishable act the court orders to keep him\her at a corrective house.

Victim: It refers to a person against whom a punishable act or a crime is committed. The Rwandan or any other crime law may be applied in such situation.

Healing house: It refers to a place at which mentally retarded and psychologically ill prisoners are kept.

Adultery: It means having intercourse with a woman or enabling other person to do the same without any legal

or consensual connection with this woman.

Terrifying: It means that some person warns another to do harm to him/her or to any other persons of his/her concern.

Abortion: It means intentionally causing an expulsion of a fetus from the uterine of a woman.

Suicide: It refers to an attempt by a person to deliberately kill him/herself using any means.

Insult religious believes: It refers to publically offend or scorn, by any means, any religions, shrines, spiritual believes or sacred matters. So does any action leading to spreading contempt towards the believers of such religions.

Falsifying document: An action intended to create a false document. Similarly is any wrong doing aims to conceal or to spoil a part of the document for the purpose of establishing new legal position.

Bribery: It refers to giving or offering to give a civil servant any reward to let him/her do a favor to the giver or make harm to somebody. This makes the civil servant breach the obligation of his/her duty.

Public Official: It refers to any person employed, by a public authority, to do a public job. The recruitment of such person can be for pay or unpaid, permanent or temporary.

Threatening a Public Official: It means directing a threat to a public official in order to compel him/her to breach the regulations of his/her job by doing, not doing, or postponing

something pertinent to his job.

Unfaithful Witness: This is the act of deliberately telling lies or refrain from telling the truth pertaining to a case being tried in the court of law.

Causing injuries: It refers to an action results in the loss of a bodily organ from some person, the loss of the organ function, or making an injury in his/her body.

Hurt: It means causing pain or sickness to others using whatever means.

Large-scale terrifying: This refers to terrifying the general public or setting obstacles in the road so as to make non-inhabited area or inside inhabited area difficult to reach for salvage purpose. Some arms or similar weapons must be

used to qualify the crime as such.

Persuaded kidnap: It refers to taking away an immature or mentally retarded person from his/her legal custodian against the willingness of the latter.

Unlawful abduction: It refers to the seizure or obstruction of somebody so as to prevent his/her movement or to cause an illegal change in his/her movement direction.

Unlawful detention: It refers to an unlawful confinement of a person in a certain place, or continuing his/her detention in spite of an order of legal discharge.
Insult: It refers to abusing somebody to a degree lowerthan an utmost assault.

Causing an ill reputation: It means spreading or communicating to others,

following any means, events attributable to a certain person or an evaluation of his/her conduct, with an intention to hurt his/her reputation.

Sexual harassment: It refers to doing a sexual action to somebody other than actual intercourse.

Bounced check: It refers to issuing a check in favor of somebody but the bank has denied the transaction because of a lack of adequate balance or the account is nonexistent at all, with the awareness of the drawer.

Breach honesty: It means that although the trustee has been requested to hold peacefully others' money or property, he/she took an intentional action to own this money/property or to get benefit out of it.

Blackmail: It means a bad conduct by someone which makes another person deliver him/her money or a legal document.

Causing death of a fetus: It means committing an action leading to a fetus death inside its mother uterine, or results in a still birth or the baby died after the birth.

Persuasion: It means that a person influences other so as to commit a crime. It also applies to a situation where a person orders someone under his authority to commit the crime.

Receipt of stolen money: It means that the holding of money has shifted to somebody else through violence, theft, deception or trust breaching.

Riot: It refers to a gathering of five persons or more so as to oppose the

implementation of a law while causing damages and threatening the peace and order.

Robbery/attempted robbery: Where someone actually steals or attempts to steal something from a victim by threatening or attacking him or her. There needs to be a direct (face to face) encounter between the victim and offender(s) where the victim was threatened and/or attacked. That is the illegal taking or attempted to take a property from another person, or in the person's presence, by violence or intimidation.

Smuggling: It refers to importing, exporting or transport of goods with an intention to escape payment of public duties. It also includes export/import of illegal items.

Convict: It refers to a person found guilty of an offence and has either been given custodial sentence or paid fine at court/police station, road blocks or warned and cautioned then discharged

Detected: These are cases whereby the offender in a crime is known and has been arrested for the crime in question.

Attempts: It refers to the number of crimes that were committed but not completed where the perpetrator fails to commit the offence fully as he/she intended.

Arrested: It refers to a person who has been deprived of his liberty of movement on reasonable grounds of suspicion that he/she has committed a crime/offence.

Accused not located: These are cases whereby the offender in a crime is known and all efforts to locate and arrest him/her have been put, but still he/she cannot be found.

Charged: It refers to a person who has been officially accused of having committed an offence/crime through an indictment for court or has officially admitted having committed a crime/offence and paid a deposit fine at a police station instead of standing trial in a court of law.

Discharged: It refers to a person who has been charged for an offence/crime but has not been found guilty by a court of law and therefore set free.

Prisoner: A prisoner is a person held in prison, penal institute or correctional institution as a result of legal process.

Prison Admissions: It refers to the total number of persons who were imprisoned in the period under review.

Prison Discharges: It refers to the total number of prisoners who were discharged or released from prison for various reasons in the period under review.

Prison Population: It refers to the total number of prisoners during the unlocking of prison doors in the morning that is the total number of prisoners who would have slept in prison on the night of the previous day.

Traffic accident: It is an un-intended event that involves property damage or personal injury or loss of life

(death) as a result of a vehicle in motion.

Fatal traffic accidents: These are accidents where loss of life has occurred.
Serious traffic accidents: This is where there is serious injury or destruction of property or both, but no loss of life.

Minor traffic accidents: This is where there is no loss of life, and minor injuries or minor destruction of property or both is involved.

Civil Register: It is the register of recording civil events in order based on pertinent documents.

National number: It is a unique number assigned to every citizen while getting registered in the Civil Register.

Event: It refers to the events to be registered in the Civil

Register such as birth, death, marriage or divorce.

Passport: It includes all types of travelling documents issued by a country or an authority allowing its bearer to travel outside the boarder of his/her country.

Immigration: It refers to the migratory movement inside the country from other countries.
It is measured such as:

Immigration rate (Im rate) is:

$$\mathrm{Im}\,rate = \frac{\text{Number of immigrants}}{\text{Pop}} \times 100,000$$

Where Pop is the total number of population

Foreigner: It refers to a person with non-Rwandan nationality.

Residence permit: It is a document, issued by concerned authority,

allowing a foreigner to reside in Rwanda.

Visa: It is a document showing the approval of concerned authority that a person may enter or exit the country.

Civil defense: It refers to a group of technical, administrative and legal measures and procedures stipulated in the law of civil defense, for the purpose of guarding against disasters or to lessen its harmful effects on establishments, lives, properties and environment.

Disasters: It means the hazards resulting from natural disasters such as rain, earthquake, drought …etc; man-made disasters include fire, explosions, building and tunnel demolition; and break out of armed conflict.

National protected-zone: It means any zone inside the country designated for preservation and maintaining multiplication of wild animal and plants, or for protecting the landscape inside such zones. Hunting is prohibited in these zones.

Wild animal: It refers to any vertebrate and its youngsters; reptile or its eggs or youngsters and a bird or its eggs or youngsters, excluding what are domesticated out of them.

Hunt: It means chasing, annoying, wounding or killing any wild animal with any means.

Protected animal: It refers to any wild animal mentioned in the concerned law.
Goods: It refers to all mobile properties including

animals, money and
financial assets.

CHAPTER 11: Information and Communication Technology (ICT) statistics

11.1. Information Technology

Information and Communication Technologies (ICT): Technologies and equipment that handle (e.g., access, create, collect, store, transmit, receive, disseminate) information and communication.

Data: Data is information in raw or unorganized form in a manner suitable for communication, interpretation or processing. Data can be input, stored, and processed by human beings or computer, for output as usable information.

Data Collection: It is the process of gathering, measuring and recording data for further processing.

Data Processing: Operations performed on a given set of data to extract the required information in an appropriate form such as diagrams, reports, or tables.

Data Storage: It is the process or place of storing information or data including in an electronic form on media such as a computer disk or external storage device.

Data Security: It refers to the protection of an organization's data from unauthorized access, modification, destruction, or disclosure. Appropriate technical and organizational measures are taken to ensure an appropriate level of security in relation to the risks represented by the processing and the nature of the data to be protected.

Information: It refers to the result of processing, manipulating and organizing data in a way that adds to the knowledge of the person receiving it.

Information Dissemination: It is the systematic distribution of information or knowledge through a variety of ways to potential beneficiaries.

Information Technology: The methods and techniques used to produce, manipulate, store, communicate, or disseminate information by automatic means. These include computer and communications hardware and software used to automate and augment clerical, administrative, and management tasks in organizations.

Computer Hardware: A comprehensive term for all of the physical parts of a computer for inputting, storing and outputting data which include mechanical, magnetic, electronic, and electrical components making up a computer system. It refers to objects that you can actually touch, like disks, disk drives, display screens, keyboards, printers, boards, and chips.

Computer Peripherals: Any external device attached to a computer, but not part of it, and is more or less dependent of the computer. These include, input device (mouse, scanner, etc.), output device (printer, plotter, speaker), storage device (Memory cards, external hard disk, external CD drive), communication device (microphone, external modem, router).

Computer Software: It refers to organized information and electronic instructions in the form of operating systems, utilities,

programs, and applications that enable computers to work. Computer software is divided commonly into two main categories: System software and Application software.

System Software: Computer programs (instructions) that control, integrate, maintain and manage the computer system.

Application Software: Complete computer program that performs specific tasks which are either customized or user-specified. Application programs come in a wide variety (such as accounting programs, database programs, graphics and illustration programs and word processing programs).

Computer Literacy: This term refers to the knowledge and ability to operate and use computer programs,

computer applications and other related technologies that are associated with computers.

Communication Technology: It refers to the methods and techniques that transmit information in electronic form. These fall into two broad groups of either cable based or wireless. Cable technologies include telephones and facsimiles. Wireless technologies include radio, television, microwave and satellite.

Network: A group of interconnected (via cable and/or wireless technologies) computers and peripherals that is capable of sharing data, software and hardware resources between many users.

Internet: A vast computer network linking computer networks worldwide. The

Internet includes commercial, educational, governmental, and other networks, all of which use the same set of communications protocols.

Intranet: It is a computer network that uses Internet Protocol technology to securely share any part of an organization's information or network operating system within that organization. It is the connection of computer networks in a local area.

World Wide Web (WWW): The World Wide Web, or simply Web, is a way of accessing information over the medium of the Internet using hyperlinks. It is an information-sharing model that is built on top of the Internet. The Web uses the HTTP protocol, only one of the languages spoken over the Internet, to transmit data. The Web utilizes browsers, such as Internet Explorer or Firefox, to access Web documents called Web pages that are linked to each other via hyperlinks. Web documents also contain graphics, sounds, text and video.

Bandwidth: The range of frequencies available to be occupied by signals. In analogue systems it is measured in terms of Hertz (Hz) and in digital systems in bit/s per second (bit/s). The higher the bandwidth, the greater the amount of information that can be transmitted in a given time. High bandwidth channels are referred to as broadband which typically means 1.5/2.0 Mbit/s or higher.

Broadband: It is a transmission capacity that is faster than primary rate Integrated Services Digital Network (ISDN) at 1.5 or 2.0 megabits per second (Mbits).

E-government: The use of information technologies by government agencies to improve service delivery and interactions with citizens, businesses and other government institutions and improve services and streamline operations.

Cloud Computing: Cloud computing is new way to use and deliver IT service. With cloud computing the information is stored in centralized server and cashed temporary on clients. Cloud can reside within the company data center as internal cloud or available through service provider as external cloud.

Communication Media: Communication media refers to the means of delivering and receiving data or information. In telecommunication, these mean transmission and storage tools or channels for data storage and transmission.

11.2. Infrastructure and Universal access Concepts

Universal Access: Universal access is understood to be the possibility for every person in the world, regardless of their digital skills, geographical and socio-economic situation, to create and/or use for themselves or through telematics networks already installed in their environment, and to find and place on the Internet, information useful for their life plans.

Infrastructure: Is a collection of physical or virtual resources that supports an overall information technology services (such as server, storage and network components).

Digitalization: It is the process of converting analog signals or information of any form into a digital format that can be understood by computer systems or electronic devices.

Audiovisual: It refers to using both sight and sound, typically in the form of slides or video and recorded speech or music.

Information Systems: Information Systems are computerized tools that assist people in transforming data into information. It consist of infrastructure (physical and hardware components), software, people, procedures (manual and automated), and data.

Data Centre: A data Centre is a special building constructed to house servers. The data centre consists of a number of rooms with special filtration and air

conditioning to keep servers free of dust and at their optimum operating temperature, and preventing the significant quantities of heat they generate from building up and damaging them. The building provides special electricity supplies, with generators that supply power in the event of a power cut, and provide physical security in the form of guards and locks to ensure that only the owners of the servers and their appointed staff can gain access to a server, to prevent theft. Lastly, data centers have multiple high-qualities Internet connections with backups, allowing the servers within to remain connected to the Internet at high speed, even if faults or accidents break one or more of the connections.

Server: It refers to a computer that provides a specific kind of service to

other computers. It can be used to store critical data for retrieval. A server also acts the communications gateway between many computers connected to it, responding to requests for information from client computers. On the Internet, all web pages are held on servers. This includes search engine and directory data accessible from the Internet.

Open Source: Software whose source code is published and made available to the public, enabling anyone to copy, modify and redistribute the source code without paying royalties or fees.

Connectivity: Refers to the use of computer networks to link computers to one another, and provide information resources between computer systems and their final users.

Internet Service Provider (ISP): Internet Service Provider (ISP) is a company that provides its customers (other organizations and individuals) with easy and user-friendly access to the Internet via dial-up, ISDN, ADSL, or other type of connection.
ISPs typically charge a monthly fee for this service, which will vary according to the customer's type of usage, for example a customer may have a Broadband, anytime or off-peak connection package. It is also customary for an ISP to provide their own proprietary content, including news, advice, multimedia, shopping and various online services, such as Web browsing, e-mail and Web site hosting facilities.

Virtualization: In computing, virtualization means to create a virtual version of a device or

resource, such as a server, storage device, network or even an operating system where the framework divides the resource into one or more execution environments, even something as simple as partitioning a hard drive is considered virtualization because you take one drive and partition it to create two separate hard drives. Devices, applications and human users are able to interact with the virtual resource as if it were a real single logical resource.

11.3. Telecommunication and Broadcasting Concepts

Mobile Telecommunications Standard: It is the technologies for data and signal that a mobile device supports e.g. GSM, GPRS. They evolved as below:

GSM, GPRS, CDMA WCDMA (UMTS), and LTE.

Spectrum: It refers to the range of electromagnetic wave frequencies. The visible spectrum, for example, ranges from wavelengths of about 400 to 700 nanometers.

Telecommunication: Any transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.

Broadcasting: A form of unidirectional telecommunication intended for a large number of users having appropriate receiving facilities, and carried out by means of radio or by cable networks.

Wireless: Wireless is the term used to describe any network terminal where there is no physical wired connection between sender and receiver, but rather the network is connected by radio waves and/or microwaves to maintain communications. Wireless networking utilizes specific equipment such as NICs, APs and routers in place of wires (copper or optical fiber) for connectivity.

Telephone: Electronic equipment that converts sound into electrical signals that can be transmitted over distances and then converts received signals back into sounds.

Antenna: A device used to transmit and /or receive electromagnetic waves. In mobile phone technology, it is the physical part of a mobile phone that is designed to receive or transmit the radio frequency signals, which the handset uses to communicate with the telephone network. A mobile may contain an internal antenna that is concealed within its case, or there may be a short or stubby external antenna that protrudes about 3 cm or more outside the case. Some mobile phones include an FM radio, and in this case the headset lead usually acts as the radio's antenna. The headset must then be connected to the phone to ensure good reception.

Backbone: A communication network designed to carry the bulk of the traffic. They are typically sets of wire lines, radio links, or fiber-optic cables that connect one local network to another, or one regional network to another. Backbone networks are of necessity high-speed, wide bandwidth connection

paths, designed to cope with the high-density of traffic that is designed to flow through them. The points of interconnection in the network are called 'nodes.

Base Station: A fixed station in mobile radio system used for radio communication with mobile stations .base station are located at the center or on the edge of a coverage region and consist of radio channels and transmitter and receiver antennas mounted on a tower.

Mobile Station: A station in the cellular radio service intended for use while in motion at unspecified locations. Mobile station may be hand-held personal units (portables) or installed in vehicles (mobiles).

Coverage area: It refers to the geographical area in which a wireless network

company offers cellular service for their own mobile phone subscribers. It is also called a service area.

Mobile Switching Center: It is the switching center which coordinates the routing of calls in a large service area. In cellular radio systems, the MSC connects the cellular base station and the mobiles to the PSTN. An MSC is also called a mobile telephone switching office (MTSO).

Full Duplex Systems: It refers to the communication systems which allow simultaneous two-way communication. Transmission and reception is typically on two different channels (FDD) although new cordless/PCS system is using TDD.

Half Duplex Systems: It is the communication systems which allow two-way

communication by using the same radio channel for both transmission and reception. At any given time, the user can only either transmit or receive information.

Simplex Duplex Systems: It is the communication systems which provide only one-way communication.

Handoff: The action of switching a call in progress from one cell to another (or between radio channels in the same cell), to allow established calls to continue when mobile stations move from one cell to another (or as a method to minimize co-channel interference)

Roamer: It is a mobile station which operates in service area (market) other than that from which service has been subscribed.

Page: It refers to a brief message which is broadcast

over the entire service area, usually in a simulcast fashion by many base stations at the same time.

Subscriber: A user who pays subscription charges for using a mobile communications system.
Transceiver: A device capable of simultaneously transmitting and receiving radio signals.

Transmitters: A set of equipment used to generate and transmit electromagnetic waves carrying messages or signals, especially those of radio or television.

Microwave: It refers to the range of radio frequencies between 1 GHz and 30 GHz (i.e. between wave lengths of 300 mm and 10 mm). Examples of use are cellular phone carriers' point-to-point and point-to-multipoint communications,

the nationwide distribution of radio and TV channels, and radio links between earth stations and orbiting satellites.

Smartphone: It is a mobile phone with computer-like features that can include e-mail, an Internet browser, a personal organizer, a touch screen or a keyboard.

Broadcasting Digital Migration (BDM): The process of converting television signals from analogue to digital technology.

Satellite: An artificial body placed in orbit around the earth or moon or another planet in order to collect information or for communication.

Cell Phone: A device used by a subscriber for wireless communication with other Cell phones within the same

or different cellular mobile telephone network, and to a traditional wired telephone network.

Cellular or Cell: It refers to the infrastructure of the mobile telephone network that is sub-divided into many small areas, each of which is served by a Base Transceiver Station.

Duplexer: A device is used inside each subscriber unit and base station to allow simultaneous radio transmission and reception on the duplex channel pair.

Fixed telephone lines per 100 inhabitants: It refers to the number of fixed telephone lines in a country for each 100 inhabitants. Source of data: subscribers' records, population censuses and household surveys

Mobile cellular telephone subscriptions per 100

inhabitants: It refers to the number of mobile cellular telephone subscriptions in a country for each 100 inhabitants. Source of data: subscribers' records, population censuses and household surveys.

Fixed Internet subscribers per 100 inhabitants: It refers to the number of fixed Internet subscribers in a country for each 100 inhabitants. Source of data: subscribers' records, population censuses and household surveys

Fixed broadband Internet subscribers per 100 inhabitants: It refers to the number of fixed broadband Internet subscribers in a country for each 100 inhabitants. Source of data: subscribers' records, population censuses and household surveys

Mobile broadband subscriptions per 100 inhabitants: It refers to the number of mobile broadband subscriptions in a country for each 100 inhabitants. Source of data: subscribers' records, population censuses and household surveys

Proportion of households with a radio: It refers to radio access (not use) at home by in-scope households. It is calculated by dividing the number of in-scope households with a radio by the total number of in-scope households. The result is then multiplied by 100 to be expressed as a percentage. Source of data: population censuses and household surveys

Proportion of households with a TV: It refers to television access (not use) at home by in-scope households. It is calculated

by dividing the number of in-scope households with a television by the total number of in-scope households. The result is then multiplied by 100 to be expressed as a percentage. Source of data: population censuses and household surveys.

Proportion of households with a computer: It refers to computer access (not use) at home by in-scope households. It is calculated by dividing the number of in-scope households with a computer by the total number of in-scope households. The result is then multiplied by 100 to be expressed as a percentage. Source of data: population censuses and household surveys.

Proportion of households with Internet access: It refers to access to (not use of) the Internet at home by in-scope households. It is calculated by dividing the number of in-scope households with Internet access by the total number of in-scope households. The result is then multiplied by 100 to be expressed as a percentage. Source of data: population censuses and household surveys

CHAPTER 12: Political Structure; Geographical and Administrative Divisions

12.1. Political structure

The Republic of Rwanda is divided into Provinces, Districts, Sectors and Cells. The District is the basic political-administrative unit of the country.

The Cell Organizational Structure: The Village is the smallest politico-administrative entity of the Country and hence closest to the people. Therefore, this is the entity through which the problems, priorities and needs of the people at a grassroots level will be identified and addressed.

Leaders at the Village level are volunteers who are elected, to serve their country, through a direct and universal suffrage by all the residents of the village aged above 18. They don't handle any technical issues.

Above the Village is the Cell, which is managed by competent technicians, with another political team that serve as decision makers and advisors to those technicians.

Technical and key political matters are handled and addressed at the Cell level. The key organizational bodies of the Cell are:

(i) The Cell Council (CC): All citizens resident in the Cell who are aged 18 and above are members of the Cell Council. The Cell Council mobilizes the residents of the Cell, identifies, discusses and prioritizes the problems of the Cell, and takes decisions for their resolution.

(ii) The Cell Executive Committee (CEC): The Cell Council elects the

Cell Executive Committee composed of ten members. The CEC executes functions related to administration and community development including the policy orientation and technical advisory for the implementation of the decisions taken by the Cell Council.

The Cell Executive Committee works through its technical committee (the Community Development Committee) to identify and prioritize needs, design development plans, mobilize development resources and implement the plans.

The Sector Organizational Structure: The Sector is the third level of administration where people participate through their elected representatives. The following is the administrative structure at the Sector level.

(i) The Sector Council (SC): There is a political organ for policy-making decisions called the Sector Council. The number of Sector Council members is determined by the number of Cells forming the Sector. The Sector Council's functions include approval of Sector action plans and programmes and ensuring the follow-up of their implementation.

(ii) The Sector Executive Committee (SEC): The Sector Council (SC) elects the Sector Executive Committee (SEC) to support the preparation and implementation of its policies, plans, and decisions. The SEC is composed of 10 members and monitors the day-to-day administration of the Sector and the implementation of the decisions and plans of the Sector Council.

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The Sector Executive Committee works with the technical support of its two sub-committees:

The Political and Administrative Committee (PAC) and The Community Development Committee (CDC).

The Provincial and district organizational structure: The Province serves as a coordinating organ to ensure the efficiency and effectiveness of Central Government planning, execution and supervision of the decentralized services. It serves mainly as advisor to the decentralized entities and coordinates development activities.

The five provinces of Rwanda are composedof 30 **districts** (Kinyarwanda: *uturere*, sing. *akarere*). Each district is in turn divided into sectors.

Until 2001, districts were known as COMMUNES. In 2006, the number of districts was reduced from 106 to 30. The districts are listed below, by province.

Eastern Province:

1- Bugesera;
2- Gatsibo;
3- Kayonza
4- Kirehe;
5- Ngoma;
6- Nyagatare;
7- Rwamagana.

Southern Province:

1- Gisagara;
2- Huye;
3- Kamonyi;
4- Muhanga;
5- Nyamagabe;
6- Nyanza;
7- Nyaruguru;
8- Ruhango.

Western Province:

1- Karongi;
2- Ngororero;
3- Nyabihu;
4- Byamasheke;
5- Rubavu;
6- Rusizi;

7- Rutsiro.

Northern Province:

1- Burera;
2- Gakenke;
3- Gicumbi;
4- Musanze;
5- Rulindo.

City of Kigali:

1- Gasabo;
2- Kicukiro;
3- Nyarugenge

12.2. Geographical and Administration Concepts

Administration areas: They refer to divisions of a country authorized by the government for purposes of administration.

Administration divisions of Rwanda: The administrative division of Rwanda consists of Province, District, Sector, Cell and Village.

Administrative data: It is a set of data collected in different sectors for the purpose of administrative work in the sector and used for statistical purposes.

Cartography: It is the art and techniques of the production and design of maps and charts.

Geographical Information System (GIS): It is a computer system to manipulate geographical representation of data through positions on earth's surface, maps and charts by capturing, editing and integrating data and its respective objects.

Global Positioning System (GPS): It is a satellite based system used to determine the location of any point in the earth with high level of accuracy by transmitting signal information.

Spatial data: It is the data that defines a location such

as point, Lines, polygons pixel.

Non-spatial: It refers to Information about geographic feature in a GIS in form of indicators or tabulation that is linked to the feature by unique identifier.

Geo-database: It is a geographic model used to organize geographical information system data into thematic layers and spatial representations.

Coordinate system: It is a system for specifying points using coordinates measured in some specified way.

Coordinate: It is a set of numbers that identify locations in a given reference system such as x, y in a two dimensional coordinate system or x, y, z in a three dimensional coordinate system.

Map: It is a representation of earth's surface showing physical or manmade features existing on it.

Urban/Rural classification: The definition of urban community is set by the government (Ministry of Local Government). Accordingly, all non-urban communities form the rural segment of the country. The smallest administrative unit is called village no matter whether it is defined as urban or rural. Rwanda is mostly a rural country as about 83.8 percent of the population lives in rural villages according to the 2012 Population Census.

CHAPTER 13: Tourism Statistics

Bed Nights: In the hotel industry, it is the total number of beds in an accommodation establishment.

Bed Occupancy Rate (Tourism): It refers to the number of bed nights sold divided by the product of the number of bed nights available and the number of days in the survey period expressed as a percentage.

Country of Usual Residence: The country in which a person lives: that is to say, the country in which he or she has a usual residence. As such temporary travel abroad for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage does not change a person's country of usual residence.

Domestic Tourism: The domestic tourism comprises the activities of a resident visitor within the country of reference either as part of a domestic tourism trip or part of an outbound tourism trip.

Inbound tourism: Inbound tourism comprises the activities of a non-resident visitor within the country of reference on an inbound tourism trip.

Inbound trip: An inbound trip will correspond to the travel between arriving in a country and leaving, whereas a domestic trip or an outbound trip will correspond to the travel between leaving the place of residence and returning. A domestic trip has a main destination in the country of residence of the traveler, while an outbound trip has a

main destination outside this country.

Outbound Tourism:
Outbound tourism comprises the activities of a resident visitor outside the country of reference, either as part of an outbound tourism trip or as part of a domestic tourism trip.

Place of Usual Residence:
The place at which the person has lived continuously for most of the last 12 months (i.e. for at least six months and one day), not including temporary absences for holidays or work assignments, or intends to live for at least six months; and/or the place at which the person has lived continuously for at least the last 12 months, not including temporary absences for holidays or work assignments, or intends to live for at least 12 months.

Recreation: This is defined as an activity undertaken for pleasure or relaxation that diverts amuses or stimulates. It includes gambling and amusement, but excludes physical recreation activities, which are included in Sports.

Remittances: The sum of compensation of employees and personal transfer from border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by non-resident entities.

Compensation of employees: income of migrant workers who live in the host country for less than a year, and the income of resident workers who are employed by embassies, international institutions and foreign companies. **Personal transfers**: all current transfers in cash or

in kind made or received by migrants to or from individuals in the origin country.

Supplementary Items related to remittances:
- '*Personal Remittances*' (the sum of personal transfers and net, or 'take home', compensation of non-resident workers),
- '*total remittances*' (the sum of personal remittances and social benefits) and;
- '*total remittances and transfers to Non-profit Institutions Serving Households*' (NPISHs, also includes donations).These three items are considered supplementary, but not mandatory for remittances statistics.
They are cumulative measures of different items. To ensure consistency of time series, workers' remittances will be included in the statistics as a supplementary item.

Informal remittances: All monetary and in-kind transfers of goods through channels other than banks and other financial institutions (such as Micro-Finance Institutions, MFIs, and postal offices) captured in national balances of payments as defined by the IMF definition of "international financial remittances" (see definition of remittances above).

Residents (in the context of international tourism):
These are residents of the country who go on visits abroad for periods not exceeding twelve months at any time.
These are residents of the country who go on visits abroad for periods not exceeding twelve months at any time.
It is the activities of persons travelling to and staying in places outside their usual

environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited.

Tourism Characteristic Activity: These are productive activities that have tourism characteristic products as their principal output.

Tourism Industry: Refers to all establishments whose principal productivity is a tourism characteristic activity, i.e. the sum of all tourism characteristic activities.

Tourist: S/he is a visitor as long as s/he stays at least one night in the place visited.

Tourist Accommodation: Tourism accommodation refers to any facility that

regularly (or occasionally) provides 'paid' or 'unpaid' accommodation for the tourists.

Travel and Tourism: Travel refers to the activity of travelers. A traveler is someone who moves between different geographic locations for any purpose and any duration. Travel within a country by residents is called domestic travel. Travel to a country by non-residents is called inbound travel, whereas travel outside a country by residents is called outbound travel.

Travel Expenditure: These are payments by residents for goods and services they receive during their stay abroad.

Travel Receipts: They are the payments by foreigners for goods and services they

receive during their stay in the country.

Traveler: A traveler is any person on a trip between two or more countries or between two or more localities within his/her country of residence.

Trip: A trip refers to the travel by a person from the point of departure from his usual residence until he/she returns. It thus refers to a round trip.

Unaccompanied minors: Any person under 18 years of age or under a country's legal age of majority, separated from both parents and not with and being cared for by a guardian or other adult who by law or custom is responsible for them. This includes minors who are without any adult care, minors who are entirely on their own, minors who are with minor siblings but who, as a group,

are unsupported by any adult responsible for them, and minors who are with informal foster families.

Usual environment: The usual environment of an individual, a key concept in tourism, is defined as the geographical area (though not necessarily a contiguous one) within which an individual conducts his/her regular life routines.

Visitor: A visitor is a traveler taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. These trips taken by visitors qualify as tourism trips. Tourism refers to the activity of visitors. A visitor (domestic, inbound or outbound) is classified as a

tourist (or overnight visitor) if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise.

Visitors from Abroad Include: Residents of other countries who visit a country for periods not exceeding twelve months for any reason other than taking up employment and in-transit visitors who enter a country enroute to other destinations and who spend less than two nights in passing through that country.

ANNEX: List of professionals involved in preparing and developing the compendium

	NAME AND TITLE	INSTITUTION
1	DR. MOHAMED F. ABULATA, Technical Advisor to the Director General	National Institute of Statistics of Rwanda
2	Mr. HABIMANA Dominique, Director of Statistical Methods, Research and Publication Unit	National Institute of Statistics of Rwanda
3	Mr. NTAGENGERWA Bonus, Economic Statistics Classification Statistician	National Institute of Statistics of Rwanda
4	Mr. BYIRINGIRO Ibrahim, National Statistical System Coordination and Capacity Building Statistician Team Leader	National Institute of Statistics of Rwanda
5	Mr. SIBOMANA Oscar, Industry and Infrastructure Statistics Team Leader	National Institute of Statistics of Rwanda
6	Mr. Nyirimanzi Jean Claude, Team Leader Statistician in charge of Research, Publications and Documentations	National Institute of Statistics of Rwanda