OVERALL INTRODUCTION

The Context of ADB/UNFPA Cooperation

The Programme of Action of the International Conference on Population and Development (ICPD PoA) invites the United Nations Population Fund (UNFPA), other United Nations organizations, multilateral financial institutions, regional banks and bilateral financial sources to consult, with a view to coordinating their financing policies and planning procedures to improve the impact, complementarity and cost-effectiveness of their contributions to the achievement of the population programmes of the developing countries. It is within this context that African Development Bank (ADB) and the United Nations Population Fund (UNFPA) have established strong relationships for more than a decade.

The current Cooperation Agreement between ADB and UNFPA (Cooperation Agreement signed in September 1992 and amended in May 2003) enumerated specific areas of activity in which the parties would cooperate. One of these agreed activities is the development of training modules on the integration of population variables into Bank Group programmes and projects, as part of a new strategy of promoting sustainable development and poverty reduction, and embracing the Millennium Development Goals (MDGs) and the New Partnership for African Development (NEPAD) initiative.

The two institutions agreed to develop jointly the following four training modules on the integration of population issues in the Bank's programmes and projects under the Cooperation Agreement:

(i) Population Dynamics in Regional Member Countries of the Bank (RMCs) and Poverty Reduction;
(ii) Population and Poverty in Key Sectors of the Bank Group's Operations i.e. Education, Health, Agriculture and Rural Development, Transport and Infrastructure;
(iii) Population Data in a Multi-sectoral Data Base;

(iv) Advocacy and Policy Dialogue on Population Issues with Policy Makers in RMCs

During the operationalization of the agreement, it was found that a fifth module on the "Conceptual Framework on Population, Poverty and Development" would be necessary to provide an overall picture in which the above modules will be presented. The above five training modules were prepared by the following staff members from UNFPA and ADB:

1. **Mr. Laurent Assogba**, Regional Advisor in Population and Development Strategies, UNFPA Technical Services Team, Dakar Senegal;
2. **Mr. Benoit Kalasa**, Regional Advisor in Population and Development Strategies, UNFPA Technical Services Team, Addis Ababa, Ethiopia;
3. **Mr. Prosper Poukouta**, Principal Demographer, African Development Bank, Tunis, Tunisia; and
4. **Mr. Amde Wolle (Team Leader)**, Regional Advisor in Population and Development Strategies, UNFPA Technical Services Team, Harare, Zimbabwe

The ADB policy environment on population

The Bank's first policy on population was approved in 1992 following the organization in Abidjan of the regional workshop on Population Growth and Sustainable Development in Africa. This high level forum, which brought together policy makers from Regional Members Countries (RMCs), Bank's Experts, development partners and the donor community provided the Bank with the opportunity to brainstorm on the continent-specific issues of the population and development agenda. On the strength of this forum, the original Cooperation Agreement between ADB and UNFPA was signed in September 1992. The Agreement rests essentially on the recognition that the continent is hampered by high levels of fertility and mortality, rural to urban migration, land pressure, and the understanding that high population growth rates constitute a major constraint to economic development in Africa. Hence the need to promote the development of human resources and to strengthen family planning programs within national population programmes.

In January 2001, the Bank adopted its revised population policy, which highlights the key recommendations of the Dakar-Ngor Declaration 1992 (DND) and the Programme of Action of the 1994 ICPD. In this regard, there has been a major shift from family planning to a more inclusive and pragmatic concept of reproductive health; furthermore, the policy underscores the Bank's Vision, approved in 1999 that features poverty reduction as its overall objective, through the operationalization of the following key sectors: education, health, agriculture and rural development, transport and infrastructure. As a result the main trust of the population policy was to define a framework that draws the interrelationship between population, poverty and the above-defined sectors.

Consistent with the adoption of its revised policy and embracing the new and emerging development agenda at the global, regional and national level (MDGs, NEPAD, PRSPs), additional specific Areas of collaboration identified by UNFPA and ADB include reproductive Health, HIV/AIDS, displaced populations and refugees, the integration of gender dimensions in the above specified areas, co-operation with civil society, advocacy and policy dialogue with the governments. All these issues are captured in great details in the Population Guidelines approved in July 2003.

Within the Bank, three major factors have helped to strengthen the population agenda. At the institutional level, there was the creation of the Sustainable Development and Poverty Reduction Unit (PSDU), whose mission is to ensure that cross-cutting issues, viz, poverty, environment, population, gender are mainstreamed in Bank's programs and projects to ensure their effectiveness and sustainability or long term impact with minimal adverse impacts. At the policy level, the Unit is tasked with training Bank staff and RMC Officials on Bank's policies and procedures, one of which is ~~the~~ how to mainstream population issues into Bank's operations. At the operational level, PSDU is involved in the screening of projects, from identification and project formulation, to monitoring and evaluation. Population factors, where appropriate, are thus mainstreamed at the entry point and followed through the implementation and evaluation stages.

Over the past three years there has been increasing awareness at management level on the impact of population on development, and optimum balance between population growth and

economic development. In particular, the Board of Directors issued a directive requesting that the new generation of Country Strategies Papers (CSPs) provides a section on the impact of population factors, in terms of constraints and opportunities in the countries on the economic development processes. In December 2003, ADB President addressed a high level forum of population experts and officials at the opening ceremony of the 4th African Population Conference held in Tunis. Immediately following this conference, the Bank and UNFPA held bilateral consultations to strengthen their collaboration and identify joint activities to be carried out, in order to fully mainstream and operationalize population issues. The following activities were considered:

- South African Development Community SADC Multinational Programmes on HIV/AIDs. UNFPA was invited to consider providing grant resources to bridge the 18 – 20 % financing gap;
- Congo – River Basin initiatives- UNFPA will join hands with ADB to carry out some of the initiatives;
- Mano-River Basin- UNFPA participated in the joint HIV/AIDS appraisal mission in the sub-region;
- Demobilization and economic reinsertion of the youth in post-war countries. Example given is Angola. This project is expected to be expanded and to become a multi-national program, which will include Rwanda, Democratic Republic of Congo (DRC), Central Africa Republic (CAR), Ethiopia, Eritrea, Sierra Leone, Liberia, and Côte d'Ivoire. Collaboration with UNFPA is being considered;
- Regional workshop on Participation in the implementation of PRSPs in French speaking countries, which took place in January 2004. UNFPA prepared a module on Gender and Reproductive Health, and contributed to the module on Monitoring and Evaluation;
- The training of Bank staff and RMC officials on the integration of population variables into Bank's projects.

In conclusion, it is important to point out that despite the growing attention that population has benefited from since the adoption of the population policy in January 2001 and its Guidelines for implementation in July 2004, efforts still have to be made to reach out to Bank's experts in the key sectors, managers, and RMCs officials to move forward the agenda of mainstreaming population into Bank's programs and projects. In spite of the resurging debate on the definitions and appropriate operationalization of poverty, available social and population-related indicators to date, namely infant and childhood mortality rates, maternal mortality ratios, educational enrolment ratios, GDP per capita, population density per arable land, etc., put Africa at the lower rungs of the international development ladder.

Therefore, this training on the integration of population variables into Bank's projects and programmes will place emphasis on demographic information that translates into the monitoring and evaluation indicators of the Millennium Development Goals, PRSPs and Bank's CSPs. Emphasis will also be on population indicators that facilitate the participation of the poor socio-economic groups including women and the youth in the process of economic development and social progress in Africa through the NEPAD framework.

Overall purpose of the training modules

The need for integrated population and development planning has been recognized and expressed in various fora. It is in response to the felt need that capacity building in population and development of Bank's Staff was chosen as a major strategic joint intervention between the ADB and UNFPA.

The modules on **Integration of Population into Bank's Programmes and Projects** are designed to help Bank's staff and national counterparts to:

(i) Appreciate the importance of integrating population factors into development planning

(ii) Enhance/develop the capacity of the ADB staff and sectoral planners in the RMCs in designing, implementing and evaluating programmes and projects with due consideration given to population dynamics and their linkages to poverty reduction strategies and the MDGs.

(iii) Become familiar with sectors (education, health, agriculture and rural development and infrastructure) whose inputs affect the well-being of the poor as well as population dynamics;

(iv) Assess the adequacy of CSPs and PRSPs on sectors interventions and their population related dimensions;

(v) Plan and carry out actions to improve population dimensions into PRSPs and CSPs with regard to education, health, agriculture and rural development and infrastructure

(vi) Explain the need for good data/statistics in order to plan for effective poverty reduction strategies monitoring and evaluation framework;

(vii) Understand how and where to look for required socioeconomic statistics for monitoring and evaluation

(viii) Identify priority population issues for advocacy and how they should be addressed within PRSPs and CSPs;

As stated in the Title of the Training Manual, the end result would be the integration of population concerns into Bank Group Programmes and projects in Regional Member Countries (RMCs).

Target groups for training

(i) ADB staff: Primarily designed for *ADB staff*, the proposed modules form a core of knowledge and tools that will be expanded and tailored to suit various groups.

(ii) ADB National counterparts in Finance and planning ministries: enhancing the ADB staff skills in population and development would not serve the planned aim/purpose without the national counterparts in Finance and planning ministries being at the same level of understanding.

(iii) National counterparts from sectoral/line ministries (Health, Education, Agriculture, Infrastructure (Environment, roads, energy, water, electricity) will also constitute a focal group for the training.

(iv) UNFPA national counterparts: Integration of population dimensions into the development process has always been one of UNFPA goals and interventions in countries. The proposed training package will also serve to further strengthen UNFPA national counterparts in mainstreaming population factors into the development process at all levels.

(v) CST Advisors: Due to their prominent role in capacity building at country level (institutional and individual), CST Advisors would also benefit from this training as trainers so that the range of trainers would be expanded.

(vi) Management: ADB staff as well as UNFPA staff would need respective management support and backup in this effort. The in-built flexibility of this training package would enable tailor-made modules, especially on Advocacy-Policy Dialogue and Linkages between population, poverty and development, for ADB, UNFPA and Government top managers.

Duration of training

Depending on the target group, the duration of the training would be three to five days. For Bank's staff the envisaged duration would be two and half days while at country level (RMCs) the training format would allow more time for group discussions and exercises so that participants will have concrete hands on mainstreaming population issues in PRSPs and or CSPs, including assessing coverage of population issues in sectoral programmes and projects.

Format for the Training Modules

Each Module contains several sessions. Participatory methods including exercises and group works will be used. Session's topics will constitute specific activities for which first of all participants will be asked to provide their own perspectives before the facilitator summarizes the issues. Country and individual experiences would be shared at the same time. Formal presentations and discussions will then follow.
Each session contains:

(i) Time to be allocated to specific sessions would be determined during the training and will depend on the target groups;

(ii) Handouts that the participants are going to take with them; containing the substance of the modules, practical exercises and references;

(iii) Presentations in PowerPoint or any other format;

(iv) Copies of selected articles, extracts from books etc. that could help to increase participants' understanding of the issues.

Organization of the Training Manual

The first module on Conceptual Framework on Population, Poverty and Development provides the necessary common background to the context in which development interventions are happening taking into account socio-demographic situations and their specificities as well as common features.

The second module builds on the theoretical framework to map out the current situation in the Continent as well as regional perspectives on population features and socio-economic status, including the HIV/AIDS status and the prevailing vulnerability brought in by emergencies, both natural and human.

It is only with the third Module "Population, Sectoral Strategies and Poverty Reduction" that mainstreaming of population factors is addressed sector by sector with, where appropriate, the adoption of standard approach and tools.

With the growing importance that accountability and transparency are taking, Module four "Population Data in a Multi-sectoral Database" emphasizes the need for population related data as integral components of monitoring and evaluation frameworks for the PRSPs and CSPs.

To conclude the training, Module five "Advocacy and Policy Dialogue on Population Issues with Policy Makers in RMCs" provides the foundation and rationale for advancing policy dialogue if one has to ensure that population dimensions should continue to receive the required priority on the national and regional development agenda.

MODULE ONE: Conceptual Framework on Population and Poverty

MANUAL

Session 1: Basic concepts on Population, Development and Poverty

Session 2: Population issues in Millennium Development Goals (MDGs)

Session 3: Linkages between Population, Poverty and Development

1.1 Session one: Basic concepts on Population, Development and Poverty

Session Objectives

- Explain the basic concepts of population and the component of population dynamics
- Explain the basic concepts of development and its various perspectives
- Define poverty and its monetary and non-monetary components
- Identify the most common measures and indicators of population, development and poverty

Contents/Topics covered

- Basic concepts of population dynamics
- Basic concepts of determinants of population dynamics
- Concept of development and evolution of the development perspectives
- Poverty concepts and its determinants

1.1.1 Population related concepts

1.1.1.1 Definition and population data sources

a. Definition

Population refers to the total number of persons in a geographical location at a given time. For example, the total population (all sexes and ages) of Tunisia (geographic location) was 8.785.364 in the 1994 Census and 9.910.872 in the 2004 Census. The size of the population changes, as indicated in the case of Tunisia, as a result of three major events: birth, death and migration, described as components of **population growth** or **dynamics**

b. Population data sources

Demographic measures based on these components of population growth refer to specific areas during a specific time period. They are derived from 3 principal sources of data viz:

Censuses:

The population census forms the cornerstone of demographic analysis. More than 90 percent of the world's population was covered in the 1990 round of national censuses.

A population census refers to the count of everyone within a geographically defined boundary of the country. It is usually established by the law of the country obliging each person in that country to give information either to the census enumerators or directly to the census agency. Censuses are usually held periodically (i.e every 10 years) because of the cost and the time required for planning. Every one in the country is expected to be enumerated once during the census exercise.

Enumeration can be made either on a **de facto or de jure basis.** A **de facto** enumeration in a census exercise involves the counting of only the resident population within the country during the census period. A **de jure enumeration** includes, in addition to the resident population, the counting of absentees, who are regular members of the households.

Sample Surveys:

Sample Surveys involve an enumeration of a sample (fraction) of the total population of a country. The sample is taken on either a probability or non-probability basis to generate detailed information on specific characteristics of the population e.g. family size, birth intervals, age at marriage etc, and to provide the basis for estimating population parameters, especially when the sample is based on probability.
In comparison with census counts, sample surveys provide more detailed and accurate demographic information especially in countries with low literacy and poor transportation networks as enumerators have more time and training to elicit more detailed information from respondents. Today, the Demographic and Health Surveys (DHS) represent the most popular survey undertaking in developing countries.

Civil/Vital Registration:

Vital Registration takes the form of a continuous record of vital events, especially births and deaths occurring in the society. In some circumstances, population movement, marriages are also registered.

When reliable vital registration statistics are available, intercensal population of a country can be estimated at any point in time.

1.1.1.2 Components of population dynamics

a. Fertility

Fertility is defined as the actual birth performance in a population within a specified period of time, commonly measured by relating the actual births within a period to the base population. Indicators of fertility are: i) Crude Birth Rate (CBR), ii) Age Specific Fertility Rate (ASFR), iii) Total Fertility Rate (TFR), iv) Net Reproduction Rate (NRR).

The crude birth rate is the most easily obtained and most often reported fertility measure. It is calculated from the number of babies born in a given year (or any other time period) divided by the mid-year population, and it is expressed as the number of births per 1,000 people.

The Total Fertility Rate (TFR) is commonly used because it is easy to visualize what it stands for: the average total number of children a woman will have. But the TFR is a synthetic rate; it does not measure the fertility of any real group of women. The TFR measures the fertility of an imaginary group of women who pass through their fictitious reproductive lives subject to the rates of childbearing experienced by real women in a given year.

In every society a variety of cultural (age at marriage, sex preference, role of women), economic (income), social (education, residence) and health factors interfere with the process of human reproduction. Variations in fertility levels among populations would also depend on (i) the proportion of women married or in a sexual union, (ii) the percent of women using contraception, (iii) the proportion of women who are infecund (because they are breastfeeding, for example), and (iv) the level of induced abortion.

b. Mortality

Mortality refers to deaths that occur within a population. The probability of dying during a given time period is linked to many factors, such as age, sex, race, occupation, and social class. The incidence of death can reveal much about a population's standard of living and quality of health care. Indicators of mortality are: i) Crude Death Rate (CDR), ii) Age Specific Death Rate (ASDR), iii) Infant Mortality Rate (IMR), iv) Maternal Mortality Ratio (MMR), v) Life Expectancy at birth (e^o).

Life expectancy is a concept many people use but few understand. The term life expectancy usually is used as a shorthand way of expressing "life expectancy at birth." Life expectancy applies to a hypothetical group of people who pass through their imaginary lives subject to the death rates at each age.

Age-specific death rates refer to the number of deaths of people within a specific age group divided by the total number of people in that age group. This can also be expressed as the probability of dying at a given age. These probabilities are used to construct a life table, or actuarial table, which is used to calculate life expectancy at birth or at any other age.

Infant Mortality Rate: Death in the first year of life (IMR)— the number of deaths among infants under age 1 per 1,000 live births) is an important demographic variable and is often used as a key measure of a society's quality of life.
Women have lower death rates than men at every age, probably because of a combination of social, behavioral, and genetic influences. Even before birth, fewer female than male fetuses die in the womb. The net result of this female advantage is that women live longer than men.

Maternal Mortality (MMR): It refers to the numbers of women dying from complications during pregnancy and childbirth. Because of the occurrence of the event it is express as mothers died out 100,000 living births. Maternal mortality remains the most disparate health indicator between developed and developing countries.

Causes of death in developed and developing countries are not the same. In developing countries, most causes are infectious and parasitic diseases; while in developed countries, causes of death are generative diseases. Environmental factors tend to aggravate the virulence of diseases, while age, sex, socio-economic status as well as occupation predispose individuals in the population to different probability of dying.

c. Migration

Migration is the geographical movement of people across a specified boundary for the purpose of establishing a new permanent or semi permanent residence. Migration adds to or subtracts from an area's population depending on whether more people move in or out. Migration is the most complex and volatile demographic variable as it occurs spontaneously in response events such as wars, epidemic or systematically to socio-economic change e.g. rural out migration. Indicators for migration are: i) Crude Immigration Rate (CIR), ii) Crude Emigration Rate (CER), iii) Age Specific Net Migration (ASNM), iv) Crude Net Migration (CNM).

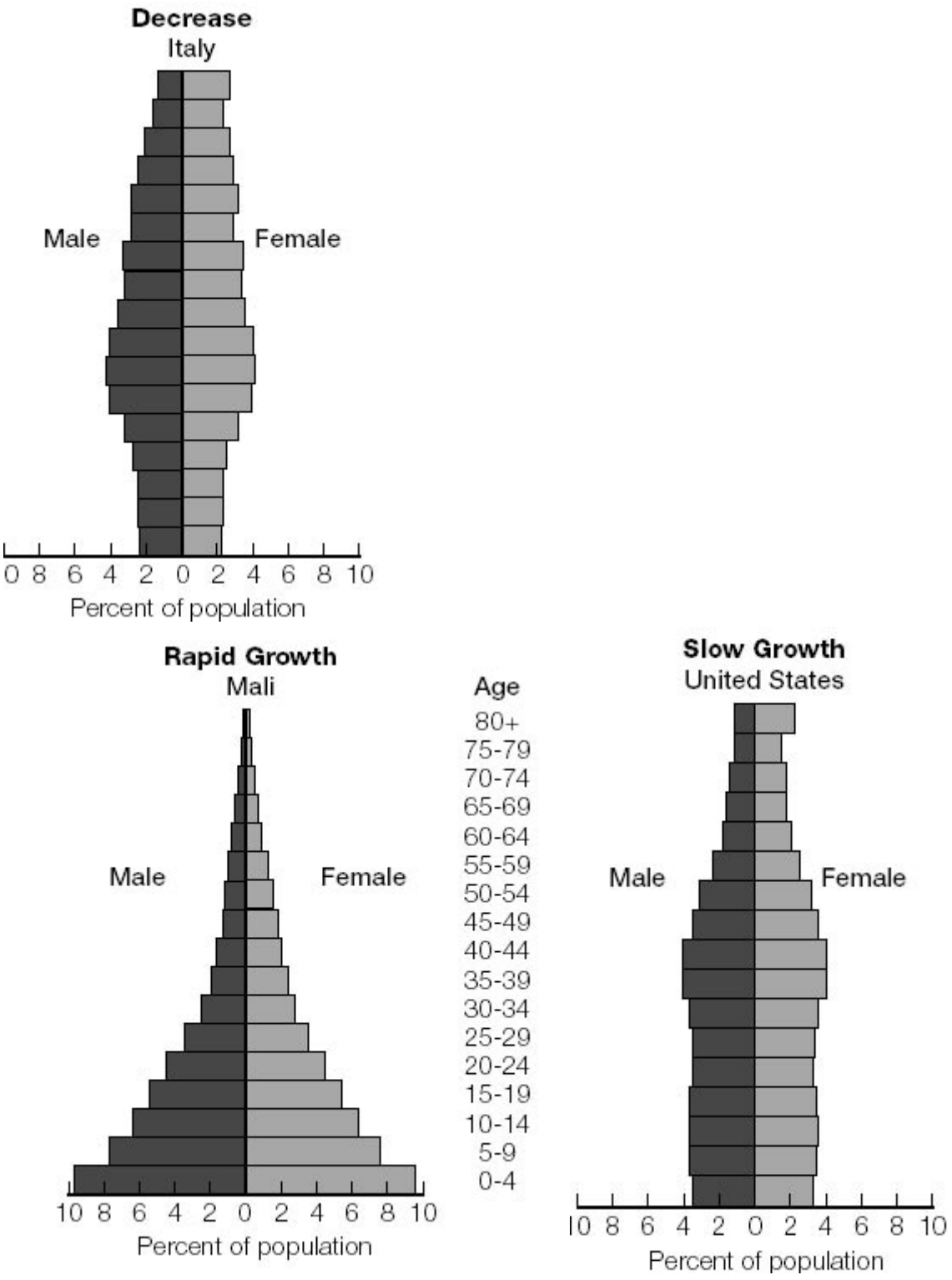
Migration is selective as more educated people are usually more motivated than other people to move. Migration is also influenced by the life cycle stage of the individual or group. For example, people are most likely to move at certain stages of their lives e.g. at marriage, schooling, retirement etc.

International migration involves movement across a national border. The terms immigration and emigration describe whether people are moving into (im-) or out of (e-) a country. Internal migration describes moves within a country. It takes forms of rural-urban, rural-rural or urban-rural migrations. Rural to urban migration has been key source of urban growth since the origin of cities.

Determinants of migration include push and pull factors. Pull factors at origin can be political and social conflicts, environmental breakdowns, war, and absence of employment opportunities. Pull factors at destination comprise better education, differential in salaries, career perspectives etc as in the case of educated and highly skilled people who emigrate to new countries. When this move is spectacular, and it involves a big loss to the home country in terms of investment in education and the potential contributions of the emigrants, it is referred to as **Brain Drain.**

d. Age and Sex Structure

Every population has a different age and sex composition – the number and proportion of males and females in each age group. A population pyramid can represent the age and sex structure graphically. There are three general types of population pyramids: those depicting rapid growth, slow growth, and population decline.



A rapidly growing population is the only one that really looks like a pyramid because each age cohort is larger than the one born before it. This pyramid shape results primarily from sustained high fertility (and most sub-Saharan African countries like Mali belong to this group). A population that is not growing, or is decreasing, produces a very different shape. If fertility remains below replacement, the pyramid's base will continue to constrict, and its age and sex

structure would eventually assume a rectangular shape because similar numbers of births would occur each year (as it is the case of Italy). A slow-growth population is generally in the process of changing from a rapid-growth to a near-zero growth shape in response to changes in fertility and mortality (e.g. USA).

Population pyramids reflect historical events—wars, famines, baby booms or busts, and changes in immigration policies—that have affected one of the three demographic variables and can have considerable impact on the population's social and economic situation, both present and future. Some of the critical concepts linked to the age and sex structure of the population are the population momentum and population dividend that would be discussed later under Session 3 on the Population and Development interrelationships.

e. Population size and growth

Population growth occurs when the number of persons added to either through new births or immigration or both is greater than the number subtracted from a population in a year due to either deaths or emigration or both, expressed as a percentage of the population at the beginning of the time period.

Whether a population grows or wanes, the changes can be traced to the net effects of the three demographic processes already discussed: fertility, mortality, and migration. Fertility adds members to the population and mortality removes them. Thus, the annual number of deaths in a population can be subtracted from the annual number of births to find the net number of people added through natural increase as summarized by the demographic balancing equation.

The rate of natural increase is added to the rate of net migration to yield the overall population growth rate. Populations increase through migration and natural increase in most places; but populations may also decline. Births, deaths, and in- and out-migrants sometimes cancel each other out and produce neither growth nor decline. The rate of growth can be used to estimate a population's hypothetical doubling time, which is the number of years until the population will double if the rate of growth remains constant. Doubling time can be estimated by dividing the number 70 by the growth rate expressed as a percentage.

Demographers can project the future population of the world or a country. Beginning with current estimates of population size and growth rates, they make assumptions—really educated guesses—about how much fertility, mortality, and migration rates will change. A country's projected population in 2050, for example, equals its current size plus the total births and immigrants expected from now until 2050 (under the assumed rates), minus the expected deaths and emigrants. Most of the world's fastest-growing countries are in the Middle East and Africa. The population of the African continent is growing at 2.5 percent, yielding a doubling time of only 28 years. In contrast, many countries are experiencing extremely slow growth and even natural decrease because death rates have risen above birth rates. The first Session in Module Thwo will present African population perspectives in more details.

1.1.2 The concept of development

1.1.2.1 Definition of Development

Development refers to both the process of widening people's choices and the level of their achieved well being particularly in terms of being able to lead a long and healthy life, to be educated, and to enjoy a decent standard of living. Sustainable development: Development must also be sustainable by keeping the economic and the ecological systems in balance.

1.1.2.2 Difference between economic growth and development

The concept of development is different from that of economic growth. Although both involve a process of change from one stage to another, economic growth is mainly perceived in quantitative terms and expressed as increases in income/output per capita. Development however, involves both quantitative and qualitative changes. It is possible to have economic growth without development especially when there is inequity in the distribution of wealth. On the other hand, development is concerned with equity in distribution as well as improvements in the quality of life of the generality of the population.

1.1.2.3 Other development related concepts

Human development is both an outcome and a process of enlarging people's choices to lead lives they value; while economic growth is only a means, though an important one, for human development.

Human Development focuses on four important capabilities: to lead a long and healthy life, to be knowledgeable, to have access to the resources needed for a decent standard of living and to participate in the life of the community. Thus Human Development Index (HDI) combines measures of life expectancy, school enrolment, literacy and income to allow a broader view of a country's development than does income alone. Although the HDI is a useful starting point, it is important to remember that the concept of human development is much broader and more complex than any summary measure can capture, even when supplemented by other indices. It does not include important aspects of human development, notably the ability to participate in the decisions that affect one's life and to enjoy the respect of others in the community.

Human Poverty Index (HPI) captures the level of human poverty. The process of development can expand human capabilities by expanding the choices that people have to live full and creative lives. And people are both the beneficiaries of such development and the agents of the progress and change that bring it about. This process must benefit all individuals equitably and build on the participation of each of them. Every Human Development Report has advocated this approach to development since the first report was published in 1990.

Gender-related development index: The HDI measures average achievements in a country, but it does not incorporate the degree of gender imbalance in these achievements. Two countries with the same average level of adult literacy (say 30%) may have different disparities in rates between men and women (one could have a rate of 28% for women and 32% for men while the other could have a rate of 20% for women and 40% for men). Such differences in disparities

would not be reflected in the HDI for the two countries. The gender-related development index (GDI), introduced in *Human Development Report 1995,* measures achievements in the same dimensions using the same indicators as the HDI but captures inequalities in achievement between women and men. It is simply the HDI adjusted for gender.

The gender empowerment measure (GEM) reveals whether women take an active part in economic and political life. It focuses on gender inequality in key areas of economic and political participation and decision-making. It tracks the share of seats in parliament held by women; of female legislators, senior officials and managers; and of female professional and technical workers—and the gender disparity in earned income, reflecting economic independence. Differing from the GDI, the GEM exposes inequality in opportunities in selected areas.

1.1.2.4 Selected indicators of development:

(i) Life expectancy at birth
(ii) Infant mortality rate
(iii) Childhood mortality
(iv) Level of literacy of the population
(v) Per capita GDP or income.
(vi) Unemployment rate
(vii) Human Development Index
(viii)Gender-related Development Index
(ix) Gender Empowerment Measure
(x) Human Poverty Index(xi)

Recommended website: http://hdr.undp.org/statistics

1.1.3 Poverty: Definition, key indicators and determinants

This session is structured in three main parts: i) Definition of poverty and inequality; ii) Measurement of poverty and inequality; and iii) determinants of poverty.

1.1.3.1 Definition of poverty and Inequality

a) General definitions

There are various perspectives and definitions of poverty (for more details, please refer to the ADB Training on the Economics of Poverty; 2004).

Monetary definition

When estimating monetary measures of poverty, one may choose between using income or consumption as the indicator of well-being. Most analysts argue that actual consumption is more closely related to a person's well-being while income is only one of the elements, which will allow consumption of goods (others include questions of access, availability, etc.). Using income may have its own advantages. When this is available, income can be compared more

easily with data from other sources, such as wages, which provide a check on the quality of the data in the household survey.

Non-monetary definition

Poverty is also associated with insufficient outcomes with respect to health, nutrition and literacy. It refers also to deficient social relations, insecurity, and to low self-confidence and powerlessness. Another notion of well-being closely related to poverty is Vulnerability. This is the probability of being in poverty, or falling deeper into poverty in the future, depending on individual/community's behaviour in terms of investment, production patterns, coping strategies and perceptions of its situation. Poverty is truly a multidimensional phenomenon in such a setting and requires multi-dimensional policy and program interventions in order to improve the well-being of individuals and communities. Inequality and vulnerability are associated concepts of well-being.

In conclusion, Poverty refers generally to the conditions of whether households or individuals have enough resources or abilities to meet their basic needs. This aspect is based on the comparison of individuals' income, consumption, education or other attributes with some defined threshold below which they are considered as being poor in that attribute.

b) Measures of poverty and inequality

While the poor are defined as those who lack command over basic consumption needs, including food and non-food components, their proportion and size (i.e. of the poor) in the population can only be assessed by establishing a **poverty line.** The **poverty line** is conceptualised as a minimum standard required by an individual to fulfil his or her basic food and non-food needs (i.e. a consumption package, which is costed and considered adequate for basic consumption needs). In practice, rich countries have higher **poverty lines** than do poor countries. As countries become better off, they have the tendency to revise the poverty line upwards.

Sometimes we are interested in **relative poverty** or **inequality, i.e. the poorer members of the society.** While measures of poverty focus on the situation of individuals or households below a defined threshold, inequality is defined over the entire population. The simplest way to measure inequality is by dividing the entire population into fifths (quintiles) from the poorest to the richest on the basis of the levels or proportions of income (or expenditure) that accrue to each group. Note that inequality measures can be calculated for any distribution, not just for consumption, income or other monetary variables, but also for land and other continuous and cardinal variables.

Several measures and indicators are used for poverty and inequality. The table that follows summarizes the most common and popular.

Item	Indicators	Comments
Well-being	1. Per capita measure of consumption/expenditure or income	• Well-being is a broader concept than economic welfare and there exist non-monetary measures of it as illustrated in the boxes below • Households differ in size and composition, and so a simple comparison of aggregate household consumption can be quite misleading about the well-being of individuals in a given household
	2. Calories consumed per person per day	It is not easy to establish the appropriate minimum amount of calories per person, as this will depend on the age, gender, and working activities of the individual.
	3. Food consumption as a fraction of total expenditure	As household income (per capita) rises, spending on food rises too, but less quickly (Engel law)
	4. Nutritional status; life expectancy	These indicators measures outcomes rather than inputs
Poverty	1. Incidence of Poverty: Headcount index	It is the share of the population whose income or consumption is below the poverty line
	2. Depth of poverty: Poverty gap index	This provides the information regarding how far off households are from the poverty line
	3. Poverty severity: squared Poverty gap index	The measure implicitly puts more weight on observations that fall well below the poverty line
Inequality	1. Gini coefficient	Based on the Lorenz curve. It is the most used inequality indicator
	2. Decile dispersion ratio	It presents the ratio of the average consumption of income of the richest 10 percent of the population divided by he average income of the bottom 10 percent.
	3. ...	

c) Understanding the determinants of poverty

Factors that cause poverty could be macro, sector-specific, community, household and individual characteristics. The framework below presents each of the main categories with their main factors.

Category	Poverty factors and Indicators
Regional characteristics	• In general, poverty is high in areas characterized by geographical isolation, a low resource base, low rainfall, and other inhospitable climatic conditions. • Other important regional and national characteristics that affect poverty include good governance, a sound environmental policy, economic, political and market stability, mass participation, global and regional security
Community characteristics	• Indicators include proximity to paved roads, whether or not the community has electricity, proximity to large markets, availability of schools and medical clinics in the area, and distance to local administrative centers. • Other indicators of community level characteristics include human resource development, equal access to employment, social mobility and representation, and land distribution.

Category	Poverty factors and Indicators
Household and individual characteristics	• Household composition, in terms of the size and characteristics of its members (such as age), is often quite different for poor and non-poor households. • Dependency ratio: One might expect that a high dependency ratio will be correlated positively with the level of household poverty. • Sex of the Household head: It is widely believed that households headed by women are poorer than those headed by men.
	Economic factors • Household rate of unemployment, underemployment and job changes • Level of household incomes and its distribution among household members • The structure of household consumption expenditures (the relative weight of the goods and services consumed by the household according to its poverty level) • The property of a household includes its tangible goods (land, cultivated areas, livestock, agricultural equipment, machinery, buildings, household appliances and other durable goods) and its financial assets
	• Health within the households: Indicators include the nutritional status, diseases status; availability of health care services, use of these services by poor and non-poor households
	• Education: Indicators include: Household members' level of education (lower literacy); availability of educational services; and the use of these services by the members of poor and non-poor households
	• Shelter: Indicators include the type of building; the means through which one has access to housing, household equipment (same as in community characteristics)

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1.2 Session 2: Population issues in Millennium Development Goals (MDGs); the New Partnership for Africa's Development (NEPAD) and Poverty Reduction Strategy Papers (PRSPs) and Country Strategy Papers (CSPs)

Session Objectives

At the end of the Session, participants would be able to:

- Appreciate population issues in the achievement of MDGs, NEPAD, PRSPs and CSPs goals

Contents/Topics covered

- Population Issues in MDGs
- Population issues in NEPAD, PRSPs and CSPs

1.2.1 Population issues in the MDGs

The MDGs provide a framework for the entire UN system to work coherently together towards a common end. The Millennium Development Goals are an ambitious agenda agreed on at the Millennium Summit in September 2000 by world leaders for reducing poverty and improving lives. For each goal one or more targets have been set, most for 2015, using 1990 as a benchmark. The table below, prepared by UNFPA is an attempt to show in each of the eight goals the role/contribution of population interventions

Goal 1: Eradicate extreme poverty and hunger

To halve the number of people living on less than $1 a day and the number of people living in hunger, universal access to reproductive health care for men and women is imperative. The ICPD Programme of Action and ICPD+5 benchmarks aim for universal access to voluntary reproductive health services, including family planning. Access to these services will give their users fundamental choices that will change the repetitive cycle of poverty. With access to family planning, women and men can decide if, when and how many children they want.

Lower fertility results in slower population growth and opens a "demographic window" of opportunity for economic growth and poverty reduction, as the ratio of dependants to working-age people declines. Large families dilute the assets of poorer households, and unwanted births deepen household poverty. Smaller families allow more investment in each child's education and health.

Goal 2: Achieve universal primary education

To achieve universal primary education, the gender gap must be closed. The ICPD Programme of Action's goal of basic education for all boys and girls by 2015 can be supported through the empowerment of women, training teachers to be gender sensitive, promoting the value of educating girls, postponing early marriage and childbearing, allowing pregnant teens to

continue studying, providing scholarships, providing universal access to reproductive health, and lowering fertility, morbidity and mortality rates.

Having access to family planning and reproductive health services makes it less likely for girls to drop out of school due to pregnancy, or to be pulled out to help family members care for their children (including unplanned). With fewer children, less competition exists for limited resources including money for school or uniform fees.

Goal 3: Promote gender equality and empower women

Ensuring gender equity and equality, and the empowerment of women depends in part on overcoming cultural, social and economic constraints that limit women's access to education, as well as providing universal access to reproductive health services that allow them to control their fertility. Combating violence against women, and removing social and family barriers to women's wider social participation are essential. This is consistent with the ICPD Programme of Action that calls for the elimination of gender disparity in primary education, and a strengthening of post-primary education for girls.
Goal 4: Reduce child mortality

A healthy mother is the first step towards a healthy child. Infant and child mortality are highest for the youngest mothers and after closely spaced births. High fertility reduces the provision of health care to children. Unwanted children are more likely to die than wanted ones. Providing universal access to reproductive health care will help to prevent unwanted pregnancy. The death of a mother increases the risk that her children will die. Consistent with the fourth MDG, the ICPD PoA puts forth the explicit goal of reducing child mortality. Family planning is needed to ensure that women have their desired number and timing of pregnancies, with their first pregnancy delayed until they are physically mature.

Goal 5: Improve maternal health

The highest proportion of women's ill health burden is related to their reproductive role. Universal access to reproductive health care--including family planning; care in pregnancy, during and after childbirth; and emergency obstetric care--would reduce unwanted pregnancy, unsafe abortion and maternal death, saving women's lives and the lives of their children.

Promotion of delayed marriage reduces the risks associated with too-early childbearing. Enabling women to have fewer pregnancies reduces the lifetime risk of maternal death and illness. Women's empowerment will enable women to address the social conditions that endanger their health and lives. Realizing the ICPD goal of ensuring universal access to reproductive and sexual health services including family planning is essential to achieving the fifth MDG by increasing women's access to health care during pregnancy, labor and after childbirth as well as access to emergency obstetric services for complicated pregnancies.

Goal 6: Combat HIV/AIDS, tuberculosis, malaria and other diseases

Universal access to reproductive health care is critically important in the fight against HIV/AIDS. The ICPD notes that better information on HIV/AIDS can prevent transmission of HIV

and other STIs. Half of new HIV infections are among young people. Preventing infection means enabling young people to protect themselves from sexually transmitted diseases. This includes teaching abstinence outside marriage, fidelity within it and responsible behavior at all times, including the responsible use of condoms. Poor countries need an adequate supply of reproductive health commodities, including male and female condoms, and strengthened systems for their supply and distribution. Realizing the ICPD goal of ensuring universal access to reproductive and sexual health services including family planning is essential to combating HIV/AIDS, as access to effective contraception (especially condoms) would help stem HIV infection rates.

Goal 7: Ensure environmental sustainability

Balancing resource use and ecological requirements will depend critically on population growth, location and movements, on patterns of resource consumption, and management of waste. The ICPD acknowledges that rapid growth of poor rural populations puts enormous stress on local environments. Poor people need better education and health services, including universal access to reproductive health care and family planning, to improve their health and well-being.

Appropriate policies will reduce urban migration and promote sustainable rural population growth. The sustainable improvement of the lives of slum and shanty dwellers will depend on policies to address high urban growth rates, which result from both natural increase and migration.

Goal 8: Develop a global partnership for development

Population and reproductive health programmes have lagged in the least-developed countries, especially those with high levels of mortality and unwanted fertility. These countries will benefit most from higher international assistance and debt forgiveness, as well as domestic resources for health and education. They need universal access to reproductive health care coupled with affordable prices for essential drugs for treating HIV/AIDS, malaria and tuberculosis, and a secure supply of contraceptives and other reproductive health commodities.

The ICPD called on international donors to provide one third of the support needed for reproductive health programmes in developing countries worldwide: $5.7 billion (of the $17 billion total requirement) in 2000, rising to $7.2 billion by 2015. Current international support is less than half of this required level.

1.2.2 Population issues in NEW PARTNERSHIP FOR AFRICA'S DEVELOPMENT (NEPAD)

The momentum created by the MDGs has been embraced at both regional and national levels. At regional level, The New Partnership for Africa's Development is a pledge by African leaders, based on a common vision and a firm and shared conviction, that they have a pressing duty to eradicate poverty and to place their countries, both individually and collectively, on a path of sustainable growth and development, and at the same time to participate actively in the world economy and body politic. The Programme is anchored on the determination of Africans to

extricate themselves and the continent from the malaise of underdevelopment and exclusion in a globalized world. NEPAD endorses the eight International Development Goals and is in line with the MDGs.

The Long-Term Objective of NEPAD is:

- To eradicate poverty in Africa and to place African countries, both individually and collectively, on a path of sustainable growth and development and thus halt the marginalisation of Africa in the globalization process; and
- To promote the role of women in all activities.

The NEPAD social development objective, which is the eradication of poverty through sustainable development of human and social capital, reflects the internationally agreed goals and thresholds that were set out in the United Nations Conferences of the 1990s and the Millennium Declaration.

The goals of NEPAD, which are similar to those of ICPD and ICPD+5, are the following:

(i) To reduce extreme poverty by one half between 1990 and 2015;

(ii) To enroll all children of school age in primary schools by 2015, with special attention to gender disparities in primary and secondary education by 2005;

(iii) To reduce infant and child mortality rates by two thirds between 1990 and 2015;

(iv) To reduce maternal mortality ratios by three quarters between 1990 and 2015;

(v) To assure access for all to reproductive health services by 2015;

(vi) To put in place national strategies for sustainable development by 2005, so as to reverse the loss of environmental resources by 2015.

It should be noted that activities in population data collection would also assist the monitoring and evaluation of NEPAD implementation as they contribute to the development of information systems, which enable decision-makers at all levels to take informed decisions on the socio-economic status of the population.

1.2.3 Population issues in Poverty Reduction Strategy Papers and Country Strategy Papers

The World Bank introduced the PRSP for the Highly Indebted Poor Countries (HIPC) in 1999, which is supposed to be a country-driven policy paper setting out a strategy for fighting poverty. For many African countries, PRSPs have become the central vehicle for national poverty reduction and achievement of the MDGS. Since 2000, experiences with PRSPs have varied from country to country. PRSPs have shown encouraging developments and emerging concerns and constraints. As of mid-September 2004, 29 RMCs were at different stages of implementing PRSPs. Of the 29 countries, 26 had I-PRSP while 20 had full PRSPs.

The Bank's Country Strategy Paper (CSP) is the strategic framework for intervening in the socio-economic development of an RMC.

The CSP is based on a consultative assessment with major stakeholders and defines the Bank's level of assistance and development priorities. The CSP provides an indication of the Bank's resource envelope and strategic selection of sectors to be funded. The selection of sectors is based on criteria that provide the maximum impact on poverty reduction and have the greatest potential in addressing gender inequality.

By giving appropriate cognizance to population, RH and gender (as well as the linkages between them) in poverty reduction programmes, some or preferably all of the following population concerns should be raised in this strategic document:

- Implications and/or impact of a country's current and prospective population dynamics, RH and gender situation should be considered as part of the prospects for reducing poverty in any of the RMCs. This consideration should go over and beyond descriptions of the country's population/ profile in these documents. It may include the how to 'accommodate' the consequences of such dynamics in the future (for example increases in the number of school-going age population) and programme interventions that could 'influence' the future course of relevant components of population change. For example, increasing contraceptive prevalence rates for the purpose of increasing birth intervals, reducing fertility levels and improving maternal and child health in order to improve maternal and child health, thereby reducing maternal, infant and child morbidity and mortality rates and achieving a healthier population.
- These interventions should feature among the prioritized and costed public actions for reducing poverty within the framework of those programmes;
- Appropriate resources are to be specifically allocated to (and subsequently released for) those interventions as part of the public expenditure outlay for achieving the identified objectives of the poverty reduction programmes; and
- Indicators for measuring progress attained in reducing poverty as a consequence of those programmed interventions (as well as information and data for the calculation of relevant indicators) are to be included as part of the monitoring and evaluation framework of the poverty reduction programmes, and resources allocated to them.

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1.3 Session 3: Linkages between Population, Poverty and Development

Session Objectives

By the end of the session, participants will have been exposed to:

- The debates (theories/perspectives) on the relationship between population, means of subsistence, economic growth, poverty and development;
- The development of international consensus on population and development and main recommendations
- Ideas on available evidence (or lack of it) on linkages between population dynamics and various aspects of development
- A simple framework of economic –demographic inter-relationships

Organization of the module or Topics covered

This topic is organized around four main issues:

(i) Eighteenth and Nineteenth Century Perspectives on Population;
(ii) Twentieth Century Debates over the Effects of Population Growth on Economic Growth;
(iii) The Demographic Transition and the Demographic "Dividend";
(iv) Theoretical and Empirical Examples of Linkages on Population and Development;

1.3.1 Eighteenth and Nineteenth Century Perspectives on Population

The eighteenth century was a period of profound change in intellectual climate. These changes were to have a decisive influence on social and economic as well as population theory. The view that man's capacity to reproduce was unlimited, whereas, that of producing his means of subsistence was limited, was advanced during this period. The linking up of problems of economic development with population growth rate had its heydays in the 19th century Europe during the days of Malthus, Adam Smith and David Ricardo. Malthus was of the view that natural population grows at the rate of geometric progression while economic growth (food production) was moving at an arithmetic progression i.e. population grows faster than economic growth. He regarded this as a quasi-natural fatality that can be resolved only by epidemics, wars and self-restraint and the misery of the working masses. In a world with fixed resources for growing food, and slow technical progress, Malthus theorized, food production would quickly be swamped by the pressures of a rapidly growing population. The available diet would then fall below subsistence level, until population growth was halted by a high death rate. Living standards could only ever improve in the short term—before they set in motion more rapid population growth. His "principle of population" by creating considerable controversy, made both his followers and opponents conscious of the need for a better understanding of population trends and their relations with social and economic conditions.

Smith and Ricardo, on the other hand, saw the growth of natural population as a direct consequence of the improvement in the economic factor. Thus they believed in the self-

regulating, harmonious and progressive movement of economic development and population growth.

1.3.2 Twentieth Century Debates over the Effects of Population Growth on Economic Growth

Though the general trend was rising, population growth was not steady until the eighteenth century. However, it is the second half of the twentieth century that stands out for its remarkable population growth. The world's population has grown six-fold since 1800, when it stood at about 1 billion. It took less than 130 years to add another billion. Things have quickened considerably since and world population is forecast to reach 9.3 billion by the year 2050. The various perspectives on such trends could be summarized in three schools of thought (Bloom et al 2000):

(i) The "Pessimistic" Theory: Rapid population growth has negative impact on economic growth

(ii) The "Optimistic" Theory: Population growth can fuel economic growth

(iii) The "Neutralist" Theory: Population growth has no significant effect on economic growth

1.3.2.1 The "pessimistic" theory: rapid population growth has negative impact on economic growth

Rapid population growth continues to press on the modern consciousness and Malthus's pessimism has remained with us. Concerns have been expressed from extreme positions that hundreds of millions of people are going to starve to death to more measured studies that the net effect of population growth on economic growth is negative. In addition to the effect of population numbers on the demand for fixed resources, there is also a potentially negative impact of population growth on capital intensity. In principle, higher population numbers require more homes, factories, and infrastructure to house, employ, and provide for their needs. In the long run, such capital can be constructed, but periods of rapid population growth may well lead to reductions in capital per worker and lower living standards. When population growth is rapid, a large part of investment is used to supply the needs of the growing population rather than enabling an increase in the level of provision per capita.

However, by the early 1980s, economists were beginning to reject the pessimist view. Empirical research had weakened the pessimists' case; economic theory had begun to give increasing importance to technology and human capital accumulation rather than to the old key growth factor of physical capital; and demographic theory started to look to the intermediate and long term, where the short-term effects of population growth were likely to have at least partly smoothed out.

1.3.2.2 The "optimistic" theory: Population growth can fuel economic growth

Recent history has cast further doubt on the pessimists' theory. In the last 30 years—during which the world's population has doubled—per capita incomes have increased by about two-

thirds. Famines have occurred, but the famines that have occurred were largely caused by poverty and lack of funds within a section of the population to buy food rather than by any absolute shortage of food. Technological progress, in both agriculture and industry, has been more rapid than during any other time in human history. There have been equally dramatic social and institutional innovations: in the way people work, the standard of their education and health, and the extent to which they participate in the political process. Rather than being constrained by fixed resources, the prices of many raw materials are in long-term decline, and some parts of the economy are becoming "dematerialized" as knowledge becomes an increasingly vital asset. These trends have supported the views of a group of "population optimists" who have sought to promote the idea that population growth can be an economic asset. Simon Kuznets and Julian Simon, for example, argued that as populations increase, so does the stock of human ingenuity. Larger societies—with the capacity to take advantage of economies of scale—are better positioned to develop, exploit, and disseminate the increased flow of knowledge they receive. Ester Boserup uses similar arguments to turn the Malthusian world-view around. Population growth creates pressure on resources. People are resourceful and are stimulated to innovate, especially in adversity. When rising populations swamped traditional hunter-gatherer arrangements, slash-burn-cultivate agriculture emerged. When that, too, became inadequate, intensive multi-annual cropping was developed. More recently the Green Revolution, which has almost quadrupled world food production since 1950 using just 1 percent more land, was a direct reaction to population pressure.

The Optimists, while refuting the alarmist tendencies of the Pessimists' theory, were not dogmatic about the positive impacts of population growth. Instead, they took a broader view, suggesting that a multiplicity of external factors was responsible for the consequences of population growth. These factors could have either positive or negative economic consequences. This broadening of the discussion on population growth eventually led to population **neutralism** emerging as the dominant view in the demographic debate.

1.3.2.3 The "neutralist" theory: Population growth has no significant effect on economic growth

In his path-breaking **Inquiry into the Nature and Causes of the Wealth of Nation**s, Adam Smith (1776) asked why some countries were richer than others. He found his answer in the division of labor, which allowed workers to become more productive by honing their skills at ever more specialized tasks. In recent years, economists considering the economic effects of demographic change have been more interested in Adam Smith, and in his narrative of the power of the market, than in Thomas Malthus's dire predictions about population. Most economic analysis has examined the statistical correlation between population and economic growth and found little significant connection. Though countries with rapidly growing populations tend to have more slowly growing economies, this negative correlation typically disappears (or even reverses direction) once other factors such as country size, openness to trade, educational attainment of the population, and the quality of civil and political institutions are taken into account. The portion of economic growth unexplained by these other factors, i.e. "residual" growth, bears little correlation to population growth rates. In other words, when controlling for other factors, there is little cross-country evidence that population growth impedes or promotes economic growth.

This result seems to justify a third view: **population neutralism**. The neutralist theory has been the dominant view since the mid-1980s. Although there are some variations within the neutralist school—with the National Academy of Sciences (NAS) concluding in 1986 that *"on balance* ... slower population growth would be beneficial to economic development of *most* developing countries", and many World Bank economists suggesting that in some countries bigger populations can boost economic growth —the overall tendency is to accord population issues a relatively minor place in the context of the wider policy environment.

1.3.2.4 The omitted issue of age structure in the population debate

Proponents of population pessimism, optimism, and neutralism can all fall back on theoretical models and more or less robust data to support their positions. All of these theories, however, tend to ignore a critical dimension of population dynamics: populations' evolving age structure. Economists have tended to focus on population growth, ignoring the changing age distribution within populations as they grow. Yet these changes are arguably as important as population growth. Each age group in a population behaves differently, with distinct economic consequences: The young require intensive investment in health and education, prime-age adults supply labor and savings, and the aged require health care and retirement income. When the relative size of each of these groups in a population changes, so does the relative intensity of these economic behaviors. This matters significantly to a country's income growth prospects. Policymakers with a broad view of development and the complex relation between economic and human development must factor these effects of changing age structure into decisions about their countries' future.

This challenge is especially pressing in the developing world. In those countries whose mortality and fertility rates are beginning to fall (South Central Asia and much of sub-Saharan Africa, for example), there is an opportunity for governments to capitalize on the consequent demographic transition, where the number of working-age adults grows large relative to the dependent population and potentially acts as a major economic spur. Conversely, if the appropriate policy environment is not in place, unemployment and in-stability may result, and health, education, and social welfare systems may undergo unbearable strain. Those developing countries whose transition is advanced, on the other hand (Southeast Asia and Latin America), need to look to the future, adopting policies to cope with an aging population and optimize the remaining years of low dependency ratios.

1.3.3 The Demographic Transition and the Demographic Dividend: High Mortality and fertility to Declining Mortality and Fertility

1.3.3.1 The Demographic Transition

In much of the developing world, a demographic transition is under way, accelerating with the declines in mortality that began near the end of World War II. Improvements in medicine and public health—for instance, the introduction of antibiotics such as penicillin; treatments for diseases such as tuberculosis and diarrhea; and the use of DDT, which helps control malaria—have contained or eradicated diseases that once killed millions of people. These advances were accompanied by improved sanitation, better nutrition, and the wider practice of healthier behaviors. All this gradually led to greater life expectancies, by as much as 20 years in some countries, and naturally to population growth, especially in developing regions. But despite

higher life expectancies, these countries had populations that were, on average growing **younger.** This is declines were not evenly distributed across the population. Infectious diseases are particularly ruthless killers of the young, so their containment had the most powerful impact on the mortality of infants and children, which fell earlier and more quickly than mortality at other ages The larger surviving youth cohorts served to drive down the average age of populations.

The mortality decline, which began the demographic transition, has been succeeded by equally dramatic reductions in fertility, especially in less-developed countries. Fertility decisions seem to respond strongly to changes in child mortality as parents realize that if fewer children are likely to die in childhood, they can give birth to fewer children to attain their desired number of offspring. This desire to rein in fertility is reflected in trends in the use of contraceptives. Worldwide, more than half of all couples now use contraception, compared with 10 percent in the 1960s. Other changes have reinforced the trend toward lower fertility, as it becomes advantageous to have smaller families. If children have a higher chance of survival and a long life expectancy, it is wise to in-vest intensively in them. A major form of investment is education—an investment that becomes more tempting when economic changes are likely to increase the potential returns on education. But this requires a long-term commitment. In a rural society, children typically start working on the land quite early and become economically productive at a young age. Educating children limits their productivity during childhood (they are at school rather than working). However, with increasing urbanization, children are less likely to be economically productive and the labor market will place a greater premium on skills, so education makes a greater difference to their future productivity. Thus urbanization raises the incentive of parents to educate their children while it reduces the opportunity cost of education in terms of forgone labor income. Because education is expensive, it becomes more likely that couples will choose to invest greater resources in fewer children. In addition, a greater emphasis on education will inevitably lead to more educated women. This reinforces the likelihood that families will become smaller: Women's time be-comes more valuable and they are less likely to want to spend so much of their adult life bearing and raising children. For many reasons, then, smaller families make increasingly sound economic sense once the demographic transition gets under way.

The decline in mortality and the decline in fertility jointly form the demographic transition, but they are not synchronized. The lag between the two causes population growth, as fertility only begins to decline some time after mortality has dropped This growth at the beginning of the demographic transition has preoccupied the prevailing views of population change and economic growth. However, the demographic transition also has a predictable impact on a country's age structure. At first, there is a cohort of children that includes many who would previously have suffered an early death. This baby-boom generation is unique: As fertility rates decline and families grow smaller, successive cohorts tend to be smaller. The result is a "bulge" in the age structure, a "demographic wave" that works its way through the population. First, there are many young people, who need to be fed, clothed, housed, cared for medically, and educated. Then, they be-come adults who are more likely to spend only part of the income they generate on their own needs. The rest is used to provide for children or is saved, most often for retirement. Finally, there is a large cohort of elderly people, who work less—or not at all—and become "dependent" again. They either live off their own savings or are sup-ported by their families or the state.

The effects of the modern demographic transition can be felt for several generations. An initial spurt of population growth occurs between the beginning of the mortality decline and the end of the fertility decline. But when the baby-boom generation itself reaches the prime reproductive years, it creates its own echo: a succeeding baby boom. Subsequent echo effects produce further spurts. In other words, even if total fertility rates have been reduced to replacement level (2.1 children per woman), the population will continue to grow until the members of the bulge generation and successive echo generations tend to have passed through their prime reproductive years. This process is called population momentum, and its effects will be felt for perhaps 50 to 100 years before the population age structure settles down. Because of the effect of population momentum alone, the population of developing countries as a whole is expected to increase by 40 percent between 1995 and 2100.

1.3.3.2 The Demographic "Dividend"

The demographic dividend is delivered through a number of mechanisms. The most important are labor supply, savings, and human capital.

Labor Supply: The demographic transition affects labor supply in two ways. First, there is an essentially mechanical effect, based on the regular and inevitable aging of the baby-boom generation. When this generation is between 15 and 64, it is more likely to be working, thus lowering the ratio of dependents to non-dependents. During the peak working years of 20 to 54, this effect is especially strong. The number of people who would like to work (labor supply) therefore gets bigger and, provided the labor market can absorb the larger numbers of workers, per capita production increases. Second, women are more likely to enter the workforce as family size declines. This effect is magnified by the fact that, with adult women themselves more likely to have been brought up in small families, they are more likely to be educated. This increases their productivity in the labor market, leading toward a stronger workforce and smaller families.

Savings: The demographic transition also encourages the growth of savings, thus improving a country's prospects for investment and growth. Again, there is an accounting effect as well as a behavioral effect at work. The young and the old consume more than they produce, whereas working-age people tend to have a higher level of economic output and also a higher level of savings. Further, people tend to save more between the ages of 40 and 65, when they are less likely to be investing in their children and the need to prepare for their retirement is becoming more pressing. So when large numbers of baby boomers start hitting their 40s, national savings will tend to rise. Incentives to make certain choices can reinforce this tendency to save among the new young baby boomers. Improved health, and longevity, make saving easier and more attractive. A healthy population must plan far in advance if it is to maintain its standard of living through decades of retirement. Smaller families and the mobility that urbanization brings make pensions even more important. An extended family often takes care of its own elderly relatives. A nuclear family, with both parents working, is far less likely to do so, although the two-earner family's increased assets make it better able to provide care financially, if not physically. Additionally, private household savings can provide the capital accumulation needed to finance growth. Further work is needed, however, to take account of the institutional features of pension systems when assessing the importance of the demographic transition to the determination of national savings.

Human Capital: Finally, the demographic transition has significant effects on investments in human capital; effects which are the least tangible, but may be the most significant and far-reaching. The demographic transition begins with changes in mortality that result in a population that lives longer and stays healthier. A longer life expectancy causes fundamental changes in the way that people live. Attitudes about education, family, retirement, the role of women, and work all tend to shift. A society, especially if it is taking full advantage of the demographic dividend, is certain to experience deep- rooted changes in its culture, as its people become more valuable assets. Take education, for example: The positive correlation between education and earnings is well known. In Latin America, for example, a worker with six years of education earns an average of 50 percent more than one who has no formal education. The premium increases to 120 percent for those with 12 years of education (i.e., those finishing secondary school), and exceeds 200 percent for those with 17 years of education (i.e., those completing tertiary education). As life expectancy increases, parents are likely to choose to educate their children to more advanced levels. Healthier children, in turn, tend to experience greater cognitive development per year of schooling than their less healthy counterparts. The parents also know that there is a good chance that each child will benefit from schooling investments over a long working life and, with fewer children, can devote more time and money to each child. The result of this educational investment is that the labor force as a whole becomes more productive, promoting higher wages and a better standard of living. Women and men therefore tend to enter the workforce later, partly because they are being educated for longer, but they are likely to be more productive once they start working. All these mechanisms are heavily dependent on the policy environment. A growing number of adults will only be productive if there is sufficient flexibility in the labor market to allow its expansion, and if there are macroeconomic policies that permit and encourage in-vestment. Similarly, people will only save if they have access to adequate saving mechanisms and have confidence in domestic financial markets. Finally, the demographic transition creates conditions where people will tend to invest in their own and their children's health and education, offering great economic benefits, especially in the modern world's increasingly sophisticated economies. But governments invariably play a vital role in creating an environment where high-quality health and education provision is possible—necessary steps to make the most of their country's demographic opportunities.

13.4 World Perspectives on the Population Debates as Reflected in World Population Conferences

Rapid population growth, resulting from the gap between declining mortality and continuing high fertility, began occurring in many developing countries by the mid-1960s resulting in rates that would double their populations in less than 25 years. Concerns about rapid population growth voiced by demographers, social scientists, and others were based largely on the assumption that such growth would "serve as a brake" on economic development. Conservationists also wrote about excessive population growth as a threat to food supplies and natural resources. Concerns about the impact of rapid population growth and high fertility motivated the widespread implementation of family planning programs in many areas of the developing world. Policymakers presumed that by helping to reduce high fertility, family planning programs would slow population growth, which in turn would contribute to improved economic performance by freeing resources that otherwise would be devoted to child-rearing and by reducing strains on infrastructure and the environment. At the level of scholars and the international community, emphasis also shifted towards the stressing of interrelationships

between population and development. The argument here is that both population and socio-economic development can and do influence each other.

The world community at large debated the issue of population and development in three United Nations World Population Conferences: 1974 in Bucharest, 1984 in Mexico, and 1994 in Cairo. The 1994 International Conference on Population and Development builds on the considerable international consensus that has developed since 1974. The 1994 Conference was given a broader mandate on development issues than previous conferences, reflecting the growing awareness that population, poverty, patterns of production and consumption and the environment are so closely interconnected that none of them can be considered in isolation.

There is a general agreement that persistent widespread poverty and serious social and gender inequalities have significant influences on, and are in turn influenced by, demographic factors such as population growth, structure and distribution. There is also a general agreement that unsustainable consumption and production patterns are contributing to the unsustainable use of natural resources and to environmental degradation. The ICPD Programme of Action states that efforts to slow population growth, reduce poverty, achieve economic progress, improve environmental protection and reduce unsustainable consumption and production patterns are mutually reinforcing. Sustained economic growth within the context of sustainable development is essential to eradicate poverty. Eradicating poverty will contribute to slowing population growth and to achieving early population stabilization. Eliminating all forms of discrimination against women is a prerequisite for eradicating poverty, promoting sustained economic growth, ensuring quality family planning and reproductive health services, and achieving a balance between population and available resources.

1.3.5 Theoretical and Empirical Examples of Linkages on Population and Development

Many developing countries managed to raise average income even as their populations grow rapidly. In that strict sense, rapid population growth has been ***accommodated***. But the goal of development extends beyond accommodation of more people; it is to ***influence*** population trends for improving people's lives.

Why does rapid population growth slow development? First, it exacerbates the awkward choice between higher consumption now and the investment needed to bring higher consumption in the future. Economic growth depends on investment. But if consumption is low already, the resources available for investment are limited; faster population growth makes investment in "population quality" more difficult. Second, in many countries increase in population threatens what is already a precarious balance between natural resources and people. Third, rapid increases in population make it hard to manage the adjustments that accompany and promote economic and social change. The growth of cities in developing countries, largely due to high rates of natural increase, poses serious management problems; so too does continued rapid growth that in some rural areas threatens permanent environmental damage. These costs of rapid population growth differ among countries. Where education levels are already high, investment in transport and communications is in place, and political and economic systems are stable, countries are in a better position to cope with the strains of rapid growth. In countries where the population is still largely dependent on agriculture, and the amount of new land or

other resources is limited, progress in the face of continuing rapid population growth will be extraordinarily difficult. The costs of rapid population growth, moreover, are cumulative. More births now make the task of slowing population growth later more difficult, as today's children become tomorrow's new parents.

Although rapid population growth is often held to be a major cause of poverty, surprisingly little work has been done to examine the direct effects of population growth on poverty. Lacking much direct evidence on the effect of population growth on poverty, one turns to the available empirical evidence on the impact of high fertility or rapid population growth on variables that are associated with poverty. For an individual the most important factors associated with poverty are low earnings, lack of land and human capital (education and health), and large families. Poverty is also related to macroeconomic factors such as, slow economic growth and an inequitable distribution of income. The Independent Inquiry Report into Population and Development commissioned by the Australian Government in 1994 stated that there is little direct evidence on whether rapid population growth causes poverty, but indirect evidence suggests that it may contribute to the growth or transmission of poverty across generations. For example, rapid population growth is likely to reduce per capita income growth and may therefore increase the incidence of poverty. Also, in densely populated poor nations with pressures on land, rapid population growth will increase landlessness and reduce the free bounty of the common environment and hence the incidence of poverty. The adverse effects of rapid population growth on child health possibly increase poverty in the next generation. The report concluded that slowing population growth from high current levels, especially in poor, agrarian societies facing pressure on land and resources, is advantageous to economic development, health, food availability, housing, poverty, the environment, and possibly education.

More recently, the UNFPA State of the World Population 2002 report argues that addressing population concerns is critical to meeting the Millennium Development Goals of curbing global poverty and hunger in half by 2015, reducing maternal and child deaths, curbing HIV/AIDS, advancing gender equality, and promoting environmentally sustainable development. Pointing to a "population effect" on economic growth, the report cites new data showing that since 1970, developing countries with lower fertility and slower population growth have seen higher productivity, more savings and more productive investment. They have registered faster economic growth. Investments in health and education, and gender equality are vital to this effect. Family planning programmes and population assistance were responsible for almost one third of the global decline in fertility from 1972 to 1994. These social investments attack poverty directly and empower individuals, especially women. Long-term demographic and economic data from 45 developing countries show that high fertility increases poverty by slowing economic growth and by skewing the distribution of consumption against the poor. Enabling women to have smaller families – by reducing mortality, increasing education and improving access to reproductive health and family planning – counters both of these effects. The national effects on poverty reduction are clear from both average domestic product (GDP) increase and consumption figures.

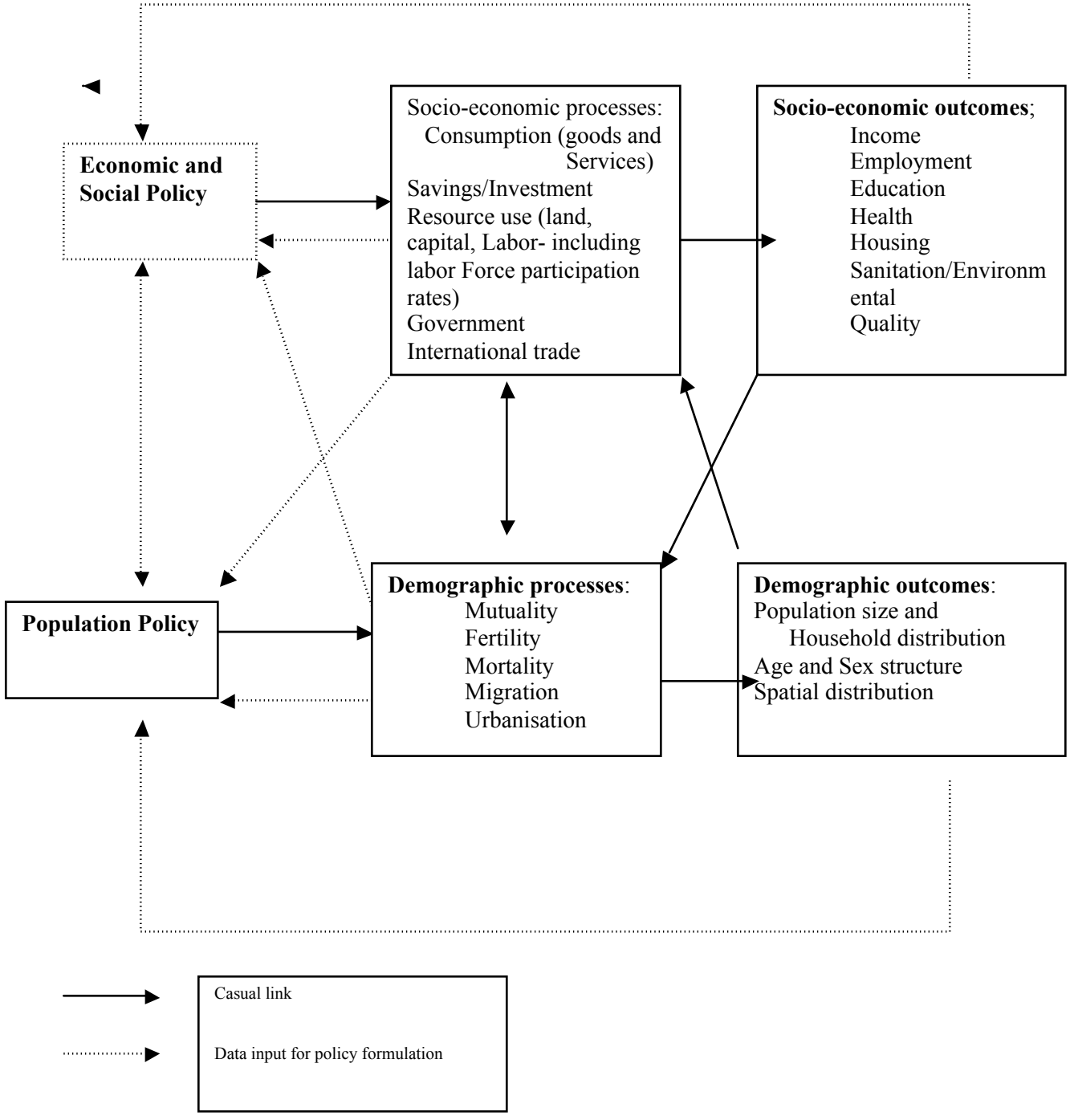
It is now abundantly clear that population changes are a part of the development story and are linked to poverty at the macro and micro levels. The key remaining questions are how large a part and how context specific are the various linkages? The variety of linkages is important and macro-level research by economic demographers in the last decade or so has begun to separate

the mortality and fertility components of population growth and to pay more attention to age structure and the life cycle. The type and nature of relationships between socio-economic and demographic processes and outcomes are inexhaustible, and our knowledge of them is still quite limited in spite of steady progress in recent decades. This calls for a systematic examination of population and development interrelationships in the planning process.

Let us look, for example, at the following simplified framework for viewing economic-demographic inter-relationships at the macro level.

In this model, elements of development policy are characterized as socio-economic or demographic – for example, according to whether the underlying objectives are primarily socio-economic or demographic. Socio-economic policies affect the process of production, distribution and consumption to create a set of socio-economic outcomes which, together, determine the well-being of the population. These outcomes, in turn, affect the demographic processes, resulting in a set of demographic outcomes upon which the socio-economic processes partly depend. The path of causation is indicated by the solid lines in the direction of the arrows. In the middle panel, the two processes may be regarded as parallel but in reality, interact with each other.

A simple framework of economic –demographic inter-relationships



As an example, consider a policy, which aims at reducing urban unemployment through a job-creation programme. This may have direct effects on investment, resource use and consumption, and may even affect government revenue and expenditure, savings and international trade (vide, the socio-economic processes box) resulting in a set of socio-economic outcomes involving new levels of employment and income, perhaps with improvements in health and housing, and with changes in the quality of the environment (negative or positive, depending on the types of activities generated). These outcomes may imply changes in urban-rural relative incomes but especially in higher expected incomes in the urban area arising from the desired decline in urban unemployment. More migrants may thus become attracted to the urban area, as predicted under the Harris-Todaro model. In addition, the socio-economic changes may affect nuptiality, fertility and mortality. All these will affect population size, structure and spatial distribution, which will in turn alter consumption patterns, resource use and the other elements in the socio-economic processes box with new implications for employment and income levels.

Additional measures (socio-economic and/or demographic) might be called for if the original objectives are to be attained. The process is, no doubt, much more complex than as sketched here, and there will be many other interactions between the two subsystems. The effects of population policies can be similarly traced through the system.

A population policy may be *laissez-faire* and accommodating, in which case the planner merely anticipates the demographic responses to the socio-economic processes and outcomes embodied in the development plan and makes allowance for them as well as for the internal evolution of the demographic subsystem itself, or it may seek to actively influence the demographic processes and outcomes as part of attempts to attain particular socio-economic objectives. In either case, at all times, the two sets of processes and outcomes provide data which can be used in formulating and/or modifying policy, as suggested by the broken lines.

In conclusion, available evidence indicates that population dynamics affect economic performance, which, in turn, has major implications for poverty levels. In many societies, health gains and reductions in the birth rate have accompanied the demographic transition and gains in economic growth to produce a decline in the incidence of poverty. Elsewhere, however, persistent population growth not only constrains development opportunities but contribute to environmental degradation. Poverty is associated with high level of unwanted births particularly in rural areas where the majority of the poor live. Consequently improved reproductive health and provision for unmet needs should be an integral part of poverty reduction strategies, especially in countries where major health issues such as HIV/AIDS tend to subvert attempts to achieve sustainable development (UNFPA 2003).

Substantial evidence has been mounting in recent years demonstrating that slower population growth and reproductive health are central to the attainment of the goals identified by the Millennium Summit and to the entire development agenda. On-going population trends will affect prospects for sustained improvement in poverty beyond the horizon of the MDGs. Lower fertility and slower population growth temporarily increase the relative size of the workforce, opening an historic, one-time only demographic window that provides an opportunity for human and financial investment in economic growth. Unfortunately, in many of the poorest countries that are most in need of such a break, population momentum, high levels of unwanted fertility

and the all-pervasive presence of the HIV/AIDS pandemic are curtailing the opportunity before it has even begun. In these circumstances, the continuing dependency of useful populations on the one hand or premature deaths of young adults on the other curtail the prospect of any such 'Dividend".

The enlarged proportion of working-age population in countries undergoing fertility decline are complemented by the increasing awareness and support for participation of women in the labour force. This contributes to economic growth especially when it occurs in the formal sector, contributes skills that are in demand and is adequately compensated. The rising levels of women's education and increased demand for labour by the expanding formal sector raise the opportunity cost of high fertility. The increase in education levels and the decline in fertility can combine in a positive feedback in which the growth of the labour force increases faster than the growth of the working-age population.

A number of other mechanisms have also been identified as significant in influencing the nature and scale of the impacts of population on development at both the national and the household scales. Long-term demographic and economic data indicate that high fertility raises absolute levels of poverty by slowing economic growth, reducing the quantum of poverty reduction that economic growth would have helped deliver, and skewing the distribution of consumption against the poor. Fertility reduction through greater acceptance of family planning counters both of these effects. Investments in improved reproductive health assist in redressing gender inequities and barriers to social and economic participation.

There are differences in timing relative to the various stages of the demographic transition. When mortality first declines increased expenditure is needed for young dependents and growth slows. As fertility declines and the rate of population increase slows, economic growth increases. In the early stages of transition, the gap between poor and non-poor households is likely to increase. As poorer families join in the transition, the reduction of poverty and inequality accelerates. The beneficial effects increase as the demographic transition proceeds, especially for a country emerging from high levels of fertility, and generally the faster the fertility decline the larger the benefits but the shorter the time period available to take advantage of them.

The magnitude of demographic effects interacts with the condition of markets, government and institutions. Where these institutions are weak, the initial negative effects tend to be magnified. Positive effects are likely to be reinforced where labour markets and school systems are working well and parents invest in their children's education. Appropriate economic and social policies, combined with access to reproductive health services can accelerate poverty reduction.

One in every four persons in developing countries, some 1.2 billion people, live in extreme poverty on less than $1 (purchasing power parity – PPP) a day. Countries where poverty levels are highest, as measured by the poverty headcount ratio, are generally those that have the most rapid increases in population and where fertility levels are highest. At the same time, in countries where there is broad access to basic social services fertility levels are lowest (UNFPA 2003).

Much of the debate on population and poverty interactions has focused on macro-level effects. It has been fuelled by simple, albeit inconclusive, correlations between aggregate population

growth in numbers and economic growth, with reverse causality making the correlations difficult to interpret. A more insightful line of approach is to analyze link-ages through components of the growth in population numbers, including the age structure, using the demographic transition as a reference framework.

Population and poverty interactions should also be analyzed from a *micro* perspective. A solid knowledge of micro-level determinants is essential for policy making on, for example, critical decisions regarding desired family size and whether or not to use contraception, since these decisions are made at the individual or household level. Combining both macro and micro-level analysis allows us to understand "poverty traps ", such as situations where aggregate high fertility slows economic growth and poverty reduction, but where it may be optimal individually for families to choose large family size. How would changes in population size and age structure affect poverty? These variables can alter:

- The rate of growth of consumption and income (CI) per person through, for example, the effect of increased investment and savings: this is the growth effect;
- The distribution of CI due to differential rates of demographic transition: this is the distribution effect;
- The ability of the poor, with emphasis on women and children, to convert a given level of CI into nutritional requirements and to access, for example, basic social services: this is the conversion effect.

The first two effects are best analysed at the macro level, while the conversion effect is best approached at the micro level.

Population pressures can do irreversible damage to the environment, especially in settings of a fragile ecosystem, marginal lands and high densities where the bulk of the poor reside. For example, a study by the Population Reference Bureau (1996) found that population growth, particularly migration, is associated with the destruction of tropical forests, which is linked to a loss of biodiversity and land degradation. Further, population size, growth, spatial distribution and patterns of resource use can have an impact on the levels of all types of pollution, including air, water and solid pollution. However, generalizations about the negative impact of population factors on the environment can be misleading and the benefits of new technologies need to be factored in. While in many regions environmental degradation is the reality affecting large segments of the poor, the 'ecological footprint 'is largest in developed countries, with the poor in the developing world most affected. Over-consumption by the rich and under-consumption by the poor are a manifestation of the inequality between the developed and developing countries.

Nearly 75 per cent of the 1.2 billion people who are living in extreme poverty are located in rural areas, often isolated from markets and centres of social service provision. The majority of the poor are women and girls whose poverty is reinforced by legal and cultural obstacles. Fast-growing rural areas increase pressure on productive lands resulting in the over-exploitation of the soil, over-grazing and clear felling of forests. The marginalisation of the rural poor is further magnified by the infrequency of private investment flows into the countryside. Due to environmental degradation, rural people, especially women, must walk increasing distances to fetch water and collect firewood. Environmental degradation can also affect poor people

through declining employment and income opportunities. Rural to urban migration, urban population growth and urbanisation are all closely linked with the process of demographic transition, both as causes and effects. In 2000,some 40 per cent of people in less developed regions were urban. By 2025 this is projected to grow to 54 per cent. The combination of poverty, population pressures and environmental degradation is a powerful force driving rural to urban migration, as well as cross-border movements, including environmental refugees. Furthermore, the propensity to migrate varies by age so that, given the relatively large youthful populations in low-income countries, increasing levels of migration and urbanisation are to be anticipated (UNFPA 2003).

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MODULE 2: Status of Population Dynamics and Socioeconomic Development in Regional Member Countries (RMCs)

MANUAL

Session 1: Levels and Trends in Population Size, Fertility, Mortality and Migration

Session 2: Socio-economic impact of HIV/AIDS

Session 3: Emergency Situation

Session 4: Socio-economic Status of the Regional Member Countries (RMCs)

2.1 Session 1: Levels and Trends in Population Size, Fertility, Mortality and Migration

Session Objectives

By the end of the session, participants will be able to:

- Have a general idea on the population size, fertility, mortality and migration situation in Africa;
- Compare the variations among the five sub-regions in terms of size, distribution, fertility and mortality levels and trends;
- Know the levels and trends in HIV/AIDS
- Know the levels and trends of urbanization by sub-region and link them with development

Organization of the module or Topics covered

This topic is organized around five main topics:

(i) Population size and growth;
(ii) Fertility levels and trends;
(iii) Mortality levels and trends;
(iv) Levels and trends in HIV/AIDS
(v) Levels and trends in migration and urbanization

2.1.1 Levels and trends in population size, fertility, mortality and migration

2.1.1.1 Levels and Trends in Population Size

The total population of Africa, according to the UN 2002 revision of World Population Prospects, increased from 221.2 million in 1950 to 795.7 million in 2000 and is projected to be 1,084.5 million by 2015 and 1,803.3 million by 2050. Similarly, the population growth rate increased from 2.2 per cent around 1950 to 2.9 per cent around 1980 and thereafter decreased to 2.4 around 2000 and is projected to further decrease to 1.9 per cent around 2015 and 1.1 per cent around 2050.

The total population more than tripled in fifty years. The population aged under 25 has consistently been over 60 per cent since 1950 and is expected to remain at that level until 2015. This youthful population is not only growing rapidly but is also the group most affected by the HIV/AIDS pandemic. The age group that includes the elderly has been smaller. But in the recent past this category, that seems to have been less affected by the HIV infection directly, is increasing slightly in proportion. Although the proportion of the elderly population is small for the continent as a whole, several countries such as those in Northern Africa and Mauritius have significantly higher proportions.

As indicated in Table 1, the various African sub-regions have shown similar trends in the reduction of population growth rate although the pace of decline varies significantly. For

example, the decline in the population growth rate of Southern Africa between 1975 and 2000 was exceptionally more drastic than other sub-regions, and is further projected to experience a negative growth rate. This is mainly as a result of the high HIV/AIDS pandemic in this sub-region compared to others.

2.1.1.2 Levels and Trends in Fertility

The total fertility rate was 6.7 children per woman in 1950-55 and remained still high at 5.2 in 1995-2000 and is expected to decline to 2.4 in 2045-2050. These averages result from very varied experiences at the sub-regional and country levels. While in 1950 the level of fertility was generally similar among sub-regions, by 2000 there were significant differences among sub-regions ranging from 2.8 and 3.2 in Southern and Northern Africa respectively to 6.3 in Middle Africa reflecting the general difference in the level of development and contraceptive use. The contraceptive prevalence rate (CPR) for the region as a whole stands at 25, ranging from as low as 4 (Sierra Leone) to as high as 75 (Mauritius).

2.1.1.3 Levels and Trends in Mortality

For the region as a whole mortality has been declining consistently. Between 1950 and 2000 the expectation of life at birth increased from 37.8 to 48.9 while the infant mortality rate declined from 182 per thousand to 89 per thousand during the same period.

When looking at sub-regional situations one sees clearly distinct variations in both the level and trend of mortality. The expectation of life at birth in 1950 ranged from 35.5 years in Western Africa to 44.5 years in Southern Africa, a difference of 9 years. However, in 2000 it ranged from 42.7 years in Middle Africa to 66.3 years in Northern Africa, a difference of 23.6 years. It is also worth noting the trend in expectation of life at birth. Whereas only Northern and Western Africa showed consistent increase in the expectation of life at birth, the other sub-regions showed a zigzag course. In particular the Southern Africa sub-region experienced a substantial reduction in the expectation of life at birth between 1975 and 2000 from 55.2 to 46.4 years as a result of HIV/AIDS but is again projected to increase to 54.4 by 2050.

Sub-Saharan Africa has the highest infant mortality rate and at the same time accounts for half of the developing world's maternal deaths – with 1 of every 100 live births resulting in the mother's death. Women's lifetime risk of maternal death is 1 in 16 for Africa compared to 1 in 110 in Asia, 1 in 160 in Latin America and 1 in 3,500 in North America. Poor maternal health poses significant threat to the economy of the region, as the untimely and unnecessary death of women results in a loss of any social and economic investment made in them. Yet, maternal morbidity and mortality is preventable through universal access to reproductive health care, including family planning; care in pregnancy, during and after childbirth; and emergency obstetric care. Women' s empowerment also plays an important role in the reduction of unwanted pregnancy, unsafe abortion and maternal death.

2.1.1.4 Levels and trends in HIV/AIDS

Out of the 42 million people living with HIV/AIDS, SSA accounted for 70% (i.e. 29.4 million men and women) at the end of 2002, and 58% of them were women compared with 41% in

1997. The region further accounted for 77% of the adult and child deaths resulting from HIV/AIDS. This high incidence of HIV/AIDS-related mortality has seriously curtailed life expectancy in the region. In the 35 highly affected countries, life expectancy at birth was estimated at 48.3 years in 1995-2000, 6.5 years less than it would have been in the absence of AIDS. By 2015, the population of these 35 countries is projected to be 84 million, 10% less than it would have been without AIDS. In 2001, an estimated 10 million young people aged 15-24 were living with HIV/AIDS. This is especially serious considering that young people between the ages of 10 and 24 constitute one third of the region's population. SSA can no longer afford to take half measures as AIDS wipes out growing numbers of the new generation and people in the working age. This is not just a public health issue, as it has far reaching social and economic consequences in the region in terms of labour productivity, disintegration of family structures, etc. (see section on socio-economic and demographic impact of HIV/AIDS)

The demographic impact of AIDS is even more dramatic in the seven countries of Africa with the highest HIV prevalence levels (at or above 20 per cent), namely Botswana, Lesotho, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. In these countries, the population in 2015 is projected to be 19 per cent lower than without AIDS. The death toll in these 7 countries during 2000-2005 will be 112 per cent higher than the number of deaths projected in the absence of AIDS. The projected trend has very serious implications for dependency, especially for the future adults of the sub-region. Wherever AIDS has claimed the lives of many adults, more than 10% of the children lose one or both parents during their childhood. Children orphaned by AIDS are more likely to stop going to school, and often have to support themselves and take on adult responsibilities. As a result, a considerable number of children tend to leave home or lose their homes and join the growing numbers of street children. Orphan girls may encounter increased pressure to marry early, get coerced into early and unwanted sexual activities, fall back on men for financial support and protection, or turn to prostitution for survival – which for many, will be only for short-term survival. This increases their exposure to HIV infection.

Sub-Saharan Africa has just over 10% of the world's population, but is home to close to two-thirds of all people living with HIV. In 2003 alone, an estimated 3 million people in the region became newly infected, while 2.2 million died of AIDS. Among young people 15–24 years of age, 6.9% of women and 2.1% of men were living with HIV by the end of 2003. Girls and young women are at greatest risk. As of December 2003, women accounted for nearly 50% of all people living with HIV worldwide, and for 57% in sub-Saharan Africa. Women are more physically susceptible to HIV infection than men. Data from a number of studies suggest that male-to-female transmission during sex is about twice as likely to occur as female-to-male transmission, if no other sexually transmitted infections are present. Moreover, young women are biologically more susceptible to infection than older women before menopause. Women's increased risk is also a reflection of gender inequalities

There is tremendous diversity across the continent in the levels and trends of HIV infection. Southern Africa remains the worst affected region in the world, with data from selected antenatal clinics in urban areas in 2002 showing HIV prevalence of over 25%, following a rapid increase from just 5% in 1990. Prevalence among pregnant women in urban areas was 13% in Eastern Africa in 2002, down from around 20% in the early 1990s. During this period, prevalence in West and Central Africa remained stable. There is no single explanation for why the epidemic is so rampant in Southern Africa. A combination of factors, often working in concert, seems to be

responsible. These factors include poverty and social instability that result in family disruption, high levels of other sexually transmitted infections, low status of women, sexual violence, and ineffective leadership during critical periods in the spread of HIV. An important factor, too, is high mobility, which is largely linked to migratory labour systems.

2.1.1.5 Levels and Trends in Migration and Urbanization

Another important dimension of population is its changing geographic distribution. A variety of forces have contributed to the increase in internal migration in African countries. Natural increase has remained higher in rural areas, thereby increasing population pressures. Unequal distribution of land and agricultural production resources have forced many off the land, and attempts to increase production using more advanced agricultural technologies have made the agricultural sector less labour intensive. In some areas, for example Sahel, poor management of soil, water, and forest resources has further reduced the labour-absorptive capacity of rural areas. On the "pull" side of the migration equation, potential migrants also perceive that there are greater job opportunities for themselves and educational opportunities for their children in urban areas. Improved transportation and communication have also fostered geographic mobility. These same forces have stimulated flows of migrants across international borders.

International net migration in African countries is generally low. International population movements often have greater economic, social, and political impacts than purely demographic significance for both sending and receiving countries. Various countries have expressed concern about the brain drain, particularly those from the medical profession, to more developed countries.

Africa, which in 1950 had the lowest proportion urban, experienced the fastest rate of urbanization of any major area during 1950-2000 and saw its percentage urban rise from 14.7 in 1950 to 37.2 in 2000. Although Africa's average rate of urbanization over the next 25-30 years is expected to be lower than during the second half of the twentieth century (1.2 per cent per year instead of 1.9 per cent per year), it will still be high and will result in a level of urbanization of 52.9 per cent by 2030. That is, Africa will have more of its population residing in urban than rural areas. The highest levels of urbanization in the region are found in the northern and southern Africa where about half of the total population live in urban agglomerations. In contrast, only about a quarter of the total population in middle and eastern Africa lives in urban areas. Although the latter sub-regions are among the least urbanized, their urban populations are the fastest growing population.

On the other hand, some States in the central and eastern sub-region (Gabon and Djibouti) offer the extreme situation where two urban centers account for over 80 per cent of the total population living in urban areas. In the absence of sustained economic growth and political stability, the projected population increase of these cities suggests possible worsening of urban agglomeration.

Table 1: Selected Demographic Indicators by Sub-region, 1950-2050

INDICATOR	1950	1975	2000	2015	2050
Population (millions)					
Africa	221.2	408.2	795.7	1084.5	1803.3
Eastern Africa	65.6	124.8	252.5	349.1	614.5
Middle Africa	26.3	46.2	93.0	136.7	266.3
Northern Africa	53.3	97.5	173.6	224.5	306.0
Southern Africa	15.6	29.2	50.4	51.0	46.6
Western Africa	60.4	110.4	226.1	323.3	569.9
Population growth rate (%)					
Africa	2.2	2.8	2.2	1.8	1.1
Eastern Africa	2.2	2.9	2.2	2.0	1.3
Middle Africa	1.8	2.9	2.7	2.4	1.4
Northern Africa	2.3	2.6	1.9	1.3	0.5
Southern Africa	2.3	2.5	0.6	-0.2	-0.2
Western Africa	2.2	3.0	2.6	2.0	1.2
Total Fertility (per woman)					
Africa	6.7	6.6	4.9	3.8	2.4
Eastern Africa	7.0	7.0	5.6	4.3	2.5
Middle Africa	5.9	6.5	6.3	5.1	2.6
Northern Africa	6.8	6.0	3.2	2.5	1.9
Southern Africa	6.5	5.2	2.8	2.2	1.9
Western Africa	6.9	7.1	5.6	4.1	1.2
Infant mortality rate (per 1000 births)					
Africa	182	122	89	68	33
Eastern Africa	182	125	97	73	33
Middle Africa	186	126	116	93	47
Northern Africa	188	115	49	30	14
Southern Africa	104	75	52	38	22
Western Africa	192	131	90	68	33
Life expectancy at birth (yrs)					
Africa	37.8	48.2	48.9	53.0	64.9
Eastern Africa	36.3	46.7	43.1	48.3	62.5
Middle Africa	36.1	46.04	42.7	46.8	60.6
Northern Africa	41.9	53.9	66.3	70.2	76.2
Southern Africa	44.5	55.2	46.4	42.2	54.4
Western Africa	35.5	45.1	49.6	53.7	64.9
Population density (per sq km)					
Africa	7	13	26	36	60
Eastern Africa	10	20	40	55	97
Middle Africa	4	7	14	21	40
Northern Africa	6	11	20	26	36
Southern Africa	6	11	19	19	17
Western Africa	10	18	37	53	93

INDICATOR	1950	1975	2000	2015	2050
Population Age 0-24 (%)					
Africa	60.9	64.2	63.0	60.0	45.8
Eastern Africa	62.4	65.2	65.9	64.1	48.9
Middle Africa	59.7	62.7	65.9	65.7	51.3
Northern Africa	60.2	63.5	56.6	48.3	33.6
Southern Africa	57.6	62.4	55.8	52.7	39.9
Western Africa	61.1	64.5	65.3	62.3	47.0
Urban Population (%)					
Africa	14.7	25.2	37.2	45.3	52.9*
Eastern Africa	5.3	12.3	24.5	33.4	41.8
Middle Africa	14.2	26.7	35.5	44.0	52.7
Northern Africa	24.7	38.6	48.9	55.7	63.3
Southern Africa	38.2	44.1	53.9	63.7	70
Western Africa	10.1	22.6	39.3	49.0	57.1
Urban population growth rate (%)					
Africa	4.5	4.5	3.8	3.2	2.8*
Eastern Africa	5.6	6.6	4.7	3.9	3.4
Middle Africa	4.1	3.9	4.4	4.2	3.8
Northern Africa	4.3	3.6	2.7	2.1	1.8
Southern Africa	3.2	2.6	2.1	0.6	0.8
Western Africa	5.8	5.5	4.3	3.4	2.8
Percentage Urban growth rate (%)					
Africa	2.3	1.7	1.4	1.1	1.0*
Eastern Africa	3.3	3.7	2.3	1.6	1.4
Middle Africa	2.3	1.1	1.4	1.3	1.1
Northern Africa	2.0	0.9	0.9	0.9	0.8
Southern Africa	0.9	0.2	1.3	0.7	0.6
Western Africa	3.6	2.6	1.7	1.1	0.9

** These figures are for 2030*

Source: Compiled from UN. 2003. World Population Prospects: The 2002 Revision; and UN 2002. World Urbanization Prospects: The 2001 Revision.

Referemces

1. UN Population Division. 2003. World Population Prospects: The 2002 Revision
2. UN Population Division. 2002. World Urbanization Prospects: The 2001 Revision
3. UNFPA 2004. Africa Regional Report on ICPD+10
4. UNFPA. 2003. UNFPA Africa Regional Strategy 2004-2015
5. UNFPA. 2002. State of the World Population Report

2.2 Session 2: Socio-economic impact of HIV/AIDS

Session Objectives

By the end of the session, participants will have:

- A clear picture of the demographic and socio-economic impact of HIV/AIDS;
- Enough information to explain how HIV/AIDS could impact on population and development in Africa and impede its development prospects

Organization of the session or Topics covered

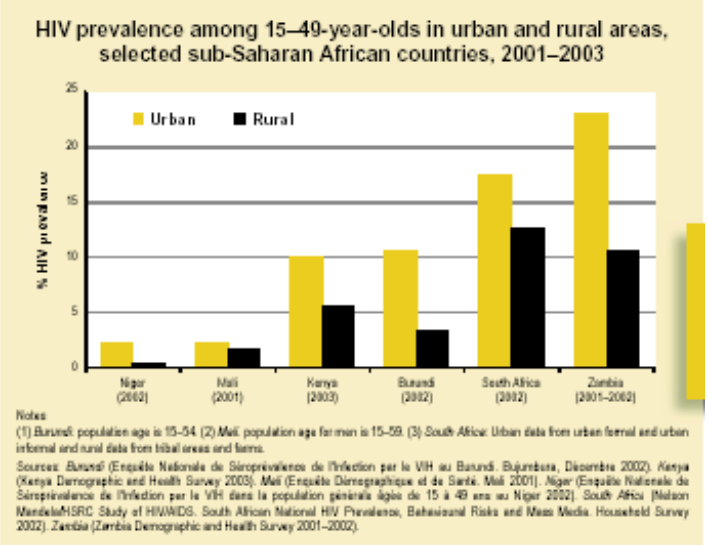
1. Description of the demographic aspects of the HIV/AIDS pandemic in Africa;
2. HIV/AIDS impacts on demographic
3. Socio-economic impacts of HIV/AIDS

2.2.1 Demographic aspects of HIV/Pandemic in Africa

AIDS is an extraordinary kind of a crisis that needs to be treated as both an emergency *and* a long-term development challenge. This challenge has an important demographic dimension that needs to be taken into account to make any poverty reduction programme/project to be successful.

Sex and age structure dimensions of the pandemic

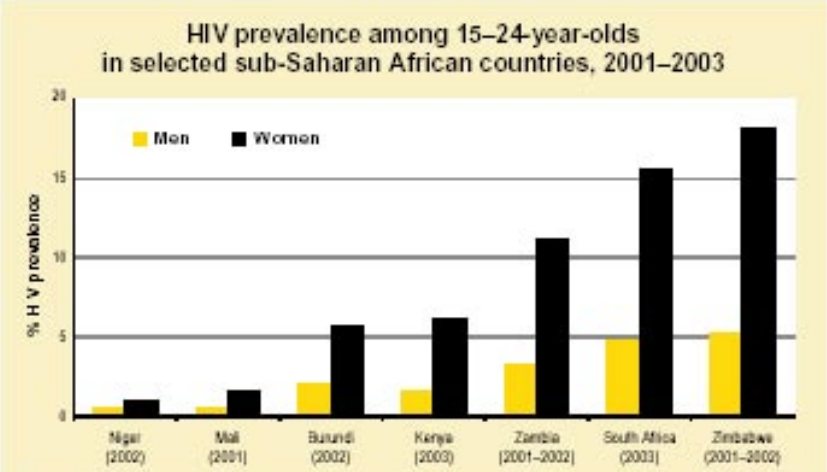
Young people (15–24 years old) account for half of all new HIV infections worldwide; more than 6000 contract the virus every day.



So far, urban populations are more infected than rural ones because of increasing urban promiscuity, reduced traditional social control, and specific age structure with more young adults in growing African cities giving more facilitating field to the HIV/AIDS infection.

An issue of particular concern is the neglect of orphaned children. AIDS has killed one or both parents of an estimated 12 million children in sub-Saharan Africa. To limit the impact of AIDS on the social and economic life of communities and countries, it is a political imperative that orphaned and vulnerable children be cared for.

Girls and young women are at highest risk. As of December 2003, women accounted for nearly 50% of all people living with HIV worldwide, and for 57% in sub-Saharan Africa. Women are more physically susceptible to HIV infection than men. Data from a number of studies suggest that male-to-female transmission during sex is about twice as likely to occur as female-to-male transmission, if no other sexually transmitted infections are present. Moreover, young women are biologically more susceptible to infection than older women before menopause. Women's increased risk is also a reflection of gender inequalities. Nowhere is the epidemic's 'feminization' more apparent than in sub-Saharan Africa, where 57% of adults infected are women, and 75% of young people infected are women and girls. Several social factors are driving this trend. (Dunkle et al., 2004).



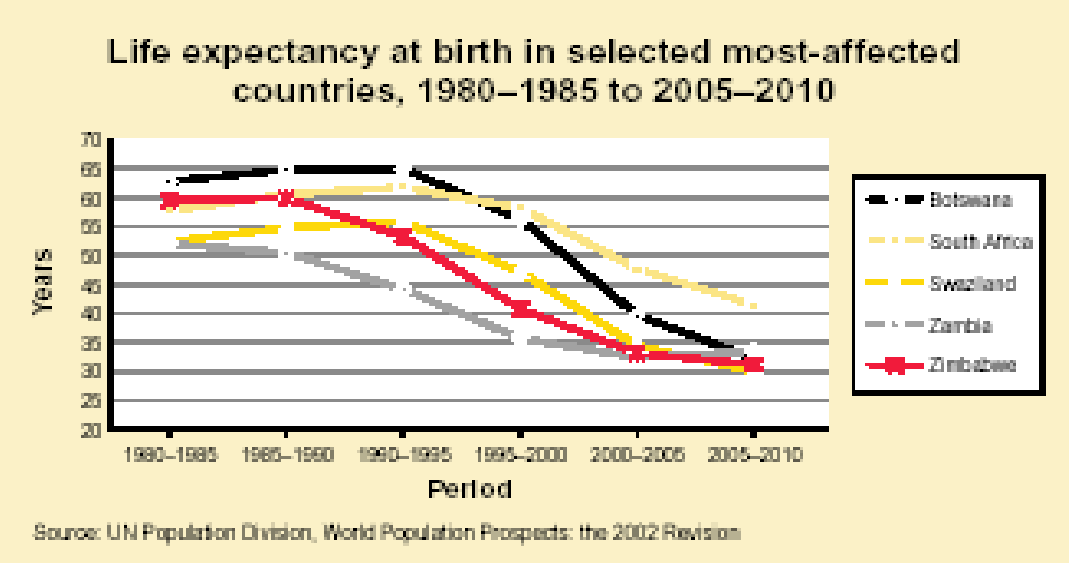
Sources: Burundi (Enquête Nationale de Séroprévalence de l'Infection par le VIH au Burundi. Bujumbura, Décembre 2002). Kenya (Kenya Demographic and Health Survey 2003. Mali (Enquête Démographique et de Santé. Mali 2001). Niger (Enquête Nationale de Séroprévalence de l'Infection par le VIH dans la population générale âgée de 15 à 49 ans au Niger (2002). South Africa (Pettifor AE, Rees HV, Steffenson A, Hlongwa-Madikizela L, MacPhail C, Vermaak K, Kleinschmidt I. HIV and sexual behaviour among young South Africans: a national survey of 15–24 year olds. Johannesburg: Reproductive Health Research Unit, University of Witwatersrand, 2004). Zambia (Zambia Demographic and Health Survey 2001–2002). Zimbabwe (The Zimbabwe Young Adult Survey 2001–2002)

There is tremendous diversity across the subcontinent in the levels and trends of HIV infection. Southern Africa remains the worst affected region in the world, with data from selected antenatal clinics in urban areas in 2002 showing HIV prevalence of over 25%, following a rapid increase from just 5% in 1990. Prevalence among pregnant women in urban areas was 13% in Eastern Africa in 2002, down from around 20% in the early 1990s. During this period, prevalence in West and Central Africa remained stable. There is no single explanation for why the epidemic is so rampant in Southern Africa. A combination of factors, often working in concert, seems to be responsible. These factors include poverty and social instability that result in family disruption, high levels of other sexually transmitted infections, the low status of women, sexual violence, and ineffective leadership during critical periods in the spread of HIV. An important factor, too, is high mobility, which is largely linked to migratory labour systems such as the southern African inter country migrants who work in the mines of the truck drivers of the eastern and western regions of the continent.

2.2.2 Demographic Impact of HIV/AIDS

The pandemic has many important impacts as well on the population dynamics as on the demographic structures.

Morbidity and mortality due to HIV/AIDS and related illness is concentrated in the age groups of 25 to 50.



Increases in mortality, especially among young children and people 20 to 50 years. In South Africa, HIV/AIDS accounted for 40% of all adult deaths in 2000-2001. In Eastern and Southern Africa, female mortality due to HIVAIDS tends to occur five to ten years earlier than for men because women are generally infected at earlier ages;

Decline in life expectancy follow as adults die at younger ages than would have been the case without HIV/AIDS.

The dependency ratio increase due to the increase of young adults' death in productive ages, resulting in that fewer adults are producing to support the whole family.

Redistribution of population: imbalance between male and female especially due to earlier girls and young females' death; the age pyramids will reflect this tension and this could result in more gender based violence.

The pyramid of population is estimated to change drastically from a regular young age structure to a more irregular age and sex structures due to increased infant and child mortality due to AIDS, and the decrease of fertility for women infection reason.

Population growth will slow as HIV/AIDS mortality increases. In Côte d'Ivoire, the population growth rate will decrease by 0.5% per year by the end of 2007. This country will have around one and half million people fewer than it would otherwise had.

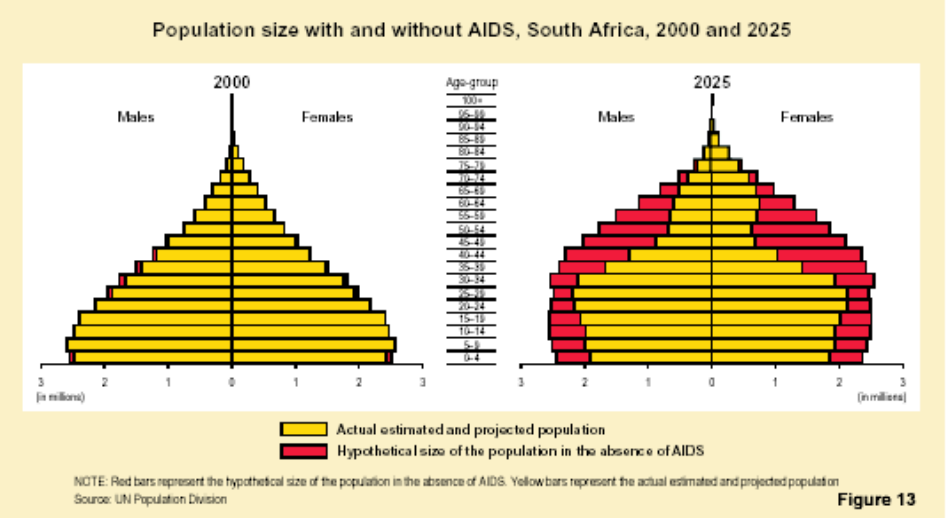


Figure 13

Human mobility has always been a major driving force in epidemics of infectious disease: prevalence of 7.6% among men who had been away from home for periods longer than 31 days. Prevalence among those who had been away for less than 31 days in the year was 3.4%, while prevalence among those who had not been away from home in the previous 12 months was 1.4%. (Lydié et al., 2004).

Across Southern Africa, the phenomenon of men migrating to urban centres in search of work and leaving their partners and children at home in rural areas is widespread and has complex historical roots. The pattern of infection in couples in Hlabisa, a rural district of KwaZulu-Natal, in which nearly two-thirds of adult men spent most nights away from home is quite representative.

2.2.3 Social and Economic Impacts of HIV

There is a growing number of orphaned children in southern and eastern Africa.

The number of orphans is estimated to climb to about 20 million by 2010. Caregiving to HIV/AIDS sick members of the family/households is an additional burden to those who are not sick. This increases the responsibility of other members of the family;

In high-prevalence countries in sub-Saharan Africa, the epidemic has a serious economic impact on households and communities. Most studies indicate a seemingly modest macroeconomic impact, with these countries losing on average between 1% and 2% of their annual economic growth. But the resulting effects on government revenue and expenditure will significantly weaken their capacity to mount an effective response, or indeed make progress towards the Millennium Development Goals.

Southern African countries are facing a growing human-capacity crisis. They are already losing skilled staff essential for governments to deliver vital public services, mainly due to AIDS. Increasingly, countries cannot meet existing social service commitments, let alone mobilize the necessary staff and resources to respond effectively. In some Southern African countries, HIV prevalence continues to rise beyond levels previously thought possible. This means extraordinary multi-sectoriel responses in affected countries are needed more urgently than ever.

At the national level, the epidemic's economic and demographic effects have received substantial media and academic attention. However, the epidemic's often-catastrophic impact on HIV-affected households deserves greater analysis and policy effort. In some of the worst affected countries, before the AIDS epidemic even started having an impact, the living standards of the poor were already deteriorating markedly. The epidemic drives these households more into destitution. For example, in Zambia's foundering economy, per capita Gross Domestic Product shrank by more than 20% between 1980 and 1999 (from US$ 505 to US$ 370). Over the same period, average daily calorie intake per person fell from 2273 to 1934 (UNCTAD, 2002). Amid such steady impoverishment, a poor household has limited abilities to overcome new adversities. It also has no resources to help others

Many of these households break up. After the death of one or both parents, children are parceled out to relatives or community members. The nature and severity of HIV on a household depends on the epidemic's extent and intensity. At the moment, AIDS most heavily affects sub-Saharan African households. But the epidemic does not discriminate. It devastates households and communities everywhere, even in countries with comparatively low national prevalence. For example, a study conducted for China's UN Theme Group on HIV/AIDS found significant economic and emotional impacts on AIDS-affected households. It also indicated the need for rapid increases in health-sector spending (Yuan et al., 2002). Over the past 10–15 years, many of the worst affected countries' social services have withered or become less affordable, incomes and formal employment levels have plunged and wars and large-scale population migration have disrupted social stability. Throughout sub-Saharan Africa, life-threatening diseases other than AIDS, such as tuberculosis and malaria, are on the rise. In this deteriorating context, poor households and communities are struggling to cope with the epidemic (Mutangadura, 2000) whose effects are reflected in the following;

- Food crisis exacerbated by AIDS;
- Loss of income
- Increase in household expenditure;
- Loss of labour, reduction in farming income and household assets and lowered household-level food security (Topouzis, 2003).

The UN's Food and Agriculture Organization estimates AIDS will have claimed one-fifth or more of agricultural workers in most countries in Southern Africa by 2020 (Villareal, 2003; Food and Agriculture Organization, 2003).

Impact on the supply, demand and quality of education: the epidemic's impact on education has far reaching implications for long-term development. Globally, AIDS is a significant obstacle to children achieving universal access to primary education by 2015—a key target of both the Education for All Initiative (UNESCO, 2000) and the Millennium Development Goals (United Nations, 2001). The epidemic weakens the quality of training and education, which means fewer people benefit from schools of good standard and university education. It also contributes to the negative impact of a pre-existing professional 'brain drain'.

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1. ECA, 2004, *"The impact of HIV/AIDS on families and communities in Africa"*
2. UNAIDS, 2004, *"4th global report on AIDS epidemic"*

2.3 Session Three Emergency Situation

Objectives of the session

At the end of the session, participants will be able to:

- Understand the status of emergency situation in Africa;
- Explain the impact of emergency situation on population;
- Understand Bank Group's intervention in emergency situation.

Topic covered

1. Status of emergency in Africa,
2. The Bank emergency policy
3. Population issues in emergency situation;

2.3.1 Status of emergency in Africa

Concepts and definitions

Emergencies refer to unexpected events that result in major physical loss or damage, social and/or economic disruption, and human suffering. The notion of emergency entails the occurrence or imminence of conditions of socio-economic hardship of severe intensity affecting large sections of a country's population or area. Emergency situations involve disruption of normal livelihood and economic activity, destruction of property, housing and public services; breakdown of industrial, commercial and communications infrastructure; human displacement and loss of life. In such situations, traditional coping and self-support mechanisms within the community are often undermined and, for the duration of the phenomenon, the population is dependent on outside assistance, at least until a degree of normalcy is restored. Typically, emergency situations are characterized by the need for prompt remedial actions to save and protect lives, salvage property and minimize the destruction of basic infrastructure. The three principal types of emergency situations are:

- Natural disasters: These are situations caused by natural phenomena such as droughts, earthquakes, floods, cyclones, hurricanes, landslides, volcanoes, and crop pest invasions such as the recent migratory locust invasion in northern and western Africa.
- Accidents: These are situations caused by inadvertent and unforeseeable events resulting in damage to public utilities, services and productive entities in RMCs (e.g. damage from fires, faulty structures, etc.)
- Conflicts: These are situations arising from wars, border disputes, civil strife or other political events that cause social and/ or economic disruption and hardship.

Facts of emergency situation in Africa

Vulnerability to natural disasters is increasing and is generally exacerbated by poverty and environmental degradation. Wars and civil conflicts have compounded the problem and plight

of refugees and internally displaced persons (IDPs). The most recent information on the emergency situation in WHO, UNHCR) show that, 23 out of the 46 countries experiencing some kind of emergency are in Africa.UNHCR estimates that globally there are 22 million refugees and internally displaced persons who fall under the UNHCR concern, and that approximately 6.3 million of these reside in Africa. In addition to this, UNHCR estimated that globally there are about 20-25 million internally displaced persons and more than half of them are in Africa[1]. Many of these refugees and IDPs are being hosted by small and impoverished countries, which are ill equipped to handle the crisis or provide the support necessary.

2.3.2 The Bank Group's interventions in emergency situation

The Bank Group has provided assistance to member countries for emergency operations through investments specifically directed at repairing infrastructure and public utilities damaged by conflicts and/or natural disasters such as floods, cyclones, earthquakes and storms. Emergency assistance has included the provision of emergency power supplies, repairs of roads and bridges, rehabilitation of agricultural and industrial infrastructure and equipment, and rehabilitation of education, health, sanitation and water supply facilities. These operations have been financed through a variety of funding mechanisms including: regular Bank Group loans; reallocation of loan funds from on-going projects or savings from completed projects; and supplementary loans for repairs of disaster damage to Bank Group projects

Criteria for Bank Group Emergency Assistance

Bank Group emergency relief assistance, under the SRF, is guided by criteria that clearly demonstrate the nature of the emergency as well as set out goals expected to be achieved through such assistance. In general, the following three criteria must be fulfilled to qualify for Bank Group assistance:

- The emergency situation must be of a scale which is clearly beyond the capacity of the country and its own agencies;
- Emergency relief assistance should be limited to cases where it is established that the proposed activities can be carried out expeditiously and effectively within the required time frame;
- Such emergency relief assistance should aim at restoring a degree of normalcy in both social and economic life of the populations as quickly as possible.

Rehabilitation and reconstruction operations are to be financed under regular Bank Group loans. Such operations are subject to standard operational policies and guidelines, including those on Sanctions Policy and on country eligibility to ADB and ADF resources. The special provisions of the Technical Assistance Fund (TAF) will govern technical assistance activities for conflict prevention and resolution.

[1] UNHCR 2000 Statistical Overview, Geneva, 2002.

2.3.3 Population issues and emergency situation

The impacts of emergency situation on population could vary slightly depending on the nature and causes of the emergency. However, whatever the nature of the emergency is, the population dynamics as well as the demographic structures are seriously affected.

- Mortality increases due to military murders and killings, increase of morbidity, lack and destruction of health facilities, deterioration of health care services, water and sanitation conditions, decreasing public expenditures in social sectors as more budget is allocated to emergency issues (war weapons, etc.),
- Reduced access to all social services due to deterioration of infrastructures lead to delay or impedes the training of many generations of young people;
- High-level population mobility between regions/countries in a very short term is one important demographic issue of the emergency situations: this involves the movement of a significant number of refugees and internally displaced persons.
- Sexual and gender based violence increases and tends to occur at every stage of a conflict. The victims are usually women, adolescent girls and boys. Tragically rape is increasingly being used as a weapon of war to humiliate, to torture, to dominate and to stigmatise and disrupt social ties. Women and girls may be forced to offer sex in exchange for food and clothing, thus usually resulting in a large number of commercial sex workers both during and after the conflict situation. The risk from all sexually transmitted infections increases significantly during crisis conditions, compounded by the usual limited access to means of prevention, treatment and care.
- In general, women and children account for over 75% of refugees and IDPs. In addition, 25% of this population at risk is women of reproductive age, of whom one in five is likely to be pregnant. The risk of maternal mortality and morbidity increases significantly due to limited access to quality reproductive health services, such as family planning, prenatal, delivery and post-delivery services in crisis and post-conflict situations.
- Deterioration and dislocation of family structures in the emergency situations result in negative consequences for family members in term of increased vulnerability for the weakest members such as women and children, for example, the interruption of children's education.

References:

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- OCHA publications
- UNFPA. 2003. UNFPA Africa Strategy
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- UNHCR 2000 Statistical Overview, Geneva, 2002.
- WHO Regional Office for Africa, Press Release, 13 March 2003

2.4 Session 4: Socio-economic Status of the Regional Member Countries (RMCs)

Session Objectives

By the end of the session, participants will have:

- A clear and comprehensive picture of development status and differentials in Africa and within Africa

Organization of the session or Topics covered

The Session starts with and overview of the development situation in Africa before presenting the highlights of the main regions of the Continent.

2.4.1 Africa general development situation

2.4.1.1 Economic performance

In Africa, real GDP growth rose from 2.9 percent in 2002 to 3.7 percent in 2003 but was still considerably below the level required to reduce poverty significantly. Positive factors affecting growth in Africa during the year included more favorable developments in non-fuel commodity prices, debt relief under the enhanced HIPC initiative, the improved macroeconomic environment, and better weather conditions together with fiscal stimulus in North Africa. But these positive forces were largely offset by continued political instability, adverse weather conditions in some parts of Sub-Saharan Africa, and the HIV/AIDS pandemic.

Africa's economic growth rate in 2003, at 3.7 percent, was the highest for the last four years, and significantly higher than the 2.9 percent rate achieved in 2002. The improved growth rate was, however, broadly in line with the trend growth observed since 1995. The higher output growth was achieved despite a fragile world output growth and continued constraints to improved economic performance in some parts of the continent.

The annual variability in Africa's growth performance is accounted for by a number of factors. These include major variations in climatic conditions affecting agricultural output, which still contributes a substantial share to the GDP of most counties. In addition, variations in the export prices of primary commodities result in a high variability in export revenues and growth, given the dependence of most countries on the export of a few commodities for their export revenues. The variability of Africa's economic performance is also driven by the incidence of civil conflicts — their frequency, geographical location within the continent, the number of countries negatively affected, and the extent of such effects. The unpredictability of donors' support also contributes to Africa's performance variability. Despite the growing use of medium-term expenditure frameworks in many countries, most donor funding is still committed annually, with the amount and timing rarely communicated in advance.

2.4.1.2 The Performance of Africa's Ten Largest Economies

Continental averages of economic outcomes are heavily influenced by the performance of 'Africa's Ten Largest Economies' (ATLEs): South Africa, Egypt, Algeria, Nigeria, Morocco, Tunisia, Libya, Sudan, Angola, and Kenya). The ATLEs account for about 55 percent of the region's population and contribute 75 percent of its GDP. In 2003, the ATLEs grew by 3.9 percent, slightly above the continental average of 3.7 percent, although there was considerable variation in output growth among the countries that belong to this group. The higher growth of the ATLEs was attributable to the strong performance of four of the six North African countries that belong to this group — Algeria, Libya, Sudan and Tunisia.

The growth of the South African economy — the largest on the continent — slowed down in 2003, partly as a result of the weak European recovery (Europe being its major trading partner) and a decline in the growth of tourism as a result of the considerable appreciation of the rand. These developments, combined with lower agricultural production, resulted in a growth rate of 2.2 percent in 2003 compared to the 3.0 percent registered in 2002. Similarly, Nigeria is estimated to have a high growth rate of 5 percent in 2003 compared to 3.3 percent in 2002, as a result of larger oil revenues in 2003. Angola registered a growth rate of 4.4 percent, sustaining its higher growth rate achieved following the end of the civil war in 2002. On the other hand, Kenya's growth rate did not rise above 1.4 percent, owing in part to investor uncertainties and infrastructural constraints, as well as limited inflows of international financial assistance.

2.4.1.3 Social Indicators

African countries generally have lagged behind other developing countries of the world in such areas as life expectancy, school enrollment, and access to basic services. Life expectancy at birth of 51 years is well below the average of 63 years for developing countries and the 80 years for OECD countries. The figure is declining further in several countries, particularly in Southern Africa, due to the HIV/AIDS pandemic. Infant mortality in the African continent is estimated at 82 per 1,000 live births, which is higher than the developing countries' average of 61 per 1,000 live births, and far higher than that of 6 per 1,000 live births for OECD countries. The maternal mortality rate in the continent is estimated at 641 per 100,000 live births.

Africa's population growth rate for 2003 is estimated at 2.2 percent, continuing its trend decline from 2.7 percent in 1990. The average, however, masks considerable differences among regions. Seychelles, have reduced both fertility and mortality rates and have population growth rates of less than 2.0 percent. Other countries, mostly in Southern Africa, that are heavily affected by the HIV/AIDS pandemic, have seen mortality rates increase sharply and their population growth rates decline steeply to an estimated 1.2 percent. Estimates of population growth rates for the remaining regions are 2.4 percent for East Africa, 2.5 percent for West Africa, and 2.6 percent for Central Africa. As these regions continue to register relatively high population growth rates, it is essential that countries adopt appropriate population policies to reduce the pressure on natural resources and the socioeconomic infrastructure.

School enrollment rates in Africa, estimated at 89 percent for primary education and 41 percent for secondary education, are below the developing countries' average of 107 percent for primary

and 59 percent for secondary education. Only about 60 percent of the population have access to potable water, compared with 78 percent for all developing countries and 95 percent for the industrialized countries. Only 62 percent of the population in Africa have access to health services, compared with 100 percent in the industrialized world.

2.4.2 Regional Performance

There is considerable variation in the growth performance of the continent's sub-regions. The growth of output in the countries of North Africa showed a substantial increase from 2.8 percent in 2002 to 4.7 percent in 2003. A similar increase was registered in West Africa with the growth in output doubling to 4.0 percent from the 1.9 percent of 2002. Central Africa's growth rate fell marginally from 4.6 percent to 4.4 percent. The strong performance in these three regions accounted for the increase in the continent's overall output from 2.9 to 3.7 percent. By contrast, there was only a marginal improvement in the growth performance of countries in East Africa — from 2.1 in 2002 to 2.6 percent in 2003, while the Southern Africa region experienced a deceleration in growth from 3.6 percent in 2002 to 2.2 percent in 2003. The latter was in large part due to the slower growth of the South African economy and the sharp contraction in the Zimbabwean economy, which registered a negative growth rate of 11 percent.

The highlights of the growth performance and social development, as reflected in key socio-economic indicators, are summarized in the table below:

Table 1: Socio-economic indicators by main regions in Africa

Indicators	REGION				
	Central	Eastern	Northern	Southern	Western
Economic Growth rate	4.4 %[1]	2.6 % [a]	5 % [i)]	2.2 % [I]	4 %
Human poverty index (HPI)	42.6 % [2]	43.6 %	< 38.8 %	41.9 %	39.2 %
Life Expectancy	42.9 years	46.2 years	66.6 years [ii)]	40 years. [II]	
Infant Mortality Rate per 1000	109.7	92.2	47.3 [ii)]	87	87.4
Maternal Mortality Ratio per 100,000	863	851	247 [ii)]	507	641
Access to Health services	< 62% [3]	51%	88 %	68 %	58 %
Access to sanitation	< 60% [3]	15 (Eritrea) to 99 % (Mauritius)	77 %	43 to 92 %	52 %
Nutrition status in Daily Supply Calories (DSC)	1 796	1 982	3 049	2 381	2 583 with wide gap between countries
Adult illiteracy Males/Females	26.8/45.2	30/45	29.2/51	18.5/29.5	34.7/52.3
Gender imbalances in Education/Illiteracy	YES	Mauritius achieved balance	YES	YES, with exception of 2 countries	YES

[1] Two countries, Burundi and the Central African Republic, recorded negative growth of 1.3 percent and 0.7 percent respectively; and driven mainly by high oil production, the Republic of Chad and Equatorial Guinea maintained their exceptionally high growth during the year with the former reaching 9.1 percent while the latter grew by 14.7 percent (2003).

[2] Above the continent average: 38.8 %
[3] < implies that the regional figure is below
[a] Kenya's economy — the largest in the region;
[b] Seychelles and Mauritius are exceptions
[i)] North Africa accounts for nearly 40 percent of the African economy
[ii)] Mauritania and Sudan have the worst indicators of the region
[I)] The lower performance of Southern African economies is due to the slower performance of the South African economy but also to the incidence of drought, political instability in some countries, and the severe economic and social impact of the HIV/AIDS pandemic
[II)] No country in Southern Africa registered life expectancy above the continental average and this is attributed to the HIV/AIDS pandemic, which is estimated to be very high in countries like Botswana (39 percent), Zimbabwe (33 percent), South Africa (20 percent), and Namibia (24 percent).
[III)] All countries are below the WHO benchmark of 2500 DSC

Regional highlights

Central region
- Mix of performance between countries: post conflict countries; oil countries
- The limited access of the population to both health services and sanitation has serious implications for related indices like life expectancy, infant mortality, and maternal mortality rates in the region.

Eastern Region
- The East Africa region is among the poorest in Africa
- A combination of poverty and the HIV/AIDS pandemic largely accounts for the low and declining life expectancy in countries of the region.
- Raising the female enrollment ratios to at least the continental level remains a serious challenge for East Africa

Northern Region
- The North Africa region has the lowest poverty incidence in the continent
- North Africa accounts for nearly 40 percent of the African economy.
- Adult illiteracy in the region remains however a challenging issue.

Southern Region
- Life expectancy in the region is the lowest in the entire Africa region
- With the exception of Botswana and Lesotho, where female illiteracy rates are below that of males, all countries in the region exhibit gender literacy disparities biased against females.
- Extreme poverty still a challenge for some countries in the region

Western Region
- The region's population of 235.4 million constitutes 28.3 percent of the continent's total population. The region's combined demographic growth rate of 2.69 percent makes West Africa the fastest-growing region in the continent.
- Access to health services and sanitation in the region remains challenging
- The high concentration of female illiterates in every country of the region poses a major development policy challenge.

2.4.3 Major Sectoral Developments

In the sectoral division of Africa's GDP, agriculture contributes 20 percent, industry (including mining, quarrying, and the energy sector) 32 percent, and the services sector the remaining 48 percent. In 2003, all three sectors continued to grow, albeit at relatively low rates. The industrial sector had the highest growth rate at 4.1 percent, although the growth of the manufacturing sector fell to 2.3 percent from the 3.5 percent registered in 2002. Developments within each sector are discussed in more detail below.

The agriculture sector continues to be a critical sector for Africa as it provides employment for some 50 percent of Africa's labor force and a means of livelihood for over 70 percent of the poor. It also accounts for about 35 percent of the region's GDP. Its performance is therefore decisive for overall economic welfare of the region. In 2003, agricultural growth increased marginally, with a growth rate of 3.1 percent relative to 2.8 percent in 2002 (see

In spite of the modest improvements in agricultural production in the region, the food security situation in Africa remains the worst for all regions of the world. Current estimates indicate that Africa's food insecurity may increase in the coming decade, making it unlikely for the region to achieve the Millennium Development Goal 1 Target 2 of halving the number of people living in hunger by 2015. In addition to the limited progress being achieved in increasing per capita agricultural output, other causes for the food insecurity in Africa include the impact of the HIV/AIDS pandemic on rural households, great variability of weather conditions often leading to drought in a number of sub-regions, and continued civil strife and instability in a number of countries. As a consequence, the number of people facing chronic as opposed to transitory food insecurity has increased, necessitating continuous supply of food aid from developing countries.

Industrialization is essential for Africa's economic growth as it contributes to raising employment and productivity and enhances the income-generating assets of the poor. It is also critical to helping countries diversify their export base and lessen the risks from the variability of the prices of primary commodities. Although in recent years the privatization programs implemented by many African countries have given industrialization a boost, the industrial base, with the exception of South Africa and some of the North African countries, generally remains weak. Sub-Saharan Africa (excluding South Africa) continues to lag behind all other regions with respect to manufacturing activity and the intensity of industrialization, measured by manufacturing value-added per capita.

The services sector grew by 3.6 percent in 2003, marginally up from growth of 3.4 percent in 2002. A major contributor was the tourism sub-sector. International tourist arrivals in Africa increased marginally to 30.5 million from its 2002 level of 29.1 million. In North Africa, international tourist arrivals rose slightly from 10.3 million in 2002 to 10.8 million in 2003, while SSA experienced a higher increase from 18.8 million to 19.8 million during the period.

Africa's market share of international tourism has risen from 3.6 percent in 1995 and 4.0 percent in 2002 to 4.4 percent in 2003. Although North Africa's share increased only marginally from 1.3 percent in 1995 and 1.4 percent in 2002 to 1.6 percent in 2003, SSA's share increased from 2.3 percent in 1995 and 2.6 percent in 2002 to 2.8 percent in 2003.

In 2003, the output of African oil-producing countries totaled 8.2 mb/d of crude oil (or 11.8 percent of global production) while the entire OPEC countries produced 27.8 mb/d of crude oil or 40.3 percent of the global production. Total world crude oil production was estimated to have risen from 66.8 mb/d in 2002 to 69.0 mb/d in 2003 (Table 1.10). Five countries — Algeria, Angola, Egypt, Libya, and Nigeria — continued to dominate Africa's oil production, accounting for 83 percent of its 2003 total. Next in importance to the African oil sector are many small- to medium sized oil producers, including Equatorial Guinea, Sudan, Gabon, Congo, Cameroon, and Tunisia. Combined crude oil production in Nigeria, Libya, and Algeria — the three OPEC members in Africa — rose to 5.2 mb/d in 2003 from their 2002 level of 4.7 mb/d. In terms of prices, the average basket price of crude oil in 2003 stood at US$28.9 per barrel (as against US$25 in 2002). To date, there are proven oil reserves of 75.4 billion barrels (7 percent of the world's total) in the continent, and production of oil in Africa is projected to rise from current levels of 8 mb/d to 11–13 mb/d over the next ten years.

Apart from the main existing oil producers, other countries also aim to increase their output or become first-time producers, including Chad, Sudan, Namibia, South Africa, and Madagascar, while Mozambique and Tanzania are potential gas producers.

2.4.4 Questions for debates

Despite the improved trade performance, Africa, more than any other region of the world, faces the danger of being left behind by the rapid changes effected by the forces of globalization. The Continent has the lowest socio-economic indicators –life expectancy at birth; maternal and children mortality; access to basic social services and sanitation…yet under all scenarios, the population would double in the coming 28 years.

The poverty, both rural and urban, is pervasive in Africa and more and more women are concerned. As highlighted in the figures presented, gender imbalances persist in most spheres of life: illiteracy, education, employment and politics. Women and girls are also more affected than men and boys by the HIV/AIDS pandemic. Africa is also the Continent devastated by conflicts and environment hazards.

By the inherent nature of demographic phenomenon (long term), one would like to reflect on the types of actions to be undertaken now, especially in the context of pursuing MDGs at the following three levels:

- Micro: actions to be targeted to individuals and addressing the demographic related behavior likely to affect population outcomes and impacting on economic and social outcomes and or performance;
- Meso: actions to be initiated at communities and favoring cultural norms for gender equality and equity for instance, as well as creating a culture of sustainable development and peace building;
- Macro: actions to be designed at the policy level and creating conducive environment and space for social policies that would bring balance between social, demographic and economic spheres.

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MODULE 3: Population, Sectoral Strategies and Poverty Reduction

MANUAL

Session 1: Concepts, Definitions and Process for Integration

Session 2: Integration of Population Issues in the Education Sector

Session 3: Integration of population issues in the health sector

Session 4: Integration of Population Issues in the Agriculture Sector

Session 5: Population in Infrastructure Sector

3.1 Session 1: Concepts, Definitions and Process for Integration

Session Objectives

By the end of the session, participants will be able to:

- Familiarize themselves with the concept and definition of integration;
- Know the various methodologies and requirements for integration of population issues in various sectors
- Have ideas on practical methods/tools for integration of population issues in ADB's programmes and projects.

Organization of the module or Topics covered

This session is organized around the following main topics:

1. The Concept and Definition of Integration;
2. Basic Requirements for Successful Integration of Population Variables in National, Sectoral and District Plans and Programmes;
3. Steps in Integrated Population and Development Planning;
4. Practical methods/tools for integration of population issues in ADB's programmes and projects;

3.1.1 The Concept and Definition of Integration

The International Conference on Population and Development (ICPD) Programme of Action provides a guide towards establishing a balance between population growth and sustained socio-economic development. It suggests that one way of attaining this objective is by examining and analyzing the interrelationships between population, economic growth and sustainable development, on the one hand, and the integration of these relationships into development strategies**.** A key message of the ICPD Programme of Action is that population issues are development issues and are closely interrelated. Efforts to address population concerns, reduce poverty, achieve economic progress, improve environmental protection, and reduce unsustainable consumption and production patterns are mutually reinforcing.

Integration has different meanings depending on the context. For macro-economic planners, it involves taking account of projections of size, age-sex structure and spatial distribution of the population in the determination of food, employment and basic needs (e.g. education, health, housing) requirements. For health planners, integration implies either the use of established development programmes to provide family planning services or, a family planning strategy that uses a development project as an entry point for the dissemination of family planning information and for motivational campaigns to increase the use of family planning methods or prevent HIV/AIDS. Still for socio-economic demographers, integration involves the formulation of socio-economic policies, programmes and projects to influence demographic trends and achieve higher standards of living

In the case of this manual, integration involves:

(i) Incorporating demographic variables and projections as inputs into national, sub-national, sectoral and programme/project level planning;
(ii) Determining the demographic impact of diverse economic and social programmes; and
(iii) Defining those complementary and specific actions needed to reduce increasing imbalance between demographic dynamics and economic potential.

This translates into taking demographic variables into account in the elaboration of development plans; formulation of population policies within the context of development policies; and the integration of the processes of development and population planning with the ultimate goal of eliminating poverty, unemployment and inequality.

A useful operational definition of integration **that has frequently been used in the last two decades is that it involves** considering systematically and taking into account explicitly in the planning process, population factors in so far as they significantly influence or are influenced by other variables relevant to development plans**.**

The objectives of such integration could be two fold:

(i) To improve the general quality of development planning; and
(ii) To promote awareness among both planners and policy makers of the need to adopt and implement population policies consistent with overall development objectives.

Integration should be seen as a cumulative process rather than a status that can be achieved in the short run. It is a process not only in terms of the gradual build-up of the substantive elements for integrated planning that results into a full planning model, but also in the broader context of increasing appreciation of the significance of social, economic and demographic inter-relationships, and hence the need for integration, by the community of researchers, policy makers, legislators, and the public at large. Unless the larger community develops a sense of the integrated approach – its essence and rationale – such an approach, even if feasible at the technical level, may not go the distance in becoming an established tradition in the national development planning endeavour. Being informed about the existence of economic-demographic inter-relationships is not enough. One should understand what important variables are involved, what the practical implications of the interactions are for national, community and individual concerns and so forth.

3.1.2 Basic Requirements for Successful Integration of Population Variables in National, Sectoral and District Plans and Programmes

Regardless of the approach of the integration process that one wants to follow, there are certain fundamentals that are necessary:

(a) Reliable measures of demographic factors and related variables;
(b) Basic understanding of the interrelationships between demographic and development variables;
(c) Appropriate methodologies;

(d) Well-trained personnel; and
(e) Appropriate institutional arrangements and resources.

(a) Data, Research and Training

Availability and utilization of current, adequate and relevant socio-economic and demographic data as well as research results on the various linkages between population and socio-economic variables are among the major prerequisites for integration and achieving a high degree of coherence and consistency among the country's macro-economic and sectoral policies. Data required for an integrated planning strategy in the various sectors are provided in the following sections.

In the area of research some basic aspects need to be considered including preparing population estimates and projections; ascertaining the nature and strength of demographic and development interactions; and conducting various forms of policy analysis. Research on the socio-economic correlates of population growth components may indicate to planners how best to influence population variables in a way conducive to socio-economic development.

National, sectoral and district institutions should identify training needs for integration purposes and implement them on priority basis. Attempts in integration will not be complete without the necessary trained manpower.

(b) Availability of methodologies and software

Identification of methodologies and software appropriate for national and sectoral planning is an important step in the integration process. Efforts should be made by each institution in collaboration with the population programme coordination ministry to obtain current developments in this area. This is discussed in some detail in the following sections.

(c) Resources

Adequate resources both in terms of personnel and funding are essential elements for integration. Funding can be raised from Government budget or through development partners. Each institution should first identify its financial requirements for the integration process and then decide on the sources of funding.

(d) Political and institutional commitment

Many governments have already shown their commitment in dealing with population and development issues by adopting comprehensive national population policies and establishing basic institutional structures for their implementation. What remains now is further commitment in terms of financial, trained manpower, institutional strengthening at both national and sub-national levels. This commitment to policy implementation should also be reflected at the level of sectoral ministries and districts.

3.1.3 Some Key Steps in Integrated Population and Development Planning

Development planning (at macro, sectoral, and district levels) involves making appropriate decisions about the entire range of development activities which a government wishes to commit itself to undertake during a given plan period. This includes making decisions on how approved policies are going to be implemented during the plan period at various levels. For countries with comprehensive national population policies, the first basic step would be to determine how best the population policy objectives and strategies could be addressed in the preparation and implementation of national, sectoral and district plans. In this endeavour, it is necessary to first ascertain whether or not the population and development situation has changed since the adoption of the policy, by way of situation analyses and priority needs identification. Based on needs analyses, population variables are then integrated in development plans utilizing appropriate methodologies and software. Subsequent to that implementation, monitoring and evaluation are addressed.

3.1.3.1 Needs Assessment

It is necessary to first make a situation analysis of the sector in terms of its efforts in addressing population policy concerns from its planning stage to programme/project formulation and implementation. Examination of the linkages between population concerns and each organization's mandates is essential. This phase of the planning process will lead to the identification of the key issues, selection of priorities and formulation of possible solutions. The following basic questions may be helpful in such analysis:

- What is being done on population issues within the sector and what remains to be done?
- Which priority population concerns related to the mandate of the organization are to be addressed in specified period of time?
- What are the underlying causes/problems of delay/inaction in addressing those population concerns?
- How can these problems be addressed?
- Which problems can be solved at the organizational level and which ones need external intervention (i.e. Population Secretariat, academic institutions etc.)?
- Who does what and how flexible or rigid is the division of labour?
- To what extent does the organization take into consideration building its technical and institutional capacity in the integration of population concerns in its plans and programmes?
- What resources are available internally to conduct population related activities and what is expected from other external sources?

The relationship between economic, social and demographic variables as well as a consideration of demographic options and their implications for alternative plans are basic ingredients in any integrated population and development planning process. Such a process requires that sector analysis should focus on ascertaining how the identified sectoral problems interrelate with the sector specific population problems; and, involves undertaking appropriate research to determine the interrelationships between the country's population and development related data using relevant economic and demographic models.

3.1.3.2 Analytical Approach

A basic approach to providing an **analytical framework** for integrated population-development planning, broadly, involves the following:

(i) A thorough **inventory of demographic and related socio-economic data**, and an assessment of their quality and gaps. One purpose of this exercise is to see if data generated by population censuses and sample surveys are adequately analysed to enable their utilization in various sector plans.
(ii) A detailed **inventory and synthesis of research** already completed and in-progress, modalities for collaboration between data collectors and data users and planners, and the extent of guidance available from sector ministries and other institutions to data collection agencies and national research institutions regarding their specific data needs, and the production of research materials required for planning and policy-making.
(iii) Preparation of detailed **demographic estimates and projections**. For any macro planning exercise, it is essential to have reliable information on population and labour force size, sex-age composition, rural-urban and regional distribution; reliable estimates of fertility, mortality and migration rates, detailed population and labour force projections by age-sex, rural-urban and regional breakdowns, and similar information for specific population groups requiring special development efforts e.g. the youth, the elderly and the handicapped.
(iv) Translation of the **consequences of population dynamics** into estimates appropriate for sectoral planning (education, health, agriculture, housing, employment etc.). Population variables influence all the usual planning sectors and are themselves affected by the economic and social changes brought about by sectoral programming. Thus the planning exercise should begin by identifying and assessing population needs in different social and economic areas, taking account of the prevailing and projected demographic and socio-economic situation. This would logically lead to fixing priorities by sector, which will in turn determine the allocation of resources under varying budget constraints.
(v) Research on the key linkages between demographic, social and economic factors and processes. Each sector should identify the gaps in research on the inter-relationship between population variables and those of sectoral variables, undertake research pertinent for sectoral planning and programming purposes on priority bases

3.1.4 Practical methods/tools for integration of population issues in ADB's programmes and projects

The section will build upon all previous sections as well as contents of other modules and related sessions in terms of poverty contents and determinants, socio-economic status of RMCs as well as population and development interrelations.

The focus will be on practical tools and or instruments to ensure that population dimensions are well reflected in various sectoral plans and programmes.

Pre-requisites:

- Sector situation analysis that is comprehensive, with data on the sector status, sector service needs, and the patterns of sectoral services use;

- Poverty profile for spatial targeting;
- Identification of key sector and population policies and programmes: Education Policy; Health Policy; Reproductive health policy and strategies; National Population Policy; HIV/AIDS policy and strategy; Adolescent Reproductive Health Policy; National Health Development Plan etc.

The following steps could be followed for integrating population issues into Bank's Sector interventions (not necessarily in sequences):

(i) Familiarity with PRSPs and CSPs processes and contents (see annex 1)

(ii) CSPs are built on existing PRSPs or any other national owned strategy for poverty reduction

(iii) Both processes are consultative, participatory and nationally owned

Common problems

- Weak linkages between PRSPs' CSPs and MDGs
- Weak analysis of sectoral (health, education, agriculture etc.) and poverty relationships
- Weak highlights of factors outside the particular sector that impact on sectoral outcomes
- Weak involvement of poor people and key actors in the various sectors in priorities setting and resources allocation
- Lack of specific population, education, health agriculture etc. indicators to be included in the monitoring and evaluation framework of PRSP or CSP

Actions recommended

(i) Assessing coverage of population dimensions in existing PRSP and ADB assisted programmes and projects (in particular CSPs)

An open framework is designed/proposed as a template to be used while assessing the coverage of population related issues in the PRSP (see annex 2).

(ii) Identifying entry points

After assessing the extent of the coverage of population including gender and reproductive health in PRSP, CSP or Health Project, one can then devise the best ways to influence these processes. The proposed approach identifies entry points and actions for achieving the mainstreaming.

For pragmatic reasons, six entry points, including both process and content, have been identified:

a. The participatory poverty assessment (PPA);
b. The situation analysis and poverty diagnosis,
c. Priorities' setting;

d. Public and social action costing;
e. Monitoring and evaluation systems design;
f. Public expenditure review (PER) and other PRSP, CSP and or Project reviews.

Participatory poverty assessment: the PRSP being a nationally owned process, it is important that the poor groups and or their representatives are empowered to understand and participate into the process. Provision should be made in terms of supporting such participation and representation through building their capacity in understanding the PRSP and its continuous participatory process and in expanding its partnerships, especially in the direction of local NGOs, communities for the implementing of health pro-poor interventions.

Situation analysis and poverty diagnosis: Demographic data and methodologies can facilitate the evaluation of ongoing trends and help identify priorities in the demand for social action by the public sector in different population groups. Ensuring the availability of updated and appropriate information helps to identify target groups, establish a suitable base for more efficient social programmes. Specific activities would include: I) studies (Population, gender, reproductive health profiles –national and sub-national) of the interrelations between economic growth/change and population dynamics (growth and structure, distribution) and poverty; ii) support population scenario building and costing; iii) emphasize health, nutrition, education and reproductive health problems of the poor; iv) apply GIS on census data to help identify the size and characteristics of the demand for social services and to compare this demand with the resources provided in each location; v) Health expenditures tracking.

For most of the envisaged activities and interventions, there is need to build strategic partnerships between the Bank, UNFPA, other UN Agencies and National counterparts. Ensuring continuous participation or representation in thematic groups is one of the strategic decisions that need to be considered.

Priorities' setting: Assessment of existing documents often show a gap between poverty diagnosis, where some demographic and population related issues could have been identified as cause and consequence of poverty, but when it comes to interventions and priorities setting, they are left out. Here, country offices would need to seek commitment of leadership to put the provision of key basic social services, including reproductive health services, as priority policy objective. Most of the evidence-based information and data of the previous entry point could be used at this stage as arguments for policy dialogue.

Public and social action costing: Getting issues on the priority list might not be enough to ensure that they are part of the final PRSP action plan for which resources will be secured. It is important to continue promoting policy dialogue on the relationship between population dynamics and poverty and building partnerships with key stakeholders participating in the various meetings related to resources allocation and disbursement such as the Mid Term Expenditures Framework (MTEF).

Monitoring and evaluation systems design: As a continuous process, the Bank could promote the inclusion of population criteria/indicators in the design of monitoring and evaluation of PRSP and CSP frameworks and their subsequent use. As tools such as DEVINFO have been

adopted for the reporting on MDGs, plans for support of training of partners in DEVINFO should be a component of envisaged interventions.

Public expenditure review (PER) and other PRSP reviews: The development and implementation of PRSPs vary from one country to another. Once a PRSP has been developed and assessed with respect to its deficiencies on population related issues, PER and PRSP reviews constitute other entry points where some adjustments, especially in priorities setting and resources allocation, could be done. The same strategies as in situation analysis and priority setting should be brought forward for discussion, through relevant partners, with arguments justifying re-allocating appropriate resources to population, gender and reproductive health as part of the overall poverty reduction strategy.

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Annex 1

COMPARATIVE CONTENT OF PRSP AND CSP

PRSP (Not consistent from one Country to another)	CSP
1. Introduction 1.1 The Macroeconomic situation 1.2 The socio-economic situation 1.3 Context of the PRSP	1. Introduction
2. The Characteristics of poverty 2.1 Definitions and perceptions of poverty 2.2 Quantitative or monetary approach of poverty 2.3 Participatory assessment of Poverty 2.4 Other dimensions of poverty and Human development	2. Recent developments 2.1 Macroeconomic context 2.2 Climate of the private sector enterprises 2.3 Crosscutting issues: population, gender, poverty reduction and environment 2.4 Main development constraints: social sectors likely to be covered here (sectoral constraints)

PRSP (Not consistent from one Country to another)	CSP
3. Growth and poverty reduction strategy 3.1 Macroeconomic framework that creates the conditions for growth 3.2 Good governance and security 3.3 Actions which directly increase the ability of the poor to raise their income 3.4 Actions which directly improve the quality of life of the poor	3. Government development programmes 3.1 Key challenges of the Government's Agenda: to include sectoral policies 3.2 Evaluation of the Agenda 3.3 Risks and Challenges 3.4 Strategic partnership
4. Macroeconomic and sector framework 4.1 The core scenario of the PRSP 4.2 Sectoral strategy framework projections and consistency with the PRSP 4.3 Financing the PRS 4.4 Risk analysis and alternative scenarios	4. Bank Group Strategy 4.1 Evaluation of the Past strategy 4.2 Bank group Porto folio and Management 4.3 Medium-term Bank Group Strategy 4.4 Lending Programme 4.5 Issues requiring dialogue
5. The institutional framework and mechanisms for implementing and monitoring the Strategy 5.1 Steering and overseeing implementation of the Strategy 5.2 Monitoring and evaluation mechanisms 5.3 Participatory monitoring 5.4 Capacity building	5. Conclusions and Recommendations
Annexes	Annexes

Annex 2

TEMPLATE FOR ASSESSING

Document – Sector Policy[2]	Population related issues addressed in the Sector[3]	Policy actions - Strategies envisaged in relation to population concerns	Issues for clarification	Suggestions for improvement Suggested actions/Strategies[4]

[2] Analysis could concern the sector in general or components of the sector

[3] This would include: fertility, morbidity, mortality, age and sex structure, population distribution, mobility, gender

[4] Suggestions for improvement should be built on the Conceptual framework of the interrelationships between population and development, with the poverty lenses; including actions outside a specific sector but that do impact on population related outcomes

3.2 Session 2: Integration of Population Issues in the Education Sector

Session Objectives

By the end of the session, participants will be able to:

- Briefly inform themselves with the Bank Group Policy on Education;
- Have some ideas on the relationship between population dynamics and educational development;
- Identify education system inputs and linkages with population dynamics;
- Plan and carry out actions to improve the consideration of population dimensions in educational planning and programming.

Organization of the module or Topics covered

This topic is organized around the following main topics:

(i) Bank Group Policy on Education;
(ii) The Education Sector;
(iii) Integration of Population Issues in the Education Sector;
(iv) Case Study

3.2.1 The Education Sector

The Education system in many countries is structured at national and sub-national levels. However educational policies and plans are generally developed at the national level to be implemented at various levels. Appropriate educational policy and plan require an understanding of the inter-relationships between population dynamics and improvements in the education levels of the population. Rapid population growth accentuates the difficulty of providing education of reasonable quality. Demographic factors – population size and growth, the age-sex structure, and geographic distribution – are crucial for the effective development of education programmes. Among other things the education sector has to deal with the following planning issues:

(i) Demographic structure and educational needs
(ii) Sources of demand for educational expansion
(iii) Education as an investment in human capital
(iv) Quantity, quality and equity in the expansion in education
(v) The educational planning process
(vi) The mechanics of target setting
(vii) Educational planning models and data requirements
(viii) Effects of rapid population growth on the attainment of educational goals
(ix) The regional dimensions of educational planning
(x) Education-employment linkages
(xi) The financing of educational expansion

It would be helpful to note the following educational planning objectives/goals that are influenced by demographic considerations;

(i) The formulation of educational targets, particularly at the primary and secondary level, taking into account prospective trends in school-age population. These targets should include enrollment and attendance standards, improvements in the quality of education, and reduction in dropout rates and wastage.
(ii) The setting of targets with regard to literacy and the level of educational attainment over the planning period and beyond, taking into consideration the age-sex and spatial distribution of the population.
(iii) The determination of needs for educational facilities and for teachers in each sub-national area, taking into consideration the size, age-sex and spatial distribution of the population.
(iv) The planning of locations and distribution of schools and educational facilities based on projections of school-age population and sub-national areas.
(v) The adoption of measure to reduce the inequalities in educational opportunities among different population groups, especially in regard to gender.
(vi) The adoption of programmes for non-formal education and literacy directed towards underprivileged groups.
(vii) The development of programmes to provide a skilled labour force and promote maximum labour productivity, taking into account the need to eliminate the problem of the "educated unemployment".

3.2.2 Bank Group Policy on Education

The Bank's Policy on Education puts emphasis on the development of education as a whole. However, in consistence with its overarching goal of combating poverty, the Bank's focus deals mainly with the development of basic education – the sub-sector which has consistently proven to have the greatest impact on reducing poverty while not neglecting the development of other key sub-sectors of education.

The Bank fully recognizes that a sound policy and regulatory framework is a prerequisite for the success of any project or program, whether internally or externally financed. Thus, the Bank plans to step up its efforts to provide assistance with policy development and reform in the education sector through increased dialogue between the Bank and its member states as well as by increasing its levels of technical assistance for this purpose. With regard to operational interventions the Bank also intends to increasing focus on "software" aspects of education sector development, notably, curriculum development, teacher training, learning assessment and evaluation as well as assistance with the development of learning materials.

Given the magnitude of the task ahead, the Bank is fully committed to the principle and practice of partnership with other stakeholders to ensure that the greatest amount of resources can be mobilized for the development of education in Africa. The Bank envisions a partnership in which parents and students, communities and organizations of civil society; governments, international organizations and donors work together towards shared objectives and within a common framework. The Bank is convinced that only through such a partnership will the goal of education for all be achieved.

3.2.3 Population, Education and Development

What is known about the interrelationships between education and population, and their resulting effects on development? The major conclusions of the UN report (UN 2003) on these relationships are summarized below within the following areas: (a) inter-relationships among population, education and development; (b) expected changes in the school-age population and the achievement of internationally recognized goals; (c) impact of education on patterns of marriage, onset of sexual activity, fertility and contraceptive use; (d) relation-ship among education, health and mortality; and (e) role of education in international migration.

a) Relationships of education and development:

(i) Increased education makes an important contribution to societies' economic growth and to the economic fortunes of individuals. Evidence also suggests that for low-income countries, expansion of primary education represents the best investment. For middle-income countries, where primary education is typically already widespread, increased investment in secondary education tends to have a greater impact on economic growth.

(ii) Illiteracy is a powerful predictor of poverty. A large body of research shows that primary education has a catalytic role in improving economic and social conditions among the poorest segments of society, including girls, rural dwellers and minorities. Another important observation is that the expansion of educational opportunities is one of the most powerful tools that Governments have for promoting both income growth and equality.

(iii) In some settings, the direct economic returns to women's education are limited because women are excluded from many types of employment. Nevertheless, studies of economic returns to education for individuals demonstrate that the returns from increasing women's schooling are, on average, even larger than the returns from increasing men's schooling because of the multi-faceted roles of women in the family and the society in general.

b) Growth of the school-age population, school enrolment and literacy:

(i) The rise in numbers of school-aged children represents a great challenge to countries in the less developed regions. Worldwide, the school-age population comprises about 2 billion persons, more than double that of 1950. Close to 90 per cent of the school-age population lives in the less developed regions. In Africa alone, the school-age population today comprises 330 million per-sons, has almost quadrupled the figure for 1950.

(ii) Between 2000 and 2050, nearly 300 million persons are expected to be added to the world's school-age population. Over 350 million - a 20 per cent increase - are expected to be added in the less developed regions. Over 90 per cent of this increase is projected to occur in Africa, whose school-age population is projected to double from 330 million in 2000 to 660 million in 2050. The school-age population of Nigeria alone will increase by 34 million (nearly 70 per cent).

(iii) The Dakar goal, adopted in 2000, requires a 50 per cent improvement in national literacy rates by 2015. If present trends continue, about 25 developing countries are likely to reach this goal. Another 58 countries are poised to achieve an improvement of 30-50 per cent in their illiteracy rate. The remaining 30 countries, many among those with the lowest literacy levels in the world, are projected to reduce illiteracy by less than 30 per cent.

(iv) Two thirds of the world's illiterate adults are women. Gender gaps remain large in many countries, especially in Africa and Asia. For example, in sub-Saharan Africa in 2000, 29

per cent of young women (aged 15-24) were illiterate, as compared with 19 per cent of young men, and in South and West Asia, the figures were 39 per cent for young women and 23 per cent for young men.

(v) Literacy rates among women have been improving at a faster pace than among men. However, in 2015, at current trends, there will still be 507 million illiterate women compared with 292 million illiterate men

(vi) At current rates of progress, 57 countries are unlikely to reach the goal of universal primary education by 2015. Furthermore, 41 of these countries, including some of those in Central and Eastern Europe, have experienced some backsliding in recent years.

c) Impact of education on patterns of marriage, onset of sexual relations, fertility and family planning:

(i) Among both women and men, an early age at first marriage is more common among those with no education than among their educated peers.

(ii) Education of women is a major factor influencing the start of child bearing. In the developing countries, the proportion of adolescents that have started childbearing is 3 to 5 times as high among adolescents with no education as among those with a secondary or higher education.

(iii) The impact of education on fertility is significant, both at the aggregate level and at the individual level. Globally, countries with higher female literacy rates and educational attainment have lower total fertility rates than countries whose populations have lower education levels.

(iv) The impact of family size on children's education in most settings is generally found to be weak in comparison with other social factors - household poverty, for instance. However, in some countries, unwanted and excess fertility has been found to reduce children's educational attainment, and for adolescent girls, pregnancy often leads to dropping out of school.

(v) Within countries, fertility decreases as educational attainment increases. The largest fertility differentials by education are found in sub-Saharan Africa, Western Asia, and Latin America and the Caribbean, where women with a secondary or higher education ultimately have, on average, about 3 children fewer than women with no education. Differentials in fertility by educational level are much smaller in developed countries than in developing countries.

(vi) In the developing countries, husband's higher education is also related to lower completed fertility, but its effect is weaker than that of wife's education. In the developed countries, there is only a slight difference (less than one half child) between the family size of the least educated men and that of the most educated men.

(vii) Women with higher levels of education desire smaller families. Education differentials in the ideal number of children are greatest in sub-Saharan Africa, where women with no education desire to have, on average, 2 children more than women with a secondary or higher education.

(viii) In general, women in developing countries want fewer children than they actually have and this gap varies across educational groups. The gap between desired and actual fertility is larger among women with no education or primary education than among women with a secondary or higher education. This is particularly true in Latin America and the Caribbean where the difference between wanted fertility rates and actual fertility rates

among women with no education is almost twice as large as the difference among highly educated women.

(ix) In the developing countries, contraceptive prevalence varies considerably across educational strata, there consistently being a higher prevalence among better-educated women than among women with low or no formal education. Even a small amount of schooling has a significant impact on contraceptive behaviour. Contraceptive-use differentials by education are most marked in sub-Saharan Africa, the region with the lowest level of education and the lowest level of contraceptive prevalence. In Africa, the proportion using contraception among women with a secondary or higher education is more than 3 times as high as that of women with no education. In the developed countries, where contraceptive prevalence is already high, differentials in contraceptive use are small.

d) Education, health and mortality:

(i) Declining mortality has acted to accelerate the growth of the school-age population. Even though this has the short-term effect of requiring the provision of enough teachers and schools, mortality decline also means that less of the costly investment in educating children is lost to premature death. In economic terms, declining mortality increases the returns to the investment in education, since more of the children who receive schooling survive to become productive workers, parents and, eventually, elders.

(ii) Of the socio-economic variables that have been found to be associated with differentials in health and mortality, education is among the strongest and the most consistent. Wherever the relationship has been examined, better-educated people and their family members appear to stay healthier and to live longer lives. For example, in many developing countries, the better educated have greater knowledge of how to prevent HIV infection.

(iii) In the more developed regions, education differentials in adult health and mortality are well documented. Evidence suggests that education differentials in mortality within developed countries are widening as better-educated persons increase their relative survival advantage over the poorly educated.

(iv) In developing countries, studies have shown that those with less education have: higher maternal mortality, children with higher under-five mortality, less knowledge of key health interventions, lower levels of immunization coverage, and lower nutritional status. Access to proper care during pregnancy and delivery is also sharply differentiated by the level of a woman's education.

(v) HIV/AIDS is a threat to the survival of education systems in many high-prevalence developing countries. High levels of teacher attrition and absenteeism because of HIV/AIDS-related illness challenge the education systems of such countries. The epidemic inflicts heavy burdens on students and their families, often resulting in declining school enrolments and increasing dropout rates. As education systems are weakened by the HIV/AIDS epidemic, teaching and learning are becoming less effective for large segments of the populations of a growing number of developing countries.

e) Education and International migration:

(i) Education is increasingly being taken into consideration as a key factor that countries apply to immigrants for admission and residence permits. This has long been the case among the traditional countries of immigration (Australia, Canada, New Zealand and the

United States). As a result, these countries attract more educated migrants than receiving countries in Europe. However, since the second half of the 1990s, European and other receiving countries have also been enacting legislation placing emphasis on migrants' skills.

(ii) The educational attainment of migrants varies widely depending on their region or country of origin and the nature of employment at destination. The distance between origin and destination, the reasons for migration and the age structure of different groups of migrants are some of the determinants of the differences observed.

(iii) Increasingly, student migration has paved a way for a migrant work-force or for permanent settlement. Migrants educated in the host country might be at an advantage in finding employment locally. In some cases, student migration is used as a channel for clandestine labour migration. As recruitment of highly skilled professionals has become competitive, foreign students, especially those in science and technology, are being seen as part of a qualified migrant work force.

(iv) Recent years have witnessed an increase in the international mobility of students. The stock of international students is concentrated mostly in developed countries. The United States, the United Kingdom, Germany and France are the leading destinations for people seeking education abroad.

(v) Foreign students go abroad to study from a wide variety of countries that often have geographical, historical and institutional linkages with host countries. Countries in Africa, Asia and Europe mostly attract students within their respective regions, playing the role of region-al hub for higher education. A preponderance of Asian students has been characteristic of student migration to Australia and the United States.

3.2.4 Integration of Population Issues in the Education Sector

Before looking specifically at demographic aspects of education planning, we should clarify first what we mean by education planning. In its broadest terms the goal of education planning is maximization of returns (expressed in terms of quantitative and qualitative outcomes) subject to budgetary and manpower constraints. Hard choices have to be made between investing in education and in other competing areas and, within educational expenditure, between investing in higher education as opposed to primary, secondary or adult education. Targets will have to be set, and target setting can be based on one of four major approaches: (i) social demand approach, (ii) manpower requirement approach, (iii) rates-of-return approach, (iv) human resources development approach. Let us assume that the broad goals for the development of the education system have been set, based on one or more of the approaches outlined above. The next step in the education planning process is to set quantitative targets for future years and test their consistency with availability of teaching manpower and with budgetary allocations expected for the education sector. Two approaches are commonly used for this purpose: the stock approach and the flow approach. The "stock approach" involves projections of educational enrolment rates and their applications to the projected numbers within the school-going ages to derive projected numbers of pupils in different parts of the system in different future years. The "flow approach" traces in much more detail the movement of different cohorts of children through the school system and changes over time in the teaching force.

Education is one of the key objectives of the United Nations Millennium Declaration, adopted by the Assembly in September 2000. In paragraph 19 of the Millennium Declaration, heads of State and Government resolved to ensure that, **by 2015, "children everywhere, boys and girls alike, will be able to complete a full course of primary schooling and that girls and boys will have equal access to all levels of education".** This was reiterated at the special session of the General Assembly on children in 2002 where nations recognized that education, especially primary schooling, is critical for achieving social and demographic progress, sustained economic development and gender equality.

An understanding of the inter-relationships between population dynamics and improvements in education is important because they play a central role in national social and economic development. Access of women to primary and secondary education, for example, turns out empirically to be among the more important determinants of fertility levels and infant/child mortality.

In the area of population, building upon the recommendations of the previous United Nations conferences on population, the Programme of Action of the International Conference on Population and Development (1994) called upon Governments to ensure universal access to primary education before 2015 (para. 11.6) and ensure access by girls and women to education beyond the primary level (para. 4.18). In paragraph 11.2 of the Programme of Action, education is defined as a "key factor in sustainable development (which is) at the same time a component of well-being and a factor in the development of well-being through its links with demographic as well as economic and social factors".

At present, educational attainment is strongly related to differences between countries in levels of fertility and mortality. In general, such cross-national associations may reflect the effects of education on demography, and the effects of demographic factors on education, as well as the joint effects of other factors that may separately influence both education and demographic variables. In fact, a substantial body of research has been directed towards examining each of these important relationships, and it is generally accepted that education both influences and, over time, is influenced by demographic factors.

Most countries recognize the importance of education and have adopted a goal of universal primary education. Most planning models (e.g. UNESCO's Education Simulation Model, SPECTRUM) address this issue by looking at the resources required to achieve national education goals. The inputs to these projections are the enrollment rate goals (usually set out in the national development plan), the number of teachers and classrooms required per student (usually based on current ratios), and the public expenditure per student (usually based on current expenditure rates). These inputs are then used to project the number of primary and secondary school students required in order to achieve the enrolment rate goals. The number of teachers and classrooms and the expenditures required are also projected. These projections are designed to show that huge increases in educational resources are required to achieve national goals when population growth rates are high. The goals are much easier to achieve when population growth rates are slower (see table 1 for inputs required to achieve educational outputs).

Table 1: Inputs and Outputs for Achieving Educational goals

Input Data	Use	Output
• Beginning primary school age and number of years of primary school • Primary-school-aged population projection	The number of children of primary school age is calculated by summing all children who are of the ages to attend primary school	Projected number of children of primary school age at various future dates
• Primary enrollment rate • Children of primary school age	The number of primary students is projected by multiplying the number of children of primary school age by the primary enrollment rate	Primary students
• Ratio of primary students to primary teachers • Ratio of primary students to primary schools	The number of primary teachers required is projected by dividing the total number of primary students by the ratio of primary students to primary teachers	Primary teachers required
• Primary students per primary school ratio • Total number of primary students	The number of primary schools required is projected by dividing the total number of primary students by the ratio of primary students to primary schools	Primary schools required
• Average recurrent primary expenditure per student • Total number of primary students	The recurrent primary education expenditure is projected by multiplying the total number of primary students by the average recurrent expenditure per primary student	Primary school expenditure required
• Beginning secondary school age • Number of years of secondary school • Secondary-school-aged population projection	The number of children of secondary school age is calculated by summing all children who are of the ages to attend secondary school	Children of secondary school age
• Secondary enrollment rate • Children of secondary school age	The number of secondary students is projected by multiplying the number of children of secondary school age by the secondary enrollment rate	Secondary students
• Ratio of secondary students to secondary teachers • Ratio of secondary students to secondary schools	The number of secondary teachers required is projected by dividing the total number of secondary students by the ratio of secondary students to secondary teachers	Secondary teachers required
• Secondary students per secondary school ratio • Total number of secondary students	The number of secondary schools required is projected by dividing the total number of secondary students by the ratio of secondary students to secondary schools	Secondary schools required
• Average recurrent secondary expenditure per student • Total number of secondary students	The recurrent secondary education expenditure is projected by multiplying the total number of secondary students by the average recurrent expenditure per secondary student	Secondary school expenditure required

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Case Study 1: Effects of Rapid Population Growth on Attainment of Educational Goals: The Case of Malawi

Let us take as an example the problems faced by educational planners in Malawi. Since 1980 the child population has been growing by at least 3.9 per cent per year, and primary school enrolment has grown by 3.2 per cent per year. Yet the Malawi government's budgetary situation has been very difficult. Total recurrent expenditure on education has grown just 0.6 per cent per year in real terms; thus spending per pupil is falling at a rate of 2.6 per cent per year in real terms. Educational quality – as measured by pupil/teacher ratios, expenditure per pupil, availability of instructional materials, reported rates and progression rates to the end of primary school – is steadily deteriorating.

Malawi is facing severe economic difficulties. Part of the problem in education planning, however, is the very high birth rate; hence a decline in fertility would cut the costs of achieving primary school enrolment rate goals, as a World Bank projection for Malawi indicates. Assuming that recurrent costs (made up largely of teachers' salaries) remained constant at their 1980 level of $12.50 per student and that fertility also remained constant, the primary education budget would have to be doubled in real terms every 15 years in order to merely maintain the existing coverage and quality of primary education. Even with positive economic growth, this will involve significant increases in the proportion of GDP allocated to education. However, as is apparent from the following table, rapid fertility decline will ultimately result in important financial savings. For example, with lower fertility, a 100 per cent enrolment rate could be achieved by the year 2005 at a cost which is lower than what would be required to achieve an enrolment rate of 65 per cent in the same year if fertility remained unchanged. Alternatively, if an enrolment ratio of 65 per cent was maintained, spending per pupil could be doubled in real terms by 2015 without increasing the share of the primary school budget in GDP. Otherwise the fertility-related savings could be used to improve the coverage and /or the quality of secondary school education.

It is fairly obvious that where population is growing rapidly, and hence so is the number of potential students. Therefore, a given budgetary allocation which the government is willing to put into education will not go as far in providing educational opportunities to a larger proportion of potential students as it would if their numbers were growing less. In such a situation, which areas of education will be favoured? This is a policy matter and depends on many things. But at least in relation to the policy prescriptions suggested by rates-of-return analysis, most developing countries have been inclined to favour the upper levels of the educational system, which are also far more expensive per student than primary education.

The most likely effect of a slow-down in the coverage of primary education as a result of rapid growth in the number of potential pupils is that schools in poor and isolated or inaccessible

areas will not be built or upgraded. At the same time, it is the wealthy and the privileged that have most to gain from the expansion of the upper levels of the educational system. Thus delays in achieving universal primary education, or in improving the quality of primary education, especially in the rural areas, due to rapid population growth, may be a factor reinforcing the inequities in the society. This may be specially so with regard to access to better-paying jobs for which education is a screening device

Malawi: projected primary school costs under alternative fertility and enrolment assumptions, 1980-2015 (millions of 1980 dollars)

Year	Standard fertility decline		Rapid fertility decline		Savings with rapid fertility decline
	(1)	(2)	(3)	(4)	(per cent)*
1980	9.8	9.8	9.8	9.8	n.a.
1995	19.2	26.9	17.9	25.1	7
2000	22.5	34.6	17.6	27.1	22
2005	26.6	40.9	17.6	27.0	34
2010	31.0	47.8	17.3	26.6	44
2015	35.3	54.3	15.3	23.5	57

Note: Columns 1 and 3 assume a constant enrolment rate of 65 per cent. Columns 2 and 4 assume the enrolment rate increase and are 100 per cent by the year 2000

* The percentage cost savings are the same under both assumptions regarding enrolment rates. Absolute cost savings are greater under the assumptions of universal primary education by the year 2000.

Source: (ILO 1990)

The effects of population growth on the costs of education will be viewed as more or less serious depending on the official philosophy with regard to education and development, the sources of educational finance, and so on. The case for slowing population growth would appear stronger if women's rights and opportunities and their relevance to the development process were taken seriously than if they were not, because it is in rapidly advancing female education to the levels attained for males that the key delaying impact on population growth is likely to be felt. Similarly, a government which stresses the primacy of income distribution goals and more equalized opportunity will look to a rapid expansion of the education system to give the poor similar opportunities as the rich, and will therefore take more seriously the demographic obstacle to this expansion. A government with an entrenched oligarchy, and little concern for equity or for the "consumption" value of education, might find a system of far-from-universal primary education, with a high proportion of students continuing to secondary and higher education, satisfied with meeting its high-level manpower needs, and to this extent would not need to view rapid population growth as a serious concern.

Questions:

1. Is there a strong case for the ministries of education to support population policies and programmes? How about for ADB?
2. In the preparation of CSP how would the Bank staff carry out policy dialogue with the ministry of education on population issues?

3.3 Session Three: Integration of population issues in the health sector

Session objectives

By the end of the session, participants will be able to:

- Identify health system inputs and how allocation of resources among them affect the well-being of the poor;
- Briefly communicate on the Bank's Group Policy on Health;
- Assess the adequacy of CSPs and PRSPs in relation to population factors in the health sector;
- Plan and carry out actions to improve population dimensions of PRSPs and CSPs

Organization of the session or Topics covered

1. Description of the health sector focusing on health systems, health outcomes and linkages between health and poverty
2. Brief description of ADB Policy of the Health Sector
3. Population issues within the health sector
4. Tools for integrating population issues in ADB's Health programmes and projects

3.3.1 Description of the sector

The human and economic rationale for investing in health is mirrored by a growing consensus on the importance of a broad agenda in improving the health of the poor. Health is now on the international agenda than ever before, and concern for the health of the poor is becoming a central issue in development. Indeed, health features prominently in four of the seven International Development Goals:

(i) Reducing extreme poverty: the proportion of people living in extreme poverty in developing countries should be reduced by at least one-half between 1990 and 2015. Progress is to be measured via income poverty statistics but also via the proportion of children under age five who are underweight. Large health expenditures by households and ill health are widely recognized to be contributory factors to income poverty;
(ii) Reducing infant and child mortality: the death rates for infants and children under the age of five years to be reduced in each developing countries by two thirds between 1990 and 2015;
(iii) Reducing maternal mortality: the rate of maternal mortality to be reduced by three quarters between 1990 and 2015;
(iv) Reproductive health: access to be made available through the primary health care system to reproductive health services for all individuals of appropriate ages, no later than 2015.

This has been reaffirmed in the MDGs where three of the goals call for health improvements by 2015 viz reducing child deaths, maternal mortality and the spread of HIV/AIDS.

Investment in health is also increasingly recognized as an important means of economic development. As the Commission on Macroeconomics and Health of the WHO has shown, substantially improved health outcomes are a pre-requisite if developing countries are to break out of the circle of poverty. Good health contributes to development through a number of pathways, which partly overlap but in each case add to the total impact:

(i) Higher labor productivity;
(ii) Higher rates of domestic and foreign investment
(iii) Improved human capital
(iv) Higher rates of national savings
(v) Demographic changes

a) Health systems

Health systems comprise promotion, prevention, curative and rehabilitation services delivered by health workers and related support structures (e.g. drug procurement systems). They include both public services, private for-profit and not-for-profit (NGO, including those that are faith-based) services, formal and informal services, as well as traditional health care, and home/family-based care. A health system also includes other related activities, such as medical research and development.

The basic function of a health system is to ensure that providers deliver health services to patients. This is accomplished through a structure of payments and regulations, and this structure varies from one system and subsystem to another. Patients sometimes pay providers the full cost directly out of pocket, for example; in other cases they may pay only partially directly out of pocket, with a third party player –the government or a private insurer-paying the balance to the service provider.

Whatever its organization, a health care system will be judged largely according to two criteria:

(i) How well does it get high quality and appropriate services to those who need them most, especially the poor?
(ii) Do payments for services leave some groups, especially the poor, unable to afford other essential commodities such as housing and food?

To describe and analyze the health services delivery; a framework outlining 8 dimensions can be used to identify bottlenecks in health services use by the poor and vulnerable.

(i) Physical Accessibility: The first question is whether health facilities or outreach services are available and sufficiently accessible to enable the poor to make use of them;
(ii) Availability of Human Resources: The second step has to do with the availability of human resources at facilities or outreach services that target the poor.
(iii) Availability of Material Resources: The third dimension looks at the availability of material resources, most importantly medicines at facilities or outreach services that target the poor. Regarding the availability of essential medicines, the poor typically face two major problems: shortage and low quality of counterfeit/imitation drugs.

(iv) Organizational Quality: The fourth step deals with the way health services in poor areas are organized such as, hours of operation, waiting time, perceived low quality, gender of providers, lack of courtesy, required unofficial (illegal) payments. Any or all of this may deter patients from using services.

(v) Relevance of Services: The next dimension has to do with whether the sector provides services that are relevant to the diseases that affect the population, especially the poor.

(vi) Timing and Continuity: The next dimension is timing and continuity, certain key health services must be delivered in a timely manner. For other services such as the completion of tuberculosis treatment or immunizations, continuity is a vital determinant of efficacy and outcome improvements. Are services that are available to the poor provided timely and on a continued basis?

(vii) Technical Quality: Several issues fall into the dimension of technical quality. Are service provided to the poor at lower technical quality compared with those provided to the better off population? Is basis service of reasonable quality available to all?

(viii) Social Accountability: A dimension of health service delivery that is difficult to measure but essential is social accountability. To what extent are health systems and service providers accountable to their clients and communities, and in particular, to their poor clients?

To a large extent, the eight dimensions form a hierarchy: if health services are accessible but not properly staffed, the issue of whether they are properly stocked is irrelevant, and so on. There is little point in making progress on the next step if the system fails badly on any previous step.

b) Health outcomes

The concept of health is a broad one, embracing health status, nutritional status, morbidity, fertility management, disability and mortality. The life cycle approach provides a useful framework for assessing the health. It starts with pregnancy and moves through birth, infancy, childhood, the school years, adolescence, adulthood, and aging to death. At each stage of the life cycle there are risks to health, and associated with each is a corresponding outcome indicator. This framework highlights four principles:

(i) Health interventions have a cumulative impact: the benefit, nature and cost of interventions at a later stage is partially dependent on earlier interventions;
(ii) Prioritizing interventions at several points across the life cycle is needed to sustain improvements in health outcomes;
(iii) Interventions in one generation bring benefits to successive generations;
(iv) Better identification of the key risks for families and associated gaps in the health system; hence we look for where interventions can break the cycle of poverty and ill health

Health outcomes can be measured by the following: i) Mortality by age, disease, and socio-economic status; ii) Nutrition outcomes; iii) Fertility Outcomes; and iv) Morbidity Outcomes (discuss indicators of each of the category as in Annex 2).

c) Financing health systems

In addition to the health delivery services, health financing is critical. An equitable financing strategy should ensure financial protection for everyone and eliminate the possibility of poor

people being unable to pay for their health care, or becoming impoverished as a result. The design and implementation of health financing mechanisms fall under the responsibility of several government departments beyond the ministry of health, such as ministries of finance and social affairs, and social security departments. Dialogue between all the main actors, including development partners, on protecting access for poor people is essential. (SWAP in the health sector could be discussed at this level)

At household level, income protection is the ability to mitigate against detrimental effects of health related expenditures and it aims at protecting against the impact of the costs of health care so that this does not lead to an excessive decline in the living standards of the poor households. Lack of income protection against the potential impoverishing effects of health expenditures is the beginning of a cycle that leads to worsened health outcomes especially for the poor.

Poor people may spend large proportion of their resources for health to the effect that they threaten their financial security. By living on small incomes, poor people may also decide to accept the pain and discomfort of sickness rather than incur the out-of-pocket expenses of health care that may bring them to economic ruin. Thus, even though poor households are generally less healthy than rich households, they may spend less on health services, in both absolute and relative terms. This is indeed the pattern in Sub-Saharan Africa that the poor often do not use modern health care services at all, whether public or private. The implication is that in formulating health interventions to reach the poor, it needs to be recognized that adverse self-selection in health-seeking behavior-because of poverty or other factors-may constitute an obstacle to better health as much as supply-side constraints in the health system (See Case Study).

3.3.2 ADB Policy in the sector

In health, the Bank places emphasis on primary health care, reproductive health, maternal and child health care and the control of communicable diseases. It will support country level programmes for combating HIV/AIDS, malaria and tuberculosis in areas where it has the skills and resources to do so. A particular concern of the Bank's Health Policy is the accessibility, reliability and affordability of primary health services for women and children, particularly in rural and peri-urban areas.

Health is identified as a major component of the ADB Human Resources Development concern that is critical for accelerating economic growth and strengthening the fight against poverty. The Bank's Policy for Poverty reduction recognizes that poverty adversely affects access to health care and health outcomes as poor people are less able to afford the cost of health consultations or treatment, and are most susceptible to preventable diseases because of inadequate caloric intake and lack of access to clean water.

The Bank has developed policy and guidelines instruments in relation to the health sector: the Bank's Health Sector policy Paper; the Health Policy Guidelines; the Malaria Control Strategy and the HIV/AIDS Strategy Paper etc.

The Bank's interventions in the health sector serves to:

(i) Promote sound health and nutritional practices among the poor through joint campaigns with specialized agencies which address their concerns;

(ii) Facilitate the design, finance and implementation of a minimum package of essential public health care and clinical services;
(iii) Eliminate the prevalence of infectious diseases which disproportionately affect the poor;
(iv) Encourage the development of decentralization schemes that enhance the delivery of health services of high quality;
(v) Improve research on the major health problems of the poorest, the key barriers to improved access to health care and benefit incidence analysis of expenditures on health;
(vi) Reduce inequalities in access to health care by expanding services and facilities to under-serviced areas and socio-economic groups; and
(vii) Promote pro-poor public expenditures by managing resource allocations between primary and tertiary care and between urban and rural areas.

As far as HIV/AIDS is concerned, the negative socio-economic consequences and its adverse impact on the poverty reduction efforts are widely recognized. As a result, the Bank supports the following initiatives:

(i) Integrate HIV/AIDs issues in PRSPs and CSPs by including indicators of HIV/AIDs incidence and infection within poverty monitoring systems and emphasizing the incorporation of the cost of combating HIV/AIDs;
(ii) Identify and disseminate best practices related to the fight against HIV/AIDs and poverty reduction at the same time;
(iii) Reduce the risk factors of vulnerable groups including unemployment of the youth; gender inequality, especially in sexual relations, and the predicament of refugees; and
(iv) Build partnerships to combat HIV/AIDs with Community Based Organisations (CBOs) in RMCs and with other donors under the umbrella of the International Partnership Against AIDS in Africa (IPAA).

3.3.3 Health and poverty

Below is an extract summarizing key findings on the linkages of health and development by J. Sachs and Co. in the WHO document "Health and Macroeconomics".

(i) Health is a priority goal in its own right, as well as a central input into economic development and poverty reduction. The importance of investing in health has been greatly underestimated, not only by analysts but also by developing-country governments and the international donor community. Increased investments in health would translate into hundreds of billions of dollars per year of increased income in the low-income countries. There are large social benefits to ensuring high levels of health coverage of the poor, including spillovers to wealthier members of the society.
(ii) A few health conditions are responsible for a high proportion of the health deficit: HIV/AIDS, malaria, TB, childhood infectious diseases (many of which are preventable by vaccination), maternal and perinatal conditions, tobacco-related illnesses, and micronutrient deficiencies. Effective interventions exist to prevent and treat these conditions. Around 8 million deaths per year from these conditions could be averted by the end of the decade in a well-focused program.
(iii) The HIV/AIDS pandemic is a distinct and unparalleled catastrophe in its human dimension and its implications for economic development. It therefore requires special consideration.

Tried and tested interventions within the health sector are available to address most of the causes of the health deficit, including HIV/AIDS.

(iv) Investments in reproductive health, including family planning and access to contraceptives, are crucial accompaniments of investments in disease control. The combination of disease control and reproductive health is likely to translate into reduced fertility, greater investments in the health and education of each child, and reduced population growth.

(v) The level of health spending in the low-income countries is insufficient to address the health challenges they face. We estimate that minimum financing needs to be around $30 to $40 per person per year to cover essential interventions, including those needed to fight the AIDS pandemic, with much of that sum requiring budgetary rather than private-sector financing. Actual health spending is considerably lower. The least developed countries average approximately $13 per person per year in total health expenditures, of which budgetary outlays are just $7. The other low-income countries average approximately $24 per capita per year, of which budgetary outlays are $13.

(vi) Poor countries can increase the domestic resources that they mobilize for the health sector and use those resources more efficiently. Even with more efficient allocation and greater resource mobilization, the levels of funding necessary to cover essential services are far beyond the financial means of many low-income countries, as well as a few middle-income countries with high prevalence of HIV/AIDS.

(vii) Donor finance will be needed to close the financing gap, in conjunction with best efforts by the recipient countries themselves. We estimate that a worldwide scaling up of health investments for the low-income countries to provide the essential interventions of $30 to 40 per person will require approximately $27 billion per year in donor grants by 2007, compared with around $6 billion per year that is currently provided. This funding should be additional to other donor financing, since increased aid is also needed in other related areas such as education, water, and sanitation etc.

(viii) Increased health coverage of the poor would require greater financial investments in specific health sector interventions, as well as a properly structured health delivery system that can reach the poor. The highest priority is to create a service delivery system at the local ("close-to-client") level, complemented by nationwide programs for some major diseases. Successful implementation of such a program requires political and administrative commitment, strengthening of country technical and administrative expertise, substantial strengthening of public management systems, and creation of systems of community accountability. It also requires new approaches to donor/recipient relations.

(ix) An effective assault on diseases of the poor will also require substantial investments in global public goods, including increased collection and analysis of epidemiological data, surveillance of infectious diseases, and research and development into diseases that are concentrated in poor countries (often, though not exclusively, tropical diseases).

(x) Coordinated actions by the pharmaceutical industry, governments of low-income countries, donors, and international agencies are needed to ensure that the world's low-income countries have reliable access to essential medicines.

Ill health, malnutrition and high fertility are often reasons **why** households end up in poverty, or sink further into it if they are already poor. Illness of a breadwinner—and the consequent loss of income—can undermine a poor household's ability to cope financially. Out-of-pocket payments for health services—especially hospital care—can make the difference between a household being poor or not. High fertility also places an extra financial burden on households—

by diluting the resources available to other household members, and by reducing the earning opportunities, especially for women.

But poverty is also a **cause** of ill health. Poor countries—and poor people **within** countries—suffer from a multiplicity of deprivations which translate into levels of ill health that far exceed the population average. Most obviously, they lack the financial resources to pay for health services, food, clean water, good sanitation, and the other key inputs to "producing" good health. Hence it is not just lack of income that causes the high levels of ill health amongst poor people. The health facilities serving them are often dilapidated, inaccessible, inadequately stocked with basic medicines, and run by poorly trained and sometimes rude staff. Furthermore, poor people are also disadvantaged by a lack of knowledge about prevention, and when to seek health care. They also tend to live in communities that have weak institutions and have social norms that are not conducive to good health. In short, poor people are caught in a vicious circle—their poverty breeds ill health; and this, in turn, conspires to keep them poor.

3.3.4 Population issues within the Health sector

a) Population composition and distribution and health service requirements

Population growth and changes in population structure and spatial distribution affect the demand for goods and services, including the demand for health by particular subgroups. In a situation where these population subgroups are growing fast, demand for health goods and services could grow at least as fast. Rapid population growth which raises the population base requiring health services, and the changing distribution accompanying it, which influences the incidence of various diseases, complicate the task of planning aimed at determining the approximate mix and standards of preventive and curative interventions needed to maximize the attainment of health objectives.

There are a number of ways that population growth affects the health status of the population. Probably the most important relationship is between high fertility and infant, child, and maternal mortality. Some of the conclusions highlighting the relationships between population and health status are:

(i) Closely spaced births result in higher infant and child mortality;
(ii) Birth spacing can prevent an average of one in four infant births;
(iii) Children born to young mothers are likely to die;
(iv) Family planning can prevent at least 25% of all maternal deaths;
(v) Family planning prevents maternal deaths from unsafe abortions.

In seeking a more comprehensive picture of the effect of different population trends on health service requirements, it is necessary to go beyond crude personnel/population ratio (for instance the focus of Spectrum Model is projecting the increased resources required to maintain or improve health care) and examine the effect of changing population composition on health needs.

b) Age/sex structure

Different age and sex groups in the population have widely differing probabilities of sickness and recourse to medical attention. In both developed and developing countries the general pattern is much the same (Mortality curve). In addition, adolescent mothers are more likely to experience unemployment and poverty, tend to have closer spacing of births, more non-marital births and a higher proportion of unintended births than women who delay childbearing.

Health care needs, derived from the age and sex structure changes, are influenced by the pattern of diseases that affect the young –preventive and curative- and those affecting the old. In addition, the epidemiological transition (changes in major causes of death), which occurs concurrently with the fertility transition, alters the health care needs of given age groups. In examining the implications of population trends for health needs, the changing geographic distribution of the population needs to be considered, especially as health service ratios are normally higher in the cities than in the rest of the country (equity and effectiveness of health service delivery).

In a classic approach, the population at high risk is assumed to be the total infant and child population (all persons under the age of 5), plus all females of childbearing age (between 15 and 49). These groups are considered to be highly exposed to certain typical risks associated with their age and sex. With the emergence of the AIDS pandemic we know that young people (especially girls) and women are the most exposed and vulnerable groups although all groups are affected by HIV/AIDS. Age structure of a population shows specific fertility and morbidity features, which influence maternal mortality.

c) Morbidity

Communicable diseases, particularly those associated with a poor environment or maternal, perinatal and nutritional problems, account for most instances of ill health in low-income countries and among the poor in middle-income countries. HIV/AIDS is becoming a major cause of premature death across sub-Saharan Africa and Asia. Non-communicable diseases, such as diabetes, cardiovascular disease, respiratory crashes and interpersonal violence, also have a marked impact on the health of the poor populations. As more developing countries complete the demographic transition, non-communicable diseases will increase in importance, with many countries suffering the double burden of high rates of both communicable and non-communicable diseases.

Poor maternal health, sexually transmitted diseases and limited access to family planning services put a sizeable burden of ill health upon poor women. Maternal mortality, like child mortality, provides a telling proxy for the effects of poverty, gender inequality and lack of accessible health services. In most countries, taboos and norms about sexuality (including practices such as child marriage, female genital mutilation and early sexual initiation) pose string barriers to providing information, reproductive health services and other forms of support that young people need to be healthy. Meeting the needs and protecting the rights of the 1200 million of adolescents worldwide are essential to safeguarding the health of this and future generations.

d) Mobility

Internal and international migration is a major component of population dynamics that affect health status. The issue of migration is increasingly attracting attention in the era of globalization during which the rise of inequalities across and within countries negatively affects access to health care. As highlighted in ICPD PoA, there are potential limitations in access to health services in general, and access to reproductive health services by migrants and or refugees.

e) Factors outside the health sector

Households play an important role as demanders of preventive and curative health services. They also play a role in translating information delivered through BCC programmes into good health and in influencing access to and use of key inputs such as food, water and sanitation. Households finance matter as poor households have limited resources at their disposal, not just money and in-kind income, but financial assets and physical assets, such as land and animals. Hence, low levels of wealth, especially of wealth that can easily be converted into cash, are a major constraint for poor households in times of illness and crisis.

Another factor outside the health sector is the availability of transport facilities for accessing health services among members of the population who can not afford transportation costs, especially in connection with referral services.

Also important are the human assets in the households such as, knowledge, literacy and education. Of special importance here are levels of general education and health specific knowledge among women and girls. However, the balance of power within households is unequal between men and women. Therefore, women may have little control over household finances and play a minor role in decisions about the use of contraceptives to prevent unwanted pregnancy and condoms to prevent STIs. This unequal power, which may be more pronounced in poorer, less educated households is a major risk factor for poor reproductive health outcomes and the poor diet of many women.

Community factors include both community values that shape household attitudes and behaviors and the physical and environmental conditions in the community for example roads and other public infrastructure that enable households to produce better outcomes. Examples of community factors include: Gender norms and practices; Existence of effective community groups and social cohesion (social capital); Community access to public services (inside and outside the health sector); Environmental factors (clean air and water).

The communities influence gender practices, and cultural beliefs, as well as access to public services, such as public transport. As elucidated in the ICPD PoA gender equity is closely related to maternal mortality. Indeed, women's status in the society determines their risk of dying from maternal causes. Other sectors that can influence health outcomes are: Education, Transport, Water and Sanitation; Agriculture; Energy and Power.

Annex 1 attempts to summarize some of the key population related factors with the corresponding health components as well as with the possible strategies and actions within the health sector to improve them.

3.3.5 Practical methods/tools for integration of population issues in ADB's Health programmes and projects

The focus will be on practical tools and or instruments to ensure that health services are of good quality and also meet the needs of the poor. Within the context of poverty reduction, while ensuring that health services are of good quality, one major concern will be how to make them *relevant* to the priority health needs of the poor and effectively target (reach) the poor and the socially vulnerable.

To be able to integrate population issues into the health sector, the pre-requisites would be:

(i) Health situation analysis that is comprehensive, with data on the health status, health service needs, and the patterns of health services use;
(ii) Distribution of heath services vis-à-vis the poverty profile;
(iii) DHS, HLSS and other community data are among important sources of data
(iv) Identify key health and population policies and programmes: Health Policy; Reproductive health policy and strategies; National Population Policy; HIV/AIDS policy and strategy; Adolescent Reproductive Health Policy; National Health Development Plan

Actions recommended

In order to integrate pro-poor interventions into health activities, actions should include the following:

(i) Increase affordability and financial access through various health financing mechanisms: Pricing policy that reduces and/or eliminates user fees for basic services; Cross-subsidization services;
(ii) Strengthen exemption mechanisms services (using age/sex and income criteria);
(iii) Develop community financing arrangements;
(iv) Develop equity funds to pay for the poor (co payments and/or prepayments).
(v) Design of "core packages," which define health interventions to be available at the village (health post), community (health center), and district levels (district hospital)
(vi) Ensure that proposed health packages respond to the burden of disease afflicting the poor and are linked to poverty maps to facilitate geographical targeting
(vii) Ensure that proposed health packages represent priority activities for public financing
(viii) Ensure that key health, fertility and nutrition indicators are integrated in the monitoring and evaluation framework (See Annex 2) and specific data collection interventions to make data available.

To ensure mainstreaming of population dimensions in CSPs and health projects, requirements for integration as presented in Session one of the third Module should be met. Specifically, health planning should be based on:

(i) Government health goals and targets on health, population and nutrition outcomes. Here, reference could be made to the National Population Policy objectives and targets
(ii) Sound and up-dated population data (age and sex structure; spatial distribution; density) and their projections (Demographic methodologies exist for that purpose). Populations at

high health risk has to be taken into account:

- All persons under 5 years
- Females of childbearing age: 15-49

(iii) Use of health services by different categories of the population. Disaggregation is key to reflecting differentials by socio-economic, sex, age, location etc. The demographic and heath surveys provide such information.

(iv) Most used inputs and outputs for health services requirements are population related:

- Health personnel (doctors, nurses): projected, these indicators are useful in demonstrating how the health sector will have to expand in the future to maintain or improve the current levels of health services. Implications would include supporting the current number as well as providing training for new health personnel;
- Health sector infrastructure: Health centers and hospitals have to expand also based on population trends and distribution for effective allocation of health services
- Hospital beds required

(v) Annual recurrent health expenditures that reflect the financial resources required to support the health system in the future

(vi) Other health components of the Health sector will also need specific population related inputs, especially components directly influencing population outcomes such as fertility and life expectancy. Reproductive health/Family planning data and HIV/AIDS data are important in this endeavor.

Annex 1

POPULATION DYNAMICS AND HEALTH INTERRELATIONS

Population related factors and variables	Health components	Indicative Actions/Strategies
Age and sex structure	Child health and other communicable diseases; Maternal health	Increased budget allocation to the health sector; Human resources; Availability of some essential drugs
Population growth rate	Supply of health services, infrastructure and personnel	Increased budget allocation to the health sector; Human resources; Availability of some essential drugs
Mobility	Brain drain of Health sector employees; Communicable diseases; Epidemic; HIV/AIDS	Human resources; Improve working environments; Strategy to motivate and retain skilled personnel; Health workers incentives; Basic social services; Sanitation; strengthening municipalities; reform of water tariffs and shelter and land titles
Mortality/Morbidity	Supply of health services, including HIV/AIDS	Condoms distribution Build capacity to collect and analyze data about health status and its underlying determinants
Fertility	Maternal Reproductive health: Family planning; Logistics; ...	Family planning; IEC; BCC; referral systems; reproductive and sexual health reflected in national sector plans
Other population characteristics • Gender equity	Maternal health; communicable diseases	Family planning; IEC; BCC; Operations research on barriers to use services; promote participatory approaches to work with communities; Actions outside the Health sector

Annex 2

SAMPLE OF POPULATION-HEALTH DISAGGREGATED DATA

A. GENERAL INDICATORS

Population size (in million)
Sex Ratio (100 female)
Population under 15 years (%)
Dependency ratio
Urban Population (%)
Population Density (per sq. km)
Population per ha of arable land
Adult Literacy rate by sex
Labor force participation by sex

B. DEMOGRAPHIC INDICATORS

Annual population growth rate (%)
Urban population growth rate (%)
Crude death rate (per 1000 population)
Infant mortality rate (per 1000 live births)
Maternal mortality rate (per 100000 births)
Life expectancy (years) by sex
Crude birth rate (per 1000 population)
Total fertility rate (avg. # of children/woman)
Population doubling time (years)
% of women of childbearing age
Median age population

C. Indicators of Vulnerability

- % of aged people (60 years and more)
- % of jobless people
- % of women headed household
- % of girls of less than 15 years working like servants, maids, prostitutes,
- % of the children street, especially orphans, and those whose parents are without resources and jobless
- % of school drop-out among the less than 15 years
- % of refugees and displaced people (because of conflicts and natural disasters)
- % of displaced people because of projects' of development
- % of mentally handicapped people
- % of abandoned children taking drug addiction, prostitution and crimes
- % of the children victims of the trafficking and other types of abuse

D. HEALTH AND NUTRITIONAL INDICATORS.

- Population per physician
- Population per nursing persons
- Access to safe water (per cent population)
- % of fully immunized children
- Babies born with birth weight <2500 gm (%)
- Prevalence of illness among children under five years by household income quintile
- Household behavior in response to child illness by household income quintile
- Worst indicators of health by regional divisions
- Women's health indicators by household income quintile
- Poverty versus population coverage of basic health facilities by divisions
- Malnutrition status among children under five years by divisions
- Iron deficiency in women of childbearing age by division
- Vitamin A deficiency in women of childbearing age by division
- Number of health centers
- Ration of population/health center
- Assisted deliveries
- Number of physicians, nurses, midwifes...
- Children with no immunizations by region
- Sexually active women using contraception
- Access to safe water
- Access to good sanitation
- Spending on Health; RH and HIV prevention
- Districts with VCT services
- Condom use
- Antenatal centers
- Counseling to pregnant women
- Number of people reached by information and sensitization campaigns on HIV/AIDS

Annex 3

CASE STUDY:

Health outcomes for the poor are determined by many different factors, and are themselves a contributing factor to poverty. Let's look at the following story and then discuss how many factors can be implicated in the not so uncommon situation Safar Banu found herself in.

A. I am Safar Banu. I am 43 years old and I have just delivered my 10th child. The nine deliveries I have had before were not easy but I managed without the help of a clinic. Why I didn't go to get pre-natal care? I was too busy to go, I am often at work in the field shredding jute fibers and I have to care for my family. I had wanted to use something to prevent this pregnancy, but my husband wouldn't hear of it. In the last couple of weeks I've been very dizzy, and my feet have been swollen. I have also been feeling very weak. Since the delivery took place, I haven't been able to get out of bed for 10 hours, and my condition seems to be deteriorating. My limbs are burning, and my whole body is swollen. They've been pouring water over my head but it doesn't really help. I am so afraid that I will not survive this delivery.

   Seven days after the delivery Safar Banu died of complications related to childbirth.

B. I am Safar's husband. I am 45 years old. My wife died after our 10th child was born. She was a good wife, she never complained and always did her duty. My 'pir', or spiritual leader, says that Allah gives and provides for children. I will have nothing to do with these contraceptives, they are evil. I would have divorced Safar if she had insisted. But she was a good wife, so she didn't. It is Allah's will that she died. I'm a sick man myself. I would have paid more attention to her condition if I had been well myself. But we have no money, and hospitals are very expensive. No, Gopal Daktar, our traditional healer is every bit as capable to tend to us as those doctors at the hospital, and he charges a lot less. It is not his fault that she died. It is Allah's will.

   The hospital where we took Safar on the seventh day didn't even pay for the transportation to get there. We had to sell half a 'kani' of land to get her there. Now we have even less land to grow our food on. What will we live on now?

C. I am Safar's mother. When Safar told me she was pregnant for the 10th time, she was crying. She didn't want this pregnancy but couldn't do anything about it. Her husband would have divorced her if she had insisted on any form of birth control. A week before she delivered she told me she was afraid that she would not survive this birth. I was with her in the delivery hut. The birth was difficult because Safar was so weak. The dai (traditional birth attendant) and I knew something was very wrong when Safar couldn't get up for 10 hours after the birth. The women in the village said that the blood from her womb and legs, which is polluted and harmful, had risen to her head. They said she had not bled enough to drain the polluted blood. In fact, Safar bled a great deal during and after the delivery. On about the 5th day after the delivery her whole body was swollen and she was sweating profusely but had no fever. When she became unconscious on the 7th day my eldest grandson wanted to have her carried to the MCH clinic. But I told him it was too late. Even the blood of my grandson couldn't save her.

Safar always worked very hard, she ate very little, always feeding her husband and sons first. If there were no rice left, she would just drink water. When she was ill in the past, she would come to me, a poor woman, to get help and treatment. That no-good husband of hers just cared about himself. He didn't even notice how sick Safar was until her whole body became swollen on the fifth day after her delivery.

D. All my brothers and sisters and I were concerned when my mother did not recover from the delivery of our youngest sibling. We went to the delivery hut often to ask for news of her.

   On the seventh day, my cousin and I decided to organize some transport to the MCH clinic because I was afraid my mother would die if we didn't do something quickly. My grandmother tried to discourage us because she thought it was already too late. Of course we have no transportation of our own and we have no money to pay for someone to take her. I convinced my father to sell half a 'kani' of land to pay for the transportation. Everything else in the hospital was provided for free.

   When we got to the hospital there was no blood for her, so I donated my own. But it was to no avail, we had acted too late. My mother died the following day in the hospital.

E. I work at the MCH clinic in the next village from where the Banus live. Safar's mother called me not until five days after she gave birth to her tenth child. When I saw her, she complained of burning legs and she was sweating profusely but had no fever. I diagnosed the case as extreme anemia and tried to convince her husband to let her go to the hospital for a blood transfusion, which was both urgent and necessary. Her husband didn't listen to me. He went to the village healer, who of course couldn't do anything for her, even if the family had had the money to pay for the medicine. I next saw Safar two days later. Her son and a cousin had brought her to the MCH clinic. Safar was unconscious and her condition had deteriorated considerably. I feared she would not survive the night. Her pulse was extremely low and she had difficulty breathing. We had no blood to match Safar's blood type, so her son donated blood for a transfusion. Unfortunately it was too late. Safar died the next morning.

F. I am Gopal Daktar, the healer of the village. I was called when Safar Banu was about to deliver her 10th baby. The Banus are very poor. They didn't have any money to pay for the medicines, they were wasting my time. I could have tended to patients who were able to pay. But since they called me, I had to do something, so I gave her something for the contractions when labor began, of course this was just aspirin which is cheap. I gave her some more aspirin after the birth to help with the pain.

   On the fifth day the woman had further deteriorated. I didn't know what was wrong with her and tried several injections and medicines. Of course, I couldn't give her any 'good medicine' since her husband couldn't afford it and these 'good medicines' are expensive.

Having read the above story that represents the tragedy of women and families in most African countries:

- Give at least 5 reasons why she died;
- Identify the population related factors that led to the death of the woman;

- Propose strategies that should be put in place to address maternal mortality and morbidity
- Identify also policies and strategies outside the health sector that may influence the improvement in maternal health

Resources: Reference materials, useful websites and contacts

1. ILO. Population Dynamics and Educational and Health Planning
2. SPECTRUM Policy Models, RAPID: Computer Programs for Examining the Socio-economic Impact of Population Growth
3. ADB. 1997. Health Sector Policy Paper
4. ADB. 2001. HIV/AIDS Strategy Paper for Bank Group Operations
5. WHO. 2001 Macroeconomics and Health: Investing in Health for Economic Development.
6. World Bank. 1999. Health Expenditures, Services and Outcomes in Africa: Basic Data and Cross-national Comparisons 1990-1996
7. World Bank. 2004. Health Outcomes and the Poor (CD ROM)
8. World Bank. 2003. Poverty Reduction, Reproductive Health and Health Sector Reform (CD-ROM)
9. UNFPA. State of the World Population 2002
10. WHO. 2000. Health Inequalities and the Health of the Poor: What Do We Know and What Can We Do?

http://www.unfpa.org/africa
http://www.measuredhs.com
http://www.worldbank.org/poverty/data
http://www.futuresgroup.com

3.4 Session Four: Integration of Population Issues in the Agriculture Sector

Session Objectives

By the end of the session, participants will:

- Become familiar with the concept of agricultural system inputs and how allocation of resources among them affect the well-being of the poor;
- Understand the linkages between agriculture and population factors and the implications for productivity, food security, and socioeconomic development, within the framework of poverty reduction;
- Assess the adequacy of population-related dimensions in agricultural and rural development as they relate to CSPs and PRSPs.

Topics to be covered

- Brief description of the sector
- The Bank Group's agricultural sector policy
- Population issues within the agriculture sector
- Linkages between agriculture, rural development and poverty
- Framework of the population, environment and agriculture nexus (PEDA model)
- Integration of population issues in ADB's programs and projects (case study)

3.4.1 Brief description of the sector

In most developing countries, agriculture is the main source of livelihood for more than 70% of the population, both in terms of basic nutritional needs, income generating activities, and social organization. Indeed, agriculture is one of the most critical sectors in Africa's economies as it provides employment for some 50 percent of Africa's labor force and accounts for about 35 percent of the region's GDP. Its performance, therefore, determines the welfare of the grass root populations in the region. Moreover, issues related to gender, management of environment, water and other resources, and the impact of HIV/AIDS, have contributed to consolidate the nexus between agriculture, population and poverty in the context of sustainable development. A detailed description of these linkages is presented in the PEDA model featured in this module.

Despite rapid urbanization, over 70 percent of the African population still lives in rural areas and depend on agriculture. Farming systems have witnessed very little progress in technological changes and practices with regard to the existing subsistence agriculture. There has been limited progress in the area of cash cropping, which has of late been experiencing difficulties. The key constraints to sustainable agricultural development include the predominant role of women who at the same time have to cope with household chores, childbearing and rearing, and maternal and infant health; high population growth rates of around 3 percent per annum versus an estimated agricultural growth rate of about 1.7 percent.

This has led to a vicious cycle of low input and low output agriculture systems. Agriculture has also been affected by very low labor productivity, which is a result of poor basic infrastructure. Most African countries overemphasize the growing of cash crops for export whose earnings have been negatively affected by the global decline in the price of agricultural commodities. There has also been minimal investment in agriculture particularly irrigation such that agriculture remains too dependent on rain while the continent suffers from recurrent droughts which are severe and very prolonged. Besides natural disasters, the national policy environment is very unsupportive of agricultural development as it heavily taxes primary commodities. Also, the land tenure system in Africa remains complex and unpredictable.[5]

3.4.2 The Bank Group's agricultural sector policy

The development of agriculture is central to ADB's strategy for enhancing its contribution to economic development across the continent. At the operational level, Agriculture and rural integration is one of the three key strategic areas of intervention for the Bank's Vision and its overarching goal of poverty reduction (the other two being the development of human resources, and the development of infrastructure). The Bank's policy on agriculture identifies the following four key factors that stand in the way of realizing the continent's agricultural potential to serve as the engine for economic development, improved standards of living of grass root populations, and trigger for poverty reduction:

Decline in food production: Of the world's main agricultural regions, only Africa has witnessed a decline per capita food production over the past 20 years. This is due to unfavorable climatic factors, poor agricultural technology, drought and floods, high rates of population growth, rapid urbanization, a large proportion of poorly educated small-scale farmers and the impact of HIV/AIDS. As a response, the establishment of early warning systems, emergency food reserves, trade monitoring, and most importantly, the Bank's intervention in improving agricultural production in RMCs and the integrated rural development package are proposed.

Drop in export earnings: Agricultural commodities produced for export yield more than half of the foreign exchange for a majority of African countries. In countries like Mali and Burkina Faso (cotton), Tanzania, Uganda and Kenya (tea and cocoa), Madagascar and Swaziland (sugar cane), Côte d'Ivoire (Coffee, cocoa and pine apple), agricultural products accounted for between 60 to 100% of GNP. These export crops are losing their economic importance, first of all, because of stiff competition from other tropical countries from Asia and Latin America that employ more productive technologies, better market technologies and invest in research and human capital development. The second reason has to do with unfair trade with the West in the context of global economy. ADB's response is to encourage investment in agricultural supporting services, rural infrastructure, promoting regional trade via regional economic communities within the NEPAD framework, promoting training on trade negotiation skills and sub regional information exchange.

Degradation of natural resource base: Africa's natural resource base is experiencing growing pressure from the demand of an expanding population for land to farm and graze animals, water for domestic, industrial and irrigation use, wood for fuel and timber, and fish, which

[5] ADB 2002 Bank Group Agriculture and Rural Development Policy.

have resulted into the following environmental issues: increased stress on natural resources caused by drought and floods; soil erosion in semi-arid and arid areas leading to declines in productivity; over fishing; decline in biodiversity through uncontrolled harvest and trade in wildlife; degradation of river basins and their negative effects on coastal fisheries from rainfall decline and coastal mangrove clearing; persistence of hazards from diseases such as onchocerciasis, trypanosomiasis, that cause human death and restrict livestock production. The ADB responses are twofold: implement regional programs to control and desertification and the effects of drought; assist RMCs in setting up monitoring policy measures to restore ecological balance.

Population pressure: In relation to the agricultural sector, the Bank is aware of the problems related population growth, massive movements from rural to urban areas, and population pressure on land, especially in arid regions where the density population per arable land is very high. As a result, population pressure and rural exodus are problems to be addressed through the formulation of national population policies and the elaboration of a comprehensive rural development policy.

3.4.3 Population issues in the agriculture sector

Human population is the producer, the consumer and the commercial agent of agricultural production. At the same time agriculture and population factors mutually influence each other: poor food production causes famine, malnutrition and subsequent mortality, especially among infants and pregnant women. On the other hand, poor agricultural performance is due to high HIV/AIDS prevalence among the productive age groups, skilled workers migrating to urban areas in search for better economic opportunities, land pressure, or low density per arable land. The following are the population factors that influence the outcome of agricultural productivity.

HIV/AIDS: The 2004 country strategy paper for Swaziland suggests that the economic prosperity of the 1990s came to an end in large part because of the massive departure of best educated and skilled workers to South Africa, but also because of the high death rates due to HIV/AIDS in the agro-industrial sector, once labeled as the backbone and most promising sector of Swazi economy. Although still being identified as a middle-income country, 66% of the population now lives below the poverty line, because of the collapse of the agriculture sector.

Population density, land pressure and carrying capacity: A report on agricultural production and population growth in Burundi[6] (a small country of 25,950 sq kilometers, with a density of 204 inhabitants per sq kilometer, and annual population growth rate of 3%) shows a very strong linkage between population and agriculture. It is estimated that 93% of the economically active population is in the agriculture sector, dominated by the traditional system of farming which produces mainly for households consumption and local market. Because of the high population and land pressure, the sector is characterized by reduced crops lands that are used intensively over extended periods with little time to regenerate hence leading to rapid land degradation, low productivity, food insecurity and poor economic returns. To better understand this relationship, two schools of thought are briefly summarized here:

[6] Jeanne d'Arc Gahurura, 1994. Adéquation Production agricole et croissance démographique au Burundi (1990-2010). In Cahiers démographiques du Burundi, No 6.

According to the classical economists of the 19th Century, the resources of the planet are non renewable and the degradation of the ecosystem will lead to a rapid exhaustion of increasingly scarce natural resources. They also assert that when unchecked, population grows exponentially, while agricultural production at the very best grows arithmetically. This results in a mismatch between the availability of resources and the growing demand. A major challenge of decision makers, therefore, is to ensure that population growth is checked to match agricultural production and food security; otherwise populations will be confronted with malnutrition and famine, decreasing income and poverty. This is known as the Malthusian approach.

Boserup on the other hand, argues that agricultural production increases in response to population growth. Economic actors possess a potential of technological innovation (fertilizers, machines, new crops and techniques, etc.) to respond to demographic pressure and are able to produce more to meet the needs of a growing population. This approach that uses technology to compensate for the negative impact of high-density populations is known as the carrying capacity approach.

Fertility and population growth: Depending on the situation in specific countries, low fertility and moderate population growth rates can be a negative factor in local consumption and marketing. That is why, maintaining high fertility is seen as a rational response of people, particularly in rural areas, who seek to ensure the survival of a sufficient number of children to provide adequate labor and old age support. Indeed, as forest resources and soil fertility have declined and agricultural productivity per unit has stagnated, family labor appears as the only source available to rural families for expansion of agricultural production. Under prevailing low-input levels of production, many African countries find it difficult to adequately feed their people. Therefore, harmonizing population growth with the capacity of land area to produce sustainable amounts of food poses serious challenges.

Rural/urban and regional migrations: It is commonly observed that the phenomenon of rural to urban migration in developing countries is the result of poor economic opportunities and inadequate rural infrastructure and social services to retain people, especially the youth, the more educated and skilled workers. With the combined effects of rapid population growth, high density and land pressure, more and more people, opt to seek work and better standards of living in cities. With regard to regional or international migration, the success of the agricultural sector in countries like Côte d'Ivoire was a pull factor for the influx of skilled labor force from neighbouring countries, huge capital investments and goods which brought about economic prosperity and social stability for more than three decades. With due consideration to the level of socioeconomic development, there could be a positive relationship between urbanization and the development of the agricultural sector. The food security belt around the metropolitan areas as seen in Abidjan, Addis Ababa or Dakar, is a testimony of a growing and promising agricultural network targeting the increasing demand from these cities. Tacking stock of these success stories and scaling up such trends to other cities and semi urban areas in the continent can provide avenues for food security.

From a development planning perspective, demographic considerations that may affect agricultural and rural development planning goals include the following:

(i) The setting of targets for food production, taking into account prospective population trends by sex, age and levels of income in urban and rural areas;

(ii) The formulation of agricultural development targets to improve employment and productivity of agricultural population, considering such factors as agricultural resources and agrarian reform;
(iii) The formulation of rural development policies and programmes taking into account rural population trends, the need for more appropriate patterns of rural-urban migration, and, particularly, the desirability of improving the quality of life of the poorest strata in the rural population by eliminating hunger and malnutrition and improving health, education and social conditions;
(iv) With regard to gender, agriculture and rural development[7], it is observed that Africa's investment in agriculture and rural development has suffered from the failure to adequately address gender relations. Currently women constitute 60 percent of the agriculture labour force and contribute 80 percent in food production. This critical role has always been underestimated, as farmers in Africa have been synonymous with males.

There is evidence that women play an important role in the various sub-sectors of agriculture and rural development. The main sub-sector for agriculture and rural development are: crop production, livestock and pastoral farming, fisheries and aquaculture, forestry management, irrigation and marketing. Women play varying roles in different regions of Africa depending on culture, tradition and other factors. They form the majority of world's agricultural producers and are dominant in the management of fisheries, forestry and farm resources. In most regions women are universally responsible for food processing and preparation. Despite the critical role they play in agriculture and rural development, women's roles and contributions are usually undervalued and underestimated.

Women's productivity is curtailed by policies and practices that neglect the multi-faceted nature of women's work. Extension services, agricultural credit, training in modern farming methods, for example, ignore women's needs in the sector. Gender insensitive land tenure policies limit women's access to land and benefits from the sector. Women face several challenges in marketing agricultural produce, which in turn reduces their productivity. They have less access to modern technology and the design of agricultural often ignores women's needs. Lack of appreciation of the critical role women play in agriculture and rural development has left behind a record of unsustainable investments.

3.4.4 Linkages between agriculture, rural development and poverty

Recent literature on poverty suggests that the majority of African poor are rural dwellers who depend largely on agriculture as their main source of their livelihood. Their destitute situation can be analyzed from their poor standards of living, lack of access to capital and the most fertile land (if any), and deficiency in major social services (schools and health centers) and rural infrastructure such as potable water, electricity, feeder roads, primary health care facilities and agricultural extension services. The cumulative effects of their economic predicaments and lack of information/awareness have predisposed rural populations and poor people in general to cultural behavior that lead to low agricultural productivity, degradation of land, water and other natural resources, and considerable migration to urban areas, where, unfortunately they fall into the trap of all negative clichés of cities: slums and unsafe habitat, illiteracy, joblessness, street children, crime, prostitution, unwanted pregnancies, and HIV/AIDS.

[7] African Development Bank, 2004: Training Module on Gender and Agriculture

This situation reinforces the vicious circle of food insecurity and poverty both in rural and urban settings. As stated during the World Food Summit in 1996, "food security and poverty are two sides of the same coin and are the most severe twin evils befalling African nations today". FAO figures suggest that 40% of Africa's population is still affected by hunger and malnutrition, while the annual population growth rate averages 2.5% in the continent, food production declines by about 8%, and agricultural land declines by about 25%.

The linkage between population, agriculture and poverty is further evidenced when the following MDGs are considered:

Reducing poverty by half in 2015(Goal 1): Agriculture and rural development is critical to the achievement of this goal as 70 percent of the people live in rural areas. Women constitute the majority of people living in rural areas and engaged in agriculture. They are also responsible for feeding members of the household. Good nutritional status translates into better health for all members, especially growing children, and pregnant women.

Promotion of gender equality and empowerment of women (Goal 3): In agriculture the promotion of gender equality results in increased access of women to agricultural resources and inputs (land, appropriate technology, credit and markets).

Ensure environmental sustainability (Goal 7): In Africa the development of rural areas is at the center of poverty reduction. Because of population density (per arable land), agricultural activities may result into deforestation, desertification and overgrazing. The participation of women and men in the preservation and conservation of the environment is important. Education and IEC can contribute to the adoption of better practices for environmental sustainability.

Partnership and fair trade in the context of globalization (Goal 8): In Africa one of the major causes of international migration is the search for better economic opportunities and higher standards of living. Because agriculture is one of the main sources of export in Africa (ex: cotton in Burkina and Mali, cacao and coffee in Ghana in Côte d'Ivoire, tea in Kenya and Uganda, etc.), a fair regulation of export prices and conditions would greatly empower local producers, heighten their purchasing power, and limit rural exodus, as well as international emigration.

3.4.5 Framework of the population, environment, development and agriculture nexus: the PEDA Model

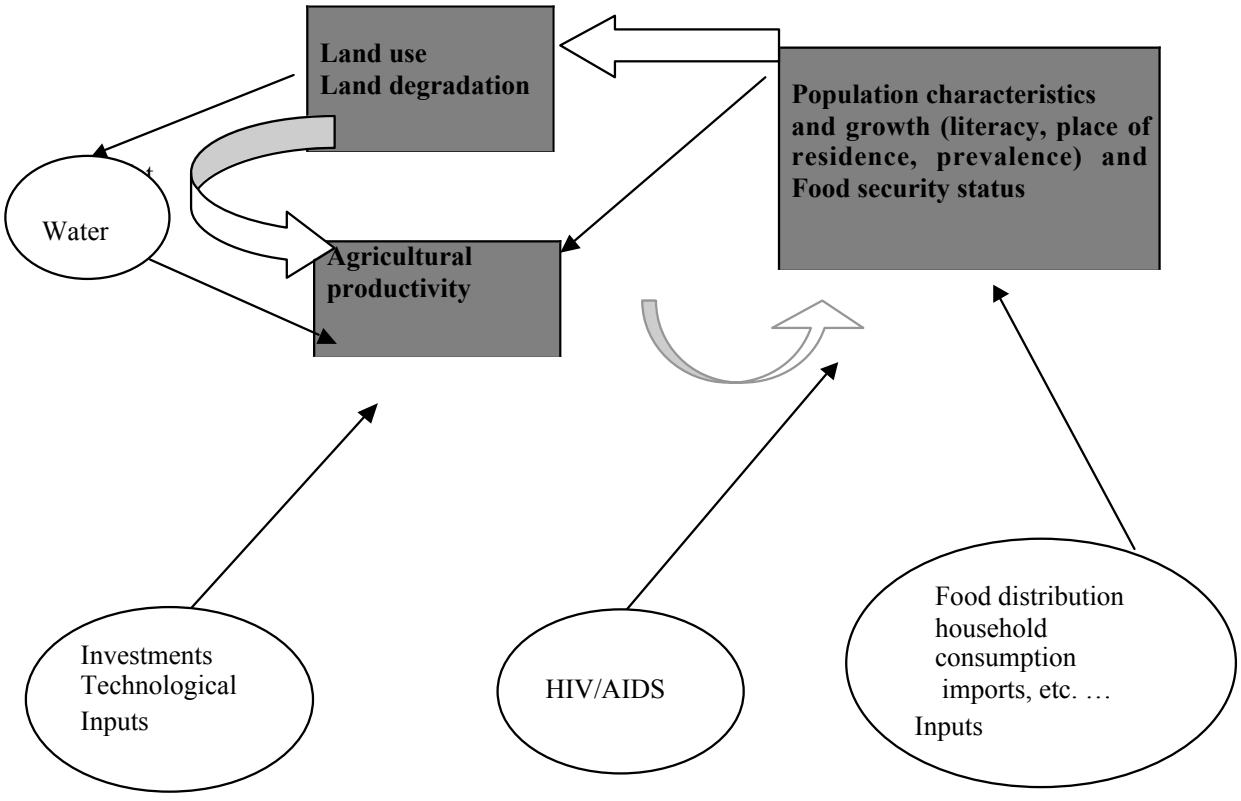
The ECA model shown illustrates the interactions between population changes, environment, socioeconomic development and agriculture, also called the nexus issues). The model is an advocacy tool aimed at demonstrating the likely impact of alternative policy options on the food security and status of the population. As food security is a factor of development in the areas of population, environment, agriculture and socioeconomic development, the model demonstrates their inter linkages.

The reasoning of the model rests on the assumption that the rural, illiterate and food insecure segment of the population tends to deplete natural resources in their quest for survival. When this fraction of the population expands, land degradation increases and as the latter negatively affects agricultural outputs, this contributes to food insecurity. Other factors that influence

food productivity and food availability are the size and literacy of the labor force; the availability of water; technology and other investments in agriculture; food imports and equality in food distribution. Population factors that are not made explicit in the model are age and sex (gender) structure; effectiveness of population control techniques, and the population effect, which is a more consistent with longitudinal analysis than the transversal one.

With regard to HIV/AIDS, the empirical evidence suggests that the predominantly rural population is also the most vulnerable to the epidemic. This results into the decrease in agricultural production (due to loss of the most productive economic actors) and food consumption, elements that would in turn affect local market and households' savings, hence aggravating poverty. At the global level this further deteriorates the already unfavorable trade balance.

Framework of the population, environment, development and agriculture nexus: the PEDA Model



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Annex 1

CASE STUDY ADAPTED FROM AN APPRAISAL REPORT

SWAZILAND: Lower Usuthu Smallholder Irrigation Project (LUSIP), UA 9.31ml 2003

Origin and history of the project: About 30percent of the land area in Swaziland is considered arable and as the country is largely mountainous, there is considerable pressure on the land resource. Of the 620,000 hectares that are suitable for agriculture, some 200,000 hectares are suitable for irrigation. Expansion of irrigation is constrained by, among factors, the limited amount of available irrigation water.

Agriculture sector: Agriculture is the main source of livelihood for over 75 percent of the population and is a major employment and income for rural households. Dependence on rainfall does not permit all year round farming since there is only one rainy season from September to March. The Lower Usuthu Irrigation Development Project directly addresses constraints of inadequate rainfall through provision of off-water-course storage facility to harness excess water during peak flood, which would otherwise, pass unutilised. Swaziland's formal lending institutions consists of the Central Bank of Swaziland, three commercial bans including Standard Bank, NedBank and First National Bank and three state owned lending institutions. The three state owned lending institutions are Swaziland Industrial Development Company (SIDC), Swaziland Development and Savings Bank (SDSB) and Enterprise Trust Fund (ETF). However, the commercial Banks are unwilling to participate in the provision of credit to smaller holder farmers due to lack of collateral and the high cost involved in its administration. SwaziBank has an adequate branch network and the capacity to cater for the needs of the smallholder farmers. There are three forms of land tenure in Swaziland. These are the traditional property rights on Swazi National Land (SNL), the individual or freehold on private or government land

called Title Deed land (TDL) and the Lease Hold land. About 70 percent of Swazi SNL. Land allocated by the chiefs is rarely taken away. Women have more access to TDL than SNL in that single women or women married outside the civil law can purchase TDL while in SNL, women can only own land through organised associations. Women make up 52 percent of Swazi population. The government established the national Gender co-ordinators' Office (NGCO) in 1996 to identify and address gender issues in the country. The NGCO identifies several issues as having a negative bearing on women's economic and social capacities. These include: lack of control and ownership to land, the inherent biases in civil and customary law which presume "women as perpetual minors", the strong influence of the traditional system where women are under the control of a male guardian for most of the decision-making, even in issues of family planning. The NGCO is advanced in the process of drafting National Gender Policy as well as legal reform to allow gender equity in all sectors.

The irrigation Sub-Sector: Groundwater availability and use for irrigation is negligible: aquifers are mainly of low permeability, even well sited and designed boreholes produce only small amounts of groundwater. The quality of water is also highly variable. Irrigation development to date has been based on the use of surface water supplies. Sugar is the major contributor to Swazi economy. Sugar production is mainly by large-scale farmers who currently produce about 97 percent of the national crop while smallholder farmer cultivate only 3 percent of the crop. The share of smaller holder is however expected to increase to about 30 percent with completion of Komati and LUSIP projects.

The Project: A number of project alternatives were considered during the feasibility study of 1998. The project appraisal confirmed that the most feasible option is to develop the project in two phases over 12 years period starting with this project as phase 1 for the development of 6,500 ha, including the infrastructure works allowing for future expansion to phase 2. The government has undertaken an extensive and unique participatory approach in the LUSIP are from the initial stages. The result of the extensive consultations with the communities in the area since 1998 has led to the establishment of various committees at the community level including women's committees, resource user groups, waters users, Lubovane planning committee, Zonal planning committee and neighbourhood committee. Since their establishment, their functions have included discussion on issues such as crop preferences, issues of livestock, grazing, and others. The LUSIP participation process has had a strong bottom-up approach with recommendations being proposed by the beneficiaries to the chiefs and those are to be taken up further with the GOS. There is an extensive participation level especially from the landless individuals, women, and the youths whose needs are being addressed in this project. The formulation of LUSIP took advantage of the lessons learnt from the implementation of the Komati Irrigation Development Project. The project will directly benefit about 2,600 farm families with up to 15,300 members. Amongst the smallholder cane farmer about 20 percent are women farmers and these will be fairly represented in all project support services. Moreover, women farmers not already organised in production groups, will be assisted to do so and will become direct project beneficiaries. The total direct project beneficiaries constitute about 70 percent of the poor in the project areas living below the poverty threshold in Swaziland.

Project objectives: The overall sector goal is to contribute towards poverty reduction in Swaziland. The objectives of the project is to increase household income, enhance food security and improve access to social and health infrastructure for rural populations by creating the

conditions for the transformation of subsistence level smallholder farmers into small-scale commercial farmers.

Key components of the project: The project outputs and description of components are as follows: a) Upstream development will provide all the main and secondary irrigation water delivery infrastructure, including all topographical surveys, technical investments, and detailed designs and well as tender documents and construction supervision. b) Downstream development- will comprise four sub-components. It will support the development of policy and legal frameworks for land, water, resettlement and farmers organisations. The participatory planning and irrigated farm development, the development of irrigation management institutions and agriculture commercialization. Among other activities, credit funds will be made available by government to the smallholder farmers for the purpose of on farm development through local development financial institutions. Among the items of the project for which a cost was specified were credit, training workshops, studies and meetings. Among the coordinating institutional groups is the National Gender Coordinator's Office.

Group Discussion

1. What are the population-related issues raised in this case study?
2. How do these issues influence the attainment of the project ultimate goal (poverty reduction)?
3. In addition to population issues raised in this report, what other cross-cutting issues can you identify**?**

3.5 Session Five: Population in Infrastructure Sector

Session Objectives

At the end of the session, the participants will be able to:

- Familiarize themselves with the status of infrastructure sector in Africa especially in terms of: transport, energy, water and sanitation sectors;
- Inform themselves on the Bank's policy on Infrastructures and transport;
- Understand the role of infrastructures in development and poverty reduction framework;
- Be able to identify the population related dimensions that underlie every type of infrastructures and that one need to be taken into account in infrastructure programs and projects.

Organization of the session or Topics covered

1. Brief description of the Infrastructure sector;
2. Brief description of the Bank's Policy on Infrastructure and Transport;
3. Role of infrastructures in development and poverty reduction
4. Population issues in Infrastructure sector.
5. Steps for integration of population issues in infrastructure sector

3.5.1 Brief description of the Infrastructure sector and status in Africa

The main infrastructure categories include: i) Electricity; ii) Transport (roads, highways, airports, seaports, railways, waterways); iii) Water & Sanitation; iv) Other social infrastructures (schools, health facilities, leisure etc. Infrastructure development is one of the contributors to economic growth. Hence, efforts should be made to enhance Africa's development in terms of the accumulation of material and human capital.

The infrastructures considered in the present session include transport (roads, highways, airports, seaports, railways, and waterways), energy and water and sanitation. Telecommunication facilities are also referred for general overview purpose.

In the review made by **M. Fay and T. Yepes** (2003)[8], of the level of access to physical infrastructure services in low, middle, and high-income countries, it was shown that infrastructure stocks increase with income. This pattern, however, varies by the type of infrastructure. With respect to water and sanitation, where maximum access is fixed at 100%; access to water in high-income countries is only 1.3 times that of the low-income countries while access to sanitation is 2.2 times higher in high-income countries. While GDP per capita is 63 times higher in high income versus low-income countries, access to electricity, fixed line telecom, roads and rail are 18, 21, 10 and 6 times higher respectively. The stock of mobiles, the new telecommunication technology, is 91 times more available in the high-income countries although the new market for this technology is the developing low-income countries.

[8] World Bank Policy Research Working Paper 3102, M. Fay and T. Yepes "Investing In Infrastructure: What Is Needed From 2000 To 2010?" (2003)

In terms of value, the world's infrastructure stock today can be estimated at about US$ 15 trillion of which, about 60% is in high-income countries, 28% in middle-income countries and 13% in low-income countries. In contrast, the population shares are 16%, 45%, and 39% respectively.

The composition of infrastructure in each income-group of countries varies. In low-income countries, roads tend to dominate, accounting for about 50% of infrastructure stocks, whereas in middle-income countries, this share falls to 28% while electricity accounts for close to 50%. In high-income countries, electricity and roads amount to about 40% to 45% each of overall infrastructure stocks. Everywhere, roads and electricity represent the bulk of investment accounting for 75 to 85 of total infrastructure value. Water and sanitation drop in relative importance as income increases, while the reverse is true for telecommunication

Table 1: Access to infrastructure by income group, 2000

Category of countries	GDP per capita	Electricity generation (kw per capita)	Telecommunication (per 1000 persons)		Roads (Km/1000 persons)	Rail (Km/1000 persons)	Water (% households connected)	Sanitation (% households connected)
			Fixed (lines)	Mobile (subscribers)				
Low Income Countries	475	0.11	28	5.8	1.06	0.07	76.26	45.58
Middle Income Countries	1,919	0.40	127	83.7	1.10	0.13	81.82	61.87
High Income Country	29,808	2.03	582	526	10.54	0.44	99.59	98.07
Ratio HIC to LIC	63	18	21	91	10	6	1.3	2.2

Source: M. Fay and T. Yepes

Table 2: The composition of infrastructure stocks, 2000

Category of infrastructure	Low Income Countries	Middle Income Countries	High Income Country	World
Electricity	25.6%	48.1%	40.1%	40.4%
Roads	50.9%	28.1%	44.9%	41.0%
Water & Sanitation	14.5%	9.9%	4.7%	7.5%
Rail	7.2%	7.0%	4.1%	5.3%
Telecom (fixed)	1.3%	3.2%	2.4%	2.5%
Telecom (mobile)	0.5%	3.7%	3.8%	3.3%
Total (%)	100%	100%	100%	100%
Total ($billions)	1,968	4,194	8,804	14,966

Sourc e: M. Fay and T. Yepes

Africa is very poorly equipped in infrastructure. While physical infrastructure-telecommunication, power, transport, water and sanitation-is vital for economic growth, the existing ones are either functioning at high cost (electricity and water) or in very bad status, (transport: roads, railways, ports and airports). While hard infrastructure- telecommunications, power, transport, water and sanitation-is vital for economic growth, Africa lags behind in these areas. In most cases, vast distances and low population density combine with the multiplicity of national borders to pose huge obstacles to putting the required infrastructure in place. In 1997 Africa, excluding South Africa, had 171,000 km of paved roads, much less than the stock in Poland. The continent is littered with pot-holed roads, irrigation canals are in bad shapes and broken down. Outside South Africa, the continent has just 5 million telephones, and most Africans live two hours from the nearest telephone. Africa is estimated to require $18 billion per year in infrastructural investments. But infrastructure must also be better managed if increased investment is to pay dividends. Shared resources such as the waters of the continent's major rivers can also be more efficiently utilised. These weaknesses contribute to higher costs, lower competitiveness, weak market integration and slow growth. They are also a factor in poverty and inequality, especially in remote rural areas.

3.5.2 Brief description of the Bank's Policy on Infrastructure and Transport

The Bank Group's Transport Sector Policy was developed in 1992 on the basis of the key transport issues identified over the entire continent. It has three specific objectives that are the following:

1. **Provide guidance to sector lending** –supply a frame of reference for internal decision making by the Bank Group regarding transport project and programme proposals made by its members states;
2. **Stimulate policy dialogue**- provide a sound basis for continuing policy dialogue between the Bank Group and it member states on the types transport sector to be supported, on sectoral planning for transport development, and on strategies for long-term collaboration, and
3. **Strengthen coordination** – promote internal and external coordination of the Bank Group's involvement in the transport sector with the activities of other donors and financing agencies.

Sector Component

The sector is defined as including any means of movement of people and goods within and between member states and between member states and points outside Africa. It is classified according to five sub-sectors based on physical and economic characteristics. The sub-sectors generally correspond to the primary modes of moving passengers and freight, including:

- Roads;
- Railways;
- Water Transport;
- Air Transport; and
- Urban Transport.

Sector strategy

The Transport development strategies of the Bank's Group are to enable member states to focus resources and activity towards resolving specific issues. It falls directly in line with article 2, paragraph 1-a of the Agreement establishing the African Development Bank, which stipulates that the Bank may "use the resources at its disposal for the financing of investment projects and programmes which by their nature or scope concern several members" or which are "designed to make the economies of its members increasingly complementary and bring about an orderly expansion of their foreign trade".

For each of the sub-sectors, a specific strategy was developed.

- **Roads sub-sector:** the strategy of the policy for this sub-sector is to support the need of state members for greater road network efficiency, improving road maintenance practices, supporting economic integration and ensuring road safety issues.
- **Rail:** Supporting member states to make railways more responsive to market demands through internal organizational reforms, increasing the efficiency of operations by reducing the costs and increasing revenues, and improving the productivity of existing services through maintenance and operations.
- **Water Transport:** Giving support to member states to implement water transport development strategies including the reform of the institutions and human resources engaged in sub-sector, improvement of the infrastructure and water craft maintenance, upgrading of the management of shipping organizations and improvement of maritime safety.
- **Air transport:** Supporting government and industries to achieve their objective of addressing the underlying issues in the sub-sector with a view to making air transport a more productive, reliable and safe mode of regional and international transport.
- **Urban Transport:** Supporting the member states to adopt strategic options which provide alternative means of addressing issues in areas such as institutional and human resource development, transport policy planning and coordination, and transport regulation and administration.

3.5.3 Role of infrastructures in development and poverty reduction

The development of infrastructure impacts on economic growth and income distribution in two ways: (I) economic growth is positively influenced by the stock of infrastructure assets, and (ii) income inequality declines with higher infrastructure quantity and quality.

The structural gap Africa is suffering from in terms of infrastructure constitutes a very serious handicap on economic growth and poverty reduction efforts. Improved infrastructure, including the cost and reliability of services, would benefit both Africa and the international community, the latter being able to obtain African goods and services more cheaply. In many African countries, the colonial powers built the infrastructure to foster exportation of raw materials and importation of industrial goods into Africa. While a lot of infrastructures have been put in place since independence, the situation is still far from being satisfactory. Government and foreign aid have been the main sources for infrastructure development.

Many recommendations are made in different regional meetings and more recently by the NEPAD, to do the following:

- Rehabilitate ports, railways and long-distance roads.
- Upgrade urban power, water, sanitation and telecommunications systems.
- Develop rural infrastructure,

However, little progress is made so far in their implementation for this is expensive and will provide economic returns only over a long period, and hence will require not only more public investments but also better governance of existing public funds for the provision of rural infrastructures.

Though there are no specific MDG concerns on infrastructures, all of them are indirectly related to the infrastructure development and improvement with regards to service access, which is a key condition to achieve most of the millennium goals.

An empirical evaluation of the impact of infrastructure development based on the estimation of infrastructure-augmented growth and income inequality regressions using data from a sample of 121 countries over the 1960-2000 period, indicate the following results in five points:

- First, the volume of infrastructure stocks has a significant positive effect on long-run economic growth.
- Second, infrastructure quantity and quality have negative impact on income inequality, not only with larger infrastructure stocks but also with an improved quality of infrastructure services. Moreover, separate experiments (using a reduced sample) show that improved access to safe water has an additional positive impact on income equality. These results are obtained in a framework that controls for reverse causation, and survives a variety of statistical tests that fail to show any evidence of misspecification. From this we can conclude that the above results reflect causal, and not merely coincidental, effects of infrastructure on growth and inequality.
- Thirdly, a variety of illustrative experiments show that the empirical findings are significant not only statistically but also economically. For example, were all Latin American countries to catch up with the region's leader in terms of infrastructure quantity and quality, their long-term per capita growth gains would range between 1.1 and 4.8 percent per annum, and their Gina coefficients would decline between 0.02 and 0.10? Catching up with the East Asian median country would involve even larger gains – ranging from 3.2 to 6.3 percent extra growth and 0.05 to 0.13 lower Ginis. Furthermore, when we bring water access into the picture, we find that if countries in Latin America and the Caribbean were to catch-up with the leader along this dimension as well, their Gini coefficients should decline between 0.02 and 0.09. Access to safe water makes a median contribution of almost 35% to this reduction in the Gini coefficient in Latin America and the Caribbean. It is important to note, however, that these catch-up scenarios implicitly assume potentially very large investment efforts in the transition toward the increased levels of infrastructure development.
- Finally, and perhaps most importantly, the conclusion that infrastructure both raises growth and lowers income inequality implies that infrastructure development may be a key win-win ingredient for poverty reduction. In addition to raising society's overall level of income, it would help raise the income of the poor more than proportionately. This suggests that infrastructure development should rank at the top of the poverty reduction agenda.

3.5.4 Population issues in Infrastructure sector

Apart from migrations that are commonly admitted as directly influenced by infrastructures policies, the other components of population dynamics interact also with infrastructures depending on their nature and quality and the level of their stock. This impact occurs through socio-economic determinants of the population dynamics such as: education, health, employment, etc.,

a) Population and Energy/ electricity

The inter-linkages between energy and population issues are quite ambiguous. Depending on the nature and type of the energy, the consequences could be positive or negative. Access to electricity is expected to save time for household members especially in rural area, provided that they spend much time to meet energy needs. The development of electricity infrastructure should provide a reliable source of light for children to do their homework and improves their school results; Similarly, the provision of electricity could improve the local environment. Access to improved and clean energy helps transportation to improve, making it easier, cheaper, and safer for the environment. It favors the provision of goods and services, leading to increasing farm incomes and work productivity.

In Sub-Saharan Africa, less than 10% of the rural population have access to modern energy services, a situation that significantly compromises the prospects for social and economic development. This is particularly true for women and girls living in rural areas who bear the greatest burdens of multiple energy-intensive tasks of rural livelihoods. Increasing access to modern energy services can free up their time for social and productive activities, thereby serving as an engine for rural economic development, attracting private capital and expanding development prospects for the poor. To this end, NEPAD aims to increase modern energy access from 10% to 35% of the African population, (i.e., an increase in access to energy from 60 million people to 300 million over the next twenty years). Increased access to energy could impact on maternal mortality reduction for women, and improved education output in terms of quality and quantity for young people and children especially for girl children.

At the same time, if the appropriate actions are not taken, the production of energy could harm the population instead of improving its well being: For example, the construction of dams could imply resettlement of the population, i.e. taking them away from their lands and farms. Most of the time, such resettlements are not undertaken adequately and the infrastructures could result in the deterioration of the environment and great human cost. It could lead to a worsening of health conditions with increased malnutrition, high morbidity and increased mortality. The work condition also could worsen with increased unemployment and rural-urban migrations, etc...

b) Population and Water and Sanitations

Development of water and sanitation infrastructure could impact on mortality reduction, by facilitating access of the households to safe and potable water; Similarly, the construction of dams could increase the risk of various diseases, changing the traditional morbidity patterns and could favour important internal migration towards the regions where the infrastructures

are installed or away from it, depending on whether the grass root populations are involved into the process or not.

While developing water infrastructure, one should keep in mind various needs such as: industrial, agricultural (irrigation) or households' water consumption. The development of such infrastructures could have enormous human cost beside the planned benefits. Constructing dams, either hydroelectric or not, is expected to improve the population well being by giving them opportunity to access cheaper electricity, water for irrigation and for households' needs, etc. The focus here is on water for households' needs.

Clean water is essential for improved living standards. Easy access to potable water improves health and frees up time for other activities, especially for women and children. Access to sanitation dramatically reduces debilitating and life threatening diseases, particularly among children.

c) Population and Roads and Transport

Road construction obviously increases opportunities for population to access domestic as well as foreign economic market. As a result, it could directly and indirectly influence population characteristics and dynamics.

- Constructing roads to open up regions could provoke and favour important rural out migration of young people towards cities, as well as it could create opposite demographic displacements from cities to rural areas depending on the specific development context prevailing in the country;
- It could lead to a change of the density between regions and districts by favoring population displacement from a more densely peopled region/district to another with less population pressure;
- Constructing roads between different districts of a country where services are concentrated, and not well dispersed, could increase access to health facilities and then favor a decrease of mortality notably those related to motherhood by reducing the fatal delays that claim thousands of women' life.

The development of the roads network within countries as well as between countries contributes to opportunities to open new lands. If there is a mal-distribution of socio-economic infrastructures within and between the regions of a country, due to an ineffective town and country planning, developing only transport infrastructures could lead to important population movements from the most disadvantaged to the wealthier regions.

d) Infrastructure and Mortality

With the development of roads network, previously understaffed health care facilities could become more attractive to health care personnel, making these locations easily accessible. They could help government campaigns to staff local health care centres with high qualified staff such as doctors who are used to staying only in cities. Health facilities could be improved, in part due to the improved roads, and increased medicine stock could become more available as transportation becomes more accessible and cheaper. Health care facilities could register

significant increases in outpatient visits. People in the rural areas could improve diets because of the ease of transporting nutritious food items to and fro.

e) Infrastructure and Fertility

Women's education is a key determinant of fertility. The development of these various infrastructures such as roads network, electricity supply, is prerequisite to the other social infrastructures like education and health equipments and any basic social services. With the development of education infrastructure, girls' enrolment should increase significantly. Increasing the number of educated women would enhance the awareness of reproductive health issues, more sensitization to RH advantages and increased benefit from services. Absenteeism of both teachers and students would also decrease.

Women could have access to more livelihood opportunities and consequently increase their participation in the formal economy. Similarly, there could be an introduction of new energy sources such as butane gas at low prices that could allow more households to use this energy source, resulting in significant timesavings for women. Maternal and childcare programs could be expanded or made available due to the improved roads and the new conducive socio-cultural environment

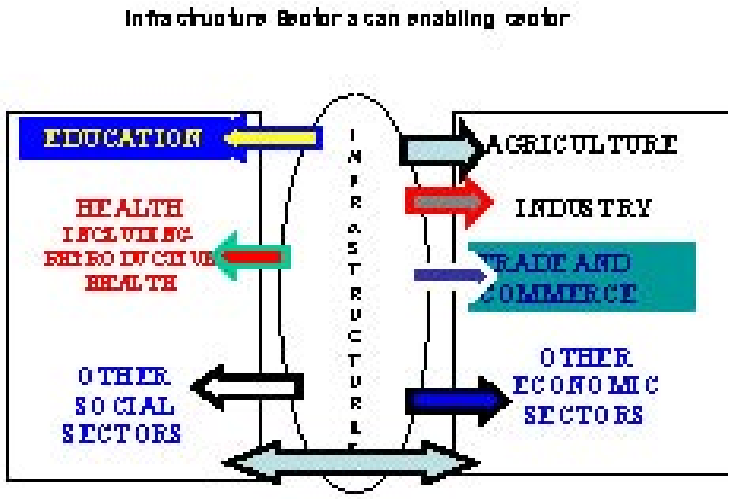
In Summary

Infrastructure development can have a disproportionate impact on the human capital of the poor, and hence on their job opportunities and income prospects. This refers not only to education, but also most importantly to health. A number of recent papers have focused specifically on the impact of expanding infrastructure services on child (and maternal) mortality, and educational attainment. The literature shows that policy changes that enhance the availability and quality of infrastructure services for the poor in developing countries have a significant positive impact on their health and/or education and, hence, on their income and welfare as well.

Brenneman and Kerf (2002) summarize some recent evidences on these impacts. Regarding education, a better transportation system and a safer road network help raise school attendance. Electricity also allows more time for study and the use of computers (Leipziger et al. 2003). Regarding health, access to water and sanitation plays a key role. Several studies have identified instances in which access to clean water has helped significantly to reduce child mortality (Behrman and Wolfe, 1987; Lavy et al. 1996; Lee et al. 1997; Jalan and Ravallion, 2002). In Argentina, for example, a recent study by Galiani et al. (2002) concludes that expanded access to water and sanitation has reduced child mortality by 8 percent, with most of the reduction-taking place in low-income areas where the expansion in the water network was the largest. More generally, Leipziger et al. (2002) find that a quarter of the difference in infant mortality and 37% of the difference in child mortality between the rich and the poor are explained by their respective access to water services. Allowing the poor access to safe water at the same rate as the rich would reduce the difference in child mortality between the two groups by over 25 percent.

3.5.5 Steps for integration of population issues in infrastructure policy and programme

Infrastructure sector is an enabling one vis-à-vis the others and thus, infrastructure policy has to be consistent with any other economic or social sectors. The process of integration of population issues into any infrastructure policy or programme has to feature throughout all the programming and project cycle process.



Steps to go

During the situation analysis exercise, one should ensure that:

- Population socio-demographic data and indicators are available and updated;
- Information/data on infrastructure distribution and utilization and other infrastructure related interventions are based on up-to-date population data and projections;
- The linkages between infrastructure, especially social infrastructures, and the other sectors (agriculture, environment, health and education) are highlighted;
- The impact of HIV/AIDS on the infrastructure sector should be made explicit;
- The socio-demographic impacts of infrastructure investments are discussed, especially when resulting in movement of people (forced migrations, Internal displacement of persons, etc.);
- Socio-demographic factors influencing/affecting (age, sex, culture, literacy, education) utilization of social services are identified.

During the strategy setting phase:

- One should ensure that the population related concerns are taken into account in terms of positive and negative impacts on various population segments and trends as identified in the situation analysis and problem identification phase;

- While discussing the resource allocation, one should ensure that appropriate resources are allocated to infrastructure, including the basic social services, and also ensure that population factors are taken into account, especially in reaching and bringing services to the most vulnerable;
- Monitoring and evaluation mechanisms should be developed that take into account the population related problems identified, and the appropriate indicators.

Annex

CASE STUDY ADAPTED FROM AN APPRAISAL REPORT **ON ZANZIBAR ROADS PROJECT**

Background to the project:

Zanzibar and Tangayika formed a political union which became the United Republic of Tanzania (URT) in 1964. Zanzibar consists mainly of 2 islands of Unguja and Pemba. Under the Tanzanian constitution, among others, matters pertaining to roads are the responsibility of individual members of the union. It is in this context that the Government of URT has, on behalf of the government of Zanzibar, requested the Bank Group to finance the upgrading of five roads in Unguja.

Road is the dominant mode of transport in Zanzibar. The road density is one of the highest in Africa. Owing to the inadequate funding of the road maintenance since the early 1980s and the lack of adequate capacity and expertise in the governmental bodies responsible for roads, there has been continuous deterioration of the trunk and rural roads.

The people in the catchment area of the roads represent about 20% of the population of the island of Unguja, that about 120,000 people in 2002. Between 60-90% of the population in the catchment area are engaged in agricultural production while a few others are engaged in small-scale artisanal activities and services; and those along the coast are in fishing and associated activities.

About 61% of Zanzibar population is below the income poverty line and they experience deprivation and social exclusion worsened by decreasing export base and poor access to infrastructural services and roads.

The Project Area

1. The project area lies in the Central, Western, Northern and Southern districts of Zanzibar. Its area of influence is the entire island of Unguja, covering six administrative districts. The project roads will be serving areas strategic to the economy of Unguja Island.
2. The proposed Manzini-Fumba road will form the main access to the Export Processing Zone (EPZ), to be located in the Fumba peninsular. The road passes through the proposed EPZ and through villages where agriculture and fishing are predominant. The Zanzibar-Dunga road links Zanzibar town to the central part of Unguja island and to the East Coast. It traverses rural and semi-urban communities known for their high agricultural production of food and cash crops, and small-scale artisanal activities such as furnituremaking, concrete-block making and mechanical workshops.
3. Mkokotoni on the Mahonda-Mkokotoni road link is one of the principal fishing ports of Unguja. Other areas along the road link are cultivated for food crops, and cloves, which is the major export crop of Zanzibar. The proposed Mfenesini-Bumbwini road provides access to the major tourist sites both inland and along the coasts. The Kinyasini-Tunguu road serves as an important link joining the North to the South of the island; it also passes through

very fertile area with potentially higher agricultural productivity. The Paje-Makunduchi road traverses the eastern shore of Unguja island where there is fast development of tourist resorts.

Group Discussion

1. What are the population-related issues raised in this project?
2. What do you foresee as the positive impacts of the project on the project-affected population?
3. What do you foresee as the negative impacts on the project-affected population?
4. What are the likely direct and indirect impacts of the project on population dynamics-Fertility (family size), Mortality-infant, childhood, maternal etc, and Migration?

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Module 4: Population data (including gender statistics) in a multi-sectoral database for planning, monitoring and evaluation

MANUAL

Module Objectives

By the end of this module, participants will be able to:

- Explain the need for good data/statistics in order to plan for effective poverty reduction strategies monitoring and evaluation framework;
- Make the best use of data at upstream in negotiating social priorities as components of national poverty reduction strategies
- Understand how and where to look for required socioeconomic statistics for monitoring and evaluation

Organization of the session or Topics covered

This topic is organized around four main issues:

(v) Bank's support for statistical activities in RMCs
(vi) Information needs, indicators and data
(vii) Factors influencing the best use of socio-demographic data
(viii) Population data (including gender statistics) in a multi-sectoral database for planning, monitoring and evaluation

4.1 Information needs, indicators and data

4.1.1 Introduction

The current development agenda is largely focused on the internationally agreed Millennium Development Goals and statistics has a prominent role in achieving and monitoring progress towards these goals. Indicators and other statistics are an integral part of the process of meeting the MDGs. Global statistics are required to allow the international community to assess the current situation, direct development policies, monitor progress towards the targets and compare the achievements of different countries and regions. To produce these indicators requires both reliable statistical systems within countries for the supply of necessary data, and effective international statistical operations, to collate and disseminate the indicators.

As most countries are developing PRSPs and macroeconomic and sector management frameworks as part of the process of reducing poverty, all focus should be on the need for statistics to provide a strong foundation for the diagnosis of poverty and the development situation. PRSP is a data intensive process and attention should be put on the capacity of the statistical system to deliver the data. It requires a comprehensive approach, requiring data and information analysis at the level of the macro economy, at the level of individual sectors, including both productive and social sectors and at the household or individual level. Because of the wide range of information needed to develop a full understanding of the nature and incidence of poverty and the need to monitor progress at the macro and micro levels, very few, if any, countries will have all the data they need immediately available.

Implementing poverty reduction strategies would require a detailed assessment and a description of the steps that countries propose to take to improve the availability of information and the quality of the main indicators.

4.1.2 Purposes of including socio-demographic data in PRSP/CSP

For any analysis, the starting point is to identify the data/information needs and their purpose. In the context of PRSP/CSP, data are needed for a number of purposes:

(i) General advocacy to support the social debate about strategies, targets and policies and promoting participation generally: Up to date socio-economic data and indicators would provide the basis for highlighting where problems are and negotiating social priorities among the overall priorities setting process of the PRSP/CSP. Indicators are the critical link between the objectives (which are stated as results to be achieved) and the types of data that need to be collected and analyzed through monitoring and evaluation.

(ii) Programme monitoring and budget management (including detailed analysis for resources allocation and programmes and projects design): Indicators constitute a critical component of a results-oriented monitoring and evaluation framework. They provide evidence of the progress of programme or project activities in the attainment of development objectives. Such evidence is the result of changes happening in the socio-economic indicators and targets that have been incorporated in the monitoring and evaluation framework.

Professionals should be alert to take any opportunity within the PRSP and CSP (Medium Term Funding Framework; PRSP and CSP Reviews; Public Expenditures Review…) to ensure that changes are happening as planned and, if not, find out the potential causes including inappropriate resources allocation. Data on input indicators, such as public expenditures, are tracked at least annually, and in most cases more often (monthly, or quarterly), as part of budget tracking mechanisms. Data on outputs are most often available on an annual basis, but it is highly desirable to have information on key outputs mid-way through the budget year to inform mid-course corrections and decisions on budget allocations for the following year. Data on some outcome indicators should also be available annually. Special attention should be paid in that endeavor to socio-demographic related data and or information as well.

(iii) Impact assessment of selected policies and programmes: An impact evaluation assesses the changes in well-being that can be attributed to a particular program or policy. Information generated by impact evaluation informs decisions on whether to expand, modify or eliminate a particular policy or program and is used in prioritizing public actions. It is a decision-making tool for policy makers and increases public scrutiny of programs. Part of the policy dialogue process should include the integration of socio-demographic indicators among impact and outcomes indicators within the monitoring and evaluation framework of the PRSP and/or CSP.

(iv) Promoting greater transparency and accountability by government. All of the groups that have a role and an interest in the objectives and implementation of development activities are the stakeholders in the monitoring and evaluation process. The first step is to

identify the key stakeholders who in some significant way are affected by, or involved in, the programme or project during its lifetime and beyond. Data disaggregation at the level of each indicator would assist in knowing who is affected and where are located the most affected.

The decision on the level of disaggregation of indicators is as important as the choice of indicators itself. Indicators can be disaggregated along various dimensions, including location, sex, income level, and social groups. All these can explain and or determine poverty dimensions and equity in a specific setting. The second is to provide for mechanisms that will allow stakeholders to interact with each other in a meaningful way not only in monitoring and evaluation but earlier, starting at the pre-formulation stage and continuing during formulation and implementation.

4.2 Factors influencing the best use of socio-economic data/information and indicators

4.2.1 Differentiating indicators' levels

In selecting indicators, one should bear in mind two main categories of indicators: intermediate and final. When an indicator measures the effect of an intervention on individuals' well being, we call it a final indicator. Some tines final indicators are divided into "outcomes" and "impact" indicators. Impact indicators measure key dimensions of well being such as freedom from hunger, literacy, good health, empowerment, and security. Outcome indicators capture access to, use of and satisfaction with public services, such as use of health clinics and satisfaction with the services received; access to credit; representation in political institutions and so on. These are not dimensions of well-being in themselves, but are closely related.

When an indicator measures a factor that determines an outcome or contributes to the process of achieving an outcome, we call it an "input" or "output" indicator, depending on the stage of the process—in other words, an "intermediate" indicator. For example, many things may be needed to raise literacy levels: more schools and teachers, better textbooks, and so on. A measure of public expenditures on classrooms and teachers would be an input indicator, while measures of classrooms built and teachers trained would be output indicators. Outputs differ from outcomes because they are fully under the control of the agency that provides them; so for example the number of schools built is an output, because it is directly under the control of education or other public authorities, while the number of children going to the schools is an outcome, because it depends on the behavior of children and their families.

4.2.2 Main sources of socio-demographic data

In most countries, the national statistical agency will be responsible for large scale and regular data collection processes. These will include censuses of population, agriculture and businesses, sample surveys, especially those that use households as the unit of enumeration and other kinds of data collection, for example, price collections. Even in fairly centralized systems, however, many other central government ministries and departments will also collect data. In some cases these agencies may carry out specialized data collections such as a school census, or a survey of small businesses.

From the point of view of the PRSP, the population census is probably the single most important source of data. Population data are important, both in their own right and also in providing the denominators for a number of important poverty indicators.

Household surveys are a crucial source of information for poverty analysis. The design of household surveys usually involves a trade-off between cost, speed, sample size and the complexity of the information to be collected. More complex household surveys, usually covering a much wider range of questions designed to understand household decision-making, but covering a smaller sample. The Living Standards Measurement Survey (LSMS) and Demographic Health Surveys (DHS) and other sectoral (socio-economic) surveys belong also to this family. Data generated from DHS provide not only information on demographic statistics but also the basis for analyzing the socioeconomic inequality in accessing and/or use of social services.

A substantial amount of information is also collected during the course of regular administrative processes. Typically, data are collected on a routine basis, for example, where people using a public service are required to make some payment, or perhaps apply for a license.

For the purposes of the PRSP some important management information systems will include: i) School records, which will provide information on the education system including indicators such as enrolment, academic outcomes and progress through the educational system; ii) Health records, providing information on access to and use of health facilities, morbidity and mortality data for important diseases, the use of preventative health services and important outcomes such as the nutritional status of children; iii) Social security records, providing information on changes in employment, for example...Information derived from the records maintained by a service delivery system such as clinics or schools, will only cover those people and households that make use of the service.

Another type of data collection method covers a wide range of other information sources that have been grouped together under the general heading of qualitative data and participatory assessments. Qualitative methods provide information that can be analyzed on both ordinal and nominal scales. Examples include: focus group discussions, In-depth interviews, and Clients exit interviews using open-ended questions. These are useful for seeking opinions. However, the methods are generally not representative and therefore do not allow generalizations and are susceptible to biases introduced by the interviewers, observers and informants. While these kinds of data are rarely considered to be part of a formal statistical system, nevertheless the information they provide is of the utmost importance for the development of a comprehensive poverty reduction strategy.

4.2.3 Institutional framework for data collection and database management

While the information needs and priorities of a country and the capacity of its statistical system vary, many of the main elements can be found in most systems. The main functions of a statistical system are to collect data from a variety of sources, process and analyze them, and then to disseminate them in different forms suited to the needs of different users. The key difference between a national statistical system and an individual researcher is that official statistics involve large data collection and the production of output for public use.

This separation between data generation and use puts important demands on the statistical system. The analysis of structure, therefore, should be carried out in terms of the capacity of the system to fulfill the required functions and ultimately to provide the data that users want and need. The main components of a national statistical system can be considered under the following headings:

- **Policy management and coordination –** who is responsible for overall policy, for setting priorities and for coordination and management of the system? A key requirement for any statistical system, but especially one that is more decentralized is to have effective procedures in place for coordination and management. Effective management is required to set strategy and agree on targets, to ensure that the system is responsive to the needs of customers, to mobilize financial and other resources, to maintain a supportive external environment, to manage human resources and to ensure consistency in systems and operations.
- **The human resources** of the statistical system, the people who work for the component organizations and the skills and expertise they possess represent the most valuable and often the scarcest resource.
- **Quality management –** who is responsible for assuring the quality of the data produced?
- **Data collection, compilation and dissemination –** which agencies are responsible for the collection, compilation and dissemination of data in the main areas of concern to the PRSP?
- **Database management –** who has the responsibility for maintaining databases in the main areas?
- **Communications –** what mechanisms and processes exist for communicating between data providers and users?

Most countries have a formal statistical law that describes the structure of the national statistical system, spells out the responsibilities and functions of a central statistical agency and also governs the relationships between data suppliers and users, including the provision of individual information, the rules for the obligatory supply of information, and guarantees of confidentiality and non-disclosure. These aspects of the law are common to the statistical legislation in almost all countries. In a number of cases, however, especially where the statistical agency has gone through some kind of recent restructuring, for example, where it has been set up as an independent agency, the law has a number of additional clauses.

4.2.4 The functioning of the Statistical Agency

The main functions of a statistical agency are data collection, data processing and analysis, and dissemination of statistical products in different formats. Infrastructure and equipment need to be adequate to meet the needs of these tasks, with particular emphasis on data handling and processing. Because poverty-related data are derived from household and other types of sample survey based on direct enumeration; therefore in order to meet the needs of the PRSP the statistical system also needs to have access to adequate infrastructure and equipment to support these kinds of surveys.

A statistical agency provides products and services for a number of different users or customers. In most countries there is no effective market for official statistics, hence prices do not convey the

level of demand for each statistical output, therefore the managers of the agency need alternative mechanisms for setting priorities and for identifying where investment and improvements are needed. In this situation, customer relations are very important and in the context of the PRSP it is vital that processes are established that provide for regular consultation between data providers and users. An important starting point is for statistical agencies to know who their customers are. Beyond this, mechanisms need to be established that provide for regular consultation and exchange of views (Reference to be made to Annex 1).

4.3 Population data (including gender statistics) in a multi-sectoral database for planning, monitoring and evaluation

Based on the previous sections both in terms of the basic conceptual framework of monitoring and evaluation of development programmes, there would be need to ensure that along with efforts of mainstreaming population concerns into PRSPs, CSPs and others Bank Group Programmes, special attention should be paid to:

- Including population related indicators in the PRS monitoring and evaluation framework;
- Designing interventions that support population related data collection and analyses, including capacity building in programme planning and management

It is important to bear in mind that, although the main objective of the monitoring system is to track progress in poverty outcomes and impacts, both final (outcome and impact) and intermediate indicators (input and output) should be tracked. Monitoring final indicators helps to judge progress toward the goals set. But final indicators are the result of several factors, many of which are outside the control of policymakers and program administrators. Intermediate indicators, on the other hand, generally change as a result of actions by the government and other agents. Moreover, final indicators generally change slowly over time, while intermediate indicators change more rapidly, giving an indication if not on what are happening with well-being, but at least on what is happening with some of its determinants. This can make it possible to take corrective action while a program is being implemented. Finally, information on intermediate indicators is often easier to collect.

The choice of indicators is clearly dependent on the types of data that are available in a country, as well as on what can be feasibly monitored given resource and capacity constraints; in fact, the process of selecting indicators should start from an analysis of what is available and what is feasible, and indicators that are not yet available should be included in the monitoring system only if it is realistic to set up a mechanism to collect and analyze data on such indicators. CSPs frameworks could therefore envisage strengthening the statistical systems, including (extract from ADB, Population Policy Guidelines):

- Improving on the management, organisation and strategic planning of the national statistical system;
- Improving on data collection and processing systems and methods for priority projects such as censuses, sample surveys and other data collection and compilation exercises that meet the demands of ongoing projects and of the various stakeholders;
- Improving on the format and design of products of the system, making them more accessible to users and improving relations with them. Taking advantage of new information technology

channels for wide dissemination (See Annex 1: Conceptual framework of Data Bases); and

- Developing institutional arrangements and upgrading legislation that would guarantee the independence and credibility of national statistical systems and thus improve public confidence in their products.
- Support for the stakeholder consultative process for designing a national program in the field of population;
- Technical assistance for the preparation of the program and for the development of the management information system;
- Including socio-demographic indicators in the monitoring and evaluation framework ensures somehow inclusion of related social interventions in the poverty reduction strategies because you can only monitor what you have planned for (see Annex 2).

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http://www.unfpa.org/africa
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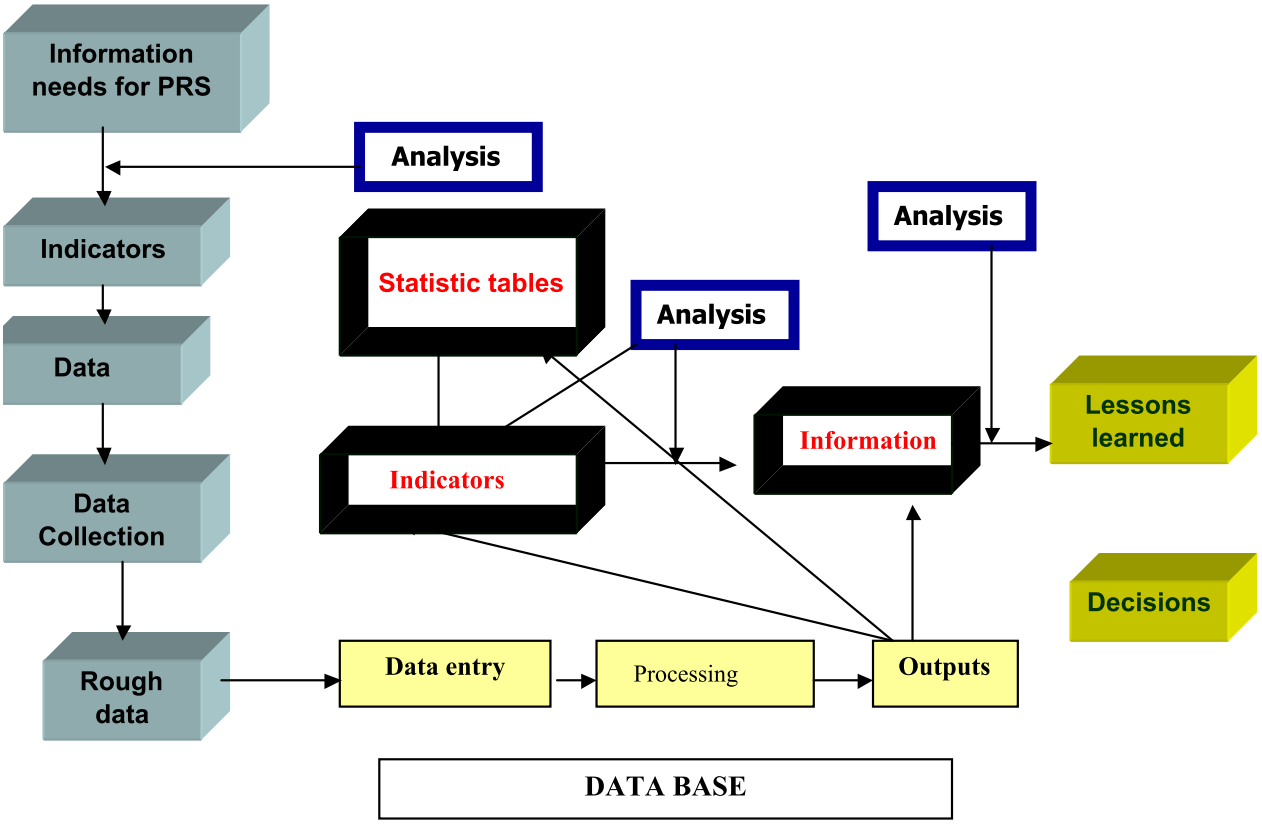
Annex 1

CONCEPTUAL FRAMEWORK OF DATA BASES



A Case for Funding Population Censuses in RMCs

Population and housing censuses are the primary source of information about the number and characteristics of the population. Its strengths and distinctiveness arise from completeness of coverage; continuity of statistics from census to census, possibilities of inter-relating various characteristics of the population and households, and the details it provides about individuals in local areas and sub-groups. No other data source meets these needs. In addition, no other data source allows for such a comprehensive gender analysis of population-based indicators. The lack of basic population data lead to serious policy and resource allocation distortions.

The use of census data to develop profiles of the poor is gaining momentum (so far it has been used in Guinea and South Africa). This process known as Poverty Mapping involves the production of poverty maps and poverty profiles at various levels of a geographical area. Poverty maps based on any poverty indicators are necessary for four major reasons: (i) to capture heterogeneity within a country or sub-national; (ii) to identify geographic factors that influence poverty; (iii) to improve targeting of resources and interventions and (iv) to improve communication about poverty conditions.

The availability of census data does indeed enhance the Bank's operations in the area of poverty reduction, gender analysis and in the preparation of PRSPs. In fact from the point of view of the PRSP, population census is probably the single most important source of data. The Bank, therefore, should join other partners led by the United Nations Fund for Population Activities (UNFPA) in supporting the funding of censuses in African countries. Many countries would have been unable to conduct censuses without technical assistance provided by UNFPA working in partnership with other donors. Despite this assistance, a number of countries are still unable to carry out population censuses at scheduled intervals. The participation by the Bank in funding the undertaking of population censuses can make a significant difference.

Annex 2

COMPILATION OF SELECTED SOCIO-DEMOGRAPHIC INDICATORS

A. GENERAL INDICATORS

- Population size (in million)
- Sex Ratio (100 female)
- Population under 15 years (%)
- Dependency ratio
- Urban Population (%)
- Population Density (per sq. km)
- Population per ha of arable land
- Adult Literacy rate by sex
- Labor force participation by sex

B. DEMOGRAPHIC INDICATORS

- Annual population growth rate (%)
- Urban population growth rate (%)
- Crude death rate (per 1000 population)
- Infant mortality rate (per 1000 live births)
- Maternal mortality rate (per 100000 births)
- Life expectancy (years) by sex
- Crude birth rate (per 1000 population)
- Total fertility rate (avg. # of children/woman)
- Population doubling time (years)
- % of women of childbearing age
- Median age population

C. INDICATORS OF VULNERABILITY

- % of aged people (60 years and more)
- % of jobless people
- % of women headed household
- % of girls of less than 15 years working like servants, maids, prostitutes,
- % of the children street, especially orphans, and those whose parents are without resources and jobless
- % of school drop-out among the less than 15 years
- % of refugees and displaced people (because of conflicts and natural disasters)
- % of displaced people because of projects' of development
- % of mentally handicapped people
- % of abandoned children under drug addiction, prostitution and crimes
- % of the children victims of the trafficking and other types of abuse

D. HEALTH AND NUTRITIONAL INDICATORS.

- Population per physician
- Population per nursing persons
- Access to safe water (per cent population)
- % of fully immunized children
- Babies born with birth weight <2500 gm (%)
- Prevalence of illness among children under five years by household income quintile
- Household behavior in response to child illness by household income quintile
- Worst indicators of health by regional divisions
- Women's health indicators by household income quintile
- Poverty versus population coverage of basic health facilities by divisions
- Malnutrition status among children under five years by divisions
- Iron deficiency in women of childbearing age by division
- Vitamin A deficiency in women of childbearing age by division
- Number of health centers
- Ration of population/health center
- Assisted deliveries
- Number of physicians, nurses, midwifes...
- Children with no immunizations by region
- Sexually active women using contraception
- Access to safe water
- Access to good sanitation
- Spending on Health; RH and HIV prevention
- Districts with VCT services
- Condom use
- Antenatal centers
- Counseling to pregnant women
- Number of people reached by information and sensitization campaigns on HIV/AIDS

Annex 2

COMPILATION OF SELECTED SOCIO-DEMOGRAPHIC INDICATORS (CONTINUED)

E. EDUCATION INDICATORS.

- Net primary enrolment ratio
- Net primary enrolment ratio (male/female)
- Gross primary school enrolment ratio (male)
- Gross primary school enrolment ratio (female)
- Proportion of pupils starting grade 1 who reach grade 5
- Ratio of girls to boys in primary education
- Net secondary enrolment ratio
- Gross Secondary school enrolment ratio (male)
- Gross Secondary school enrolment ratio (female)
- Ratio of girls to boys in secondary education
- Gross tertiary enrolment ratio (female)
- Ratio of girls to boys in tertiary education
- Combined primary/secondary/tertiary gross enrolment ratio
- Youth literacy rate (15-24 years old) (total/male/female)
- Adult literacy rate (15 and above) (total/male/female)
- Ratio of literate females to males
- Percentage of people above15 years that are illiterate) (total/male/female)
- Public expenditures on Education (as % of GDP)
- Public expenditures on Education (as % of total Government expenditures)
- Proportion of pre-& primary expenditures in Public Education expenditures
- Proportion of secondary expenditures in Public Education expenditures
- Proportion of tertiary expenditures in Public Education expenditures

F. AGRICULTURE INDICATORS

- Proportion of land covered by forest
- Deforestation (average annual %)
- Fresh water resources per capita (cubic meters)
- Ratio of area protected to maintain biological diversity to surface area
- GDP per unit of energy use (kg oil equivalent)
- Carbon dioxide emissions (metric tons) per capita
- % of employment in agriculture (male/female)
- Share of women in wage employment in non agricultural sector

G. INFRASTRUCTURE

- Proportion of population with access to safe water
- Proportion of population with sustainable access to an improved water source, urban and rural
- Proportion of population with access to safe water
- Proportion of population with sustainable access to an improved water source, urban and rural
- Electricity consumption/use per capita (Kwh)
- Proportion of population with sustainable access to an improved sanitation
- Proportion of households with access to secure tenure
- Paved roads (% of total) by regions

MODULE 5: Advocacy and Policy Dialogue on Population Issues with Policy Makers in RMCs

MANUAL

Module Objectives

By the end of the session, participants will be able to:

- Identify priority population issues for advocacy and how they should be addressed within PRSPs and CSPs;
- Plan and carry out actions to improve population dimensions into PRSPs and CSPs
- Know the key priority issues related to implementation of national population policies

Organization of the module or Topics covered

This topic is organized around four main issues:

1. Advocacy on the importance of addressing population issues in poverty reduction strategies
2. Advocacy for implementation of NPPs in the context of PRSPs, MDGs, NEPAD and other national development frameworks and sectoral programmes
3. Advocacy and policy dialogue for population issues in the process of CSPs and sectoral projects
4. Need for Partnerships and resource mobilization for population issues

5.1 Advocacy and policy dialogue on population Issues with policy makers in RMCs

In the context of accelerating the implementation of the ICPD Programme of Action as well as in promoting the MDGs and NEPAD goals and other relevant international agreements and in advancing national population policies and programmes, advocacy plays a key role. It is therefore important to clarify the concept of advocacy and to establish a strategic framework for its planning and implementation. In general, the purpose of advocacy is to promote or reinforce change in policy, programme or legislation. Rather than providing support directly to clients or users of services, advocacy aims at winning support from others, i.e. creating a supportive environment. Advocacy relies on IEC (information, education and communication) strategies to accomplish its purpose. Two key elements of advocacy strategic planning are stakeholder analysis and the techniques and tactics for addressing various stakeholders. A variety of techniques and tactics may be used to address each category of stakeholders. They include sensitization, mobilization, dialoguing, debates, negotiation, lobbying and petitioning.

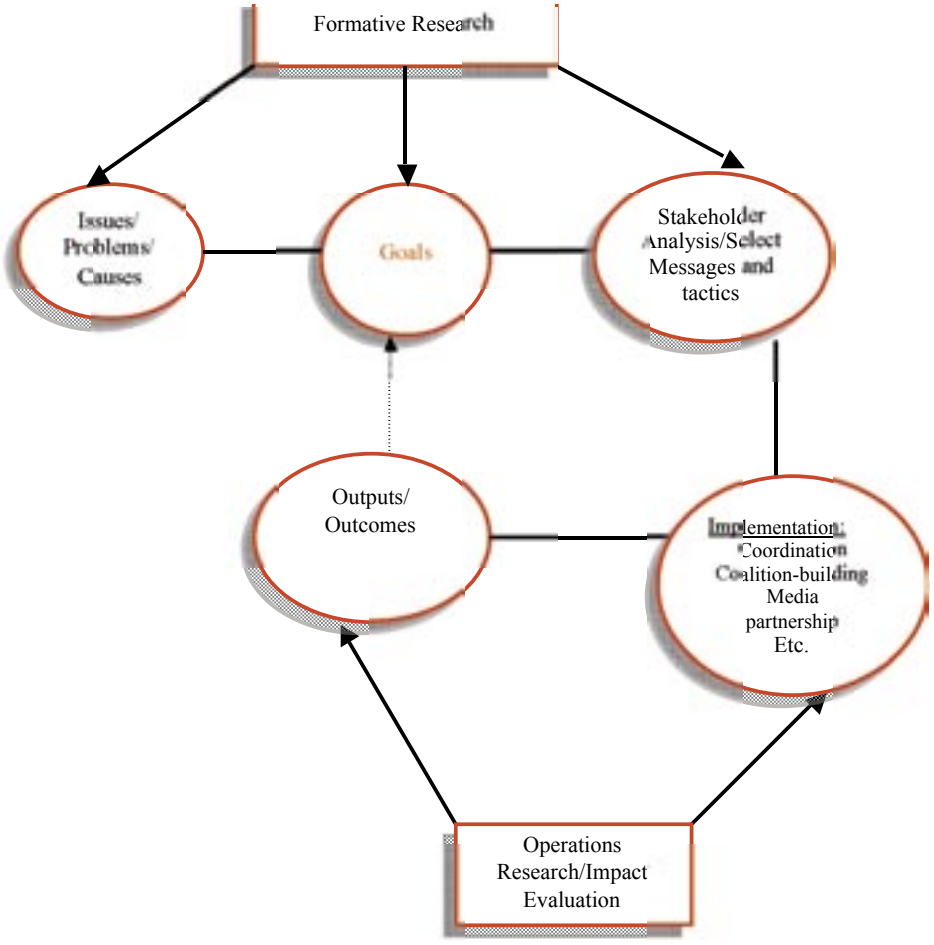
Advocacy can play three interrelated roles: (i) to foster a favorable climate for the implementation of the Bank's Policy on Population and broadly the ICPD PoA, the MDGs, and NEPAD goals; (ii) to address and promote issues that the Bank adheres to but is unable to fund directly; and (iii) to mobilize resources necessary for the implementation of various internationally agreed programmes and strategies.

For optimal effectiveness, advocacy activities should be carried out within the framework of a strategic plan (see for example figure 1 below). Having a strategy implies three important

elements. First, the development and implementation of an advocacy strategy follow a logical sequence, from the identification of issues to the attainment of desired outcomes. Second, an advocacy strategy emphasizes outcome or impact (such as a change in law or harmful cultural practices) rather than process or physical outputs (such as the number of sensitization seminars carried out or materials produced) as the end of advocacy activities. Third, such a strategy underscores the importance of research, monitoring and evaluation to inform and guide every step of the process. A key aspect in developing strategies for population advocacy is the identification of stakeholders and the selection of communication channels and techniques to reach them.

Issues for advocacy are derived from ICPD priorities, MDGs, NEPAD goals as well as regional and local concerns. Different institutions may have different emphasis for advocacy. In the case of ADB such emphasis depend on concerns raised within the Policy on Population and other policies and strategies of the Bank. From the Bank's Vision as well as its various policies, it is apparent that the Bank is increasingly interested and committed to having population dynamics as an integral component of the policy dialogue with RMCs.

Figure 1: Advocacy Strategic Planning Model



Source: UNFPA.2000. Advocacy for Population and Reproductive Health in Africa: ICPD and Beyond

5.2 Advocacy on the importance of population issues in poverty reduction strategies

The ICPD Programme of Action stressed that population concerns need to inform the formulation, implementation, monitoring and evaluation of all policies and programmes relating to sustainable development and resource allocation. Governments, international agencies, NGOs and other stakeholders should periodically review their development strategies to assess progress made in integrating population variables. Governments should establish institutional mechanisms and an enabling environment to facilitate this process. Public education, research and resource mobilization activities must be carried out to bolster political commitment. The focus of advocacy should include the updating of national population policies reflecting, among others, MDGs, NEPAD, and emerging national and regional concerns, the conduct of censuses, the reorientation of national data systems and the consideration of population factors in development and planning processes and frameworks. The following are some of the advocacy priorities in population and development.

- Promote linkages between population, poverty, environment, gender equity/equality; reproductive health and sustainable development;
- Increase investments in the social sector, especially health and education;
- Promote an enabling environment to achieve sustained economic growth within the context of poverty alleviation;
- Formulate policies and programmes that meet the needs of disadvantaged and marginalized communities (including nomads, refugees and internally displaced persons); and
- Foster sustainable resource use and promote environment protection.

5.3 Advocacy for implementation of NPPs in the context of PRSPs, MDGs, NEPAD and other national development frameworks and sectoral programmes

Most national population policies in Africa are comprehensive in the sense that they deal with the interrelationship between trends in population dynamics and education, health gender, employment, poverty etc. which are integral components of the focus areas of PRSPs, MDGs and NEPAD.

In the area of gender, the following are some of the priority issues for advocacy:

- Harmful practices, including violence against women and girls;
- Early marriage of girls;
- Gender disparities in education: low enrolment and high drop-out rates for girls;
- Inadequate male participation and responsibility in reproductive health;
- Unequal social and political participation;
- Need for gender-disaggregated data; and
- Disproportionate impact of HIV/AIDS on women and girls.

In the area of reproductive health, the following are some of the priority issues for advocacy:

- Promotion of reproductive health and rights;
- Improvements in quality of reproductive health services
- Improvements in maternal and newborn care;
- Promotion of adolescents' access to reproductive health information, counseling and services;
- Greater investment and commitment of resources to combat HIV/AIDS;
- Involvement of young people in formulating and implementing reproductive health policies and programmes;
- Inclusion of appropriate sexual health education both in schools and non-formal education;
- Institution of youth peer education and counseling programme in both formal and non-formal setting; and
- Male involvement and partnership in reproductive health.

With respect to special population groups, the following are some of the priority issues for advocacy:

- Increase development assistance for refugees and displaced person;
- Support research on the root causes of forced migration and internal displacement;
- Promote dialogue between source and recipient countries regarding the reintegration of refugees/displaced migrants;
- Promote reproductive health among refugees and displaced persons;
- Promote reproductive health and the rights of people with disabilities and other disadvantaged groups; and
- Promote awareness of the reproductive health needs of menopausal women and middle-aged men.

5.4 Advocacy and policy dialogue for population issues in the process of CSPs

The Bank is giving increased attention to issues of population within its programme of work through its population policy and guidelines. Officially, the Bank has clearly outlined what needs to be done. It stated that unchecked population growth could stand as an impediment to development process. Indeed, when population growth rates are higher than economic growth rates on a long-term, poverty becomes pervasive. More specifically, looking at the issue of population density for instance, the effect of population pressure on limited land and resources is a major development constraint that needs to be translated into policy action. Hence, the Board suggested that population dynamics become an integral part of the policy dialogue with countries.

In the preparation of CSPs, the following are some of the priority issues for advocacy:

- Promotion of the implementation of national population policies;
- Promotion of coordinated programme inputs for population and reproductive health, gender and HIV/AIDS;
- Greater investment and commitment of resources to combat HIV/AIDS;
- Proper integration of population issues in CSPs and sectoral plans and programmes.

5.5 Need for partnerships and resource mobilization for population issues

Although the Bank is not the lead agency in population, it can play an increasingly important role by increasing its capacity to work with borrowers, other donors, and nongovernmental organizations to formulate effective programmes to meet the diverse population needs of its RMCs. The Bank's sectoral and lending approach should encourage borrowers, in formulating their projects, to look comprehensively at sector needs and to take action to resolve issues and achieve clearly identifiable goals that are consistent with overall development objectives of which population is an integral part. The Bank, in partnership with other actors in the field, should also continue to help borrowers understand and build on the broader linkages between population change and others aspects of human development and poverty reduction. Through its own investments, among others, in health and education, and by encouraging borrowers and other donors to put high priority on these areas, the Bank could help borrowers reduce high rates of maternal and child mortality, bridge the gender gap in education, and raise women's economic and social status. These investments will speed up fertility declines, which is the crux of demographic transition and socio-economic development.

Since ICPD, many partnerships have been formed to promote population and reproductive health goals in Africa. Many involve NGOs and other civil society groups working in concert with government agencies. Parliamentary groups have assumed an increasingly active role in many countries. Youth and women's groups are also increasingly involved in public advocacy.

The ICPD PoA calls upon the international community to achieve an adequate level of resource mobilization and allocation, at community, national and international levels, for population and related programmes. Traditionally, Governments and external donors have funded population programmes almost exclusively. This situation cannot continue. Additional sources of funding should be sought while traditional sources are protected. This requires advocacy by various partners. Coalitions, networks and partnerships are necessary for such advocacy programme implementation.

Priority Issues in Resource Mobilization

- Need for commitment to population goals from highest political and policy-making levels;
- Increased community contributions to the provision of services;
- Increased cost-sharing by beneficiaries of services;
- Need to increase investments in reproductive health, with emphasis on safe motherhood and HIV/AIDS prevention;

- Coordination of donor efforts; and
- Need to enhance partnerships with private sector, NGOs, CBOs and civil society.

5.6 Mobilizing Resources for Data Collection

Poverty related statistics are a public good and consequently most statistical activities are financed from government revenue and financial resources are allocated through the budget. The capacity of the statistical system, therefore, is determined to a large extent by the level and stability of the financial resources it receives. Because full cost recovery from users is not possible, the ability of the system to meet the needs is determined by how successful managers are in getting resources in competition with all the other demands on the budget. In many countries statistical systems are in effect in vicious cycle, where because resources are limited, the output does not meet needs and as a result, political support for increasing resources is not forthcoming. The PRSP/CSP is an important opportunity to break out of this vicious cycle. By focusing on a major area of statistics, with associated political and civil society support, it provides the opportunity for the managers of the statistical system to make the case for increased funding and for a sustained increase in budget resources.

A major requirement from the statistical systems is to be accountable for the resources they use by providing regular reports on activities, outputs and future plans. Since the main resources used to finance statistical activities are provided from tax revenue, this accountability and reporting must be open, transparent and regular. In return for adequate resources, the managers of statistical systems must provide information on how those resources have been used, what products have been produced and what plans are in place to improve performance. Ultimately, a statistical agency will only be effective if it is able to develop and sustain a good public image, where the data it produces are seen to be objective, reliable and useful and where resources are seen to be used effectively. In many countries, the opposite picture is all too common, the products from statistical agencies are not trusted, are seen as being late, inaccurate and possibly subject to political manipulation.

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MODULE 6: Checklist for Intergrating Population Issues into Bank's Programmes and Projects

MANUAL

CHECK LIST: CARRYING OUT THE INTEGRATION OF POPULATION ISSUES INTO BANK'S PROGRAMMES AND PROJECTS

CHECKLIST FOR MANAGERS TO USE DURING CSPS/PROGRAMMES AND PROJECTS PROCESSES	
Areas of concern	Checklist for Intervention
Socio- demographic data in Bank's Programmes and Projects Cycle	Are the socio-demographic data used up to date?
	Are the data disaggregated by: sex, age, income, location and other social dimensions?
	Does Monitoring and evaluation framework in the CSPs/Programmes/Projects include population related indicators?
	Does Monitoring and Evaluation framework of CSPs/Programmes/Projects include baseline studies?
	Are information/data available being used for advocacy and policy dialogue to advance Banks' Population Policy, MDGs and ICPD agenda?
Population and Poverty	Are the linkages between poverty and population dynamics (fertility, mortality and migration) made explicit?
	Has the issue of age/sex distribution been addressed in relation to poverty reduction?
	Are the socio-demographic impacts of HIV/AIDS been addressed?
	Is the issue of inequality discussed in PRSPs, CSPs/Programmes/Projects?
	What policies and programmatic interventions are proposed to close the inequality?
	Ensure high level of consultation of stakeholders
Education	Are the linkages between the education sector and population dynamics (fertility, mortality and migration) made explicit?
	Are there cultural and religious values affecting the enrolment ratio by sex highlighted?
	Are information/data on gross enrolment ratio, net enrolment ratio, primary completion rate by sex and other education related interventions based on up-to-date population data and projections?
	Are the linkages between education and the other sectors (health, agriculture, infrastructure) highlighted?
	Do the curricula include a component on population, family and life education (RH, FP, HIV/AIDS)?
	Is the impact of HIV/AIDS on the education sector made explicit?
	Are appropriate resources allocated to education, taking into account population factors, especially the most vulnerable?
Health	Are the linkages between the health sector and population dynamics (fertility, mortality and migration) made explicit?
	Are information/data on health indicators and other health related interventions based on up-to-date population data and projections?
	Are the linkages between health and the other sectors (agriculture, environment, water, sanitation, transport, HIV/AIDS) highlighted?
	Is the impact of HIV/AIDS on the health sector made explicit?
	Is reproductive health, including adolescent reproductive health and rights adequately covered in CSPs/Programmes/Projects?
	Are maternal mortality and morbidity related issues well covered in the health situation analysis and the programming and projects' cycle?
	Are appropriate resources allocated to health, taking into account population factors, especially for reproductive health including HIV/AIDS and targeting the most vulnerable?

CHECKLIST FOR MANAGERS TO USE DURING CSPS/PROGRAMMES AND PROJECTS PROCESSES	
Areas of concern	Checklist for Intervention
Agriculture	Are the linkages between the agriculture sector and population dynamics (fertility, mortality and migration) made explicit?
	Are information/data on labour force by sex and its distribution across the country and other agriculture related interventions based on up-to-date population data and projections?
	Are the linkages between agriculture and the other sectors (education, health, environment, infrastructure, HIV/AIDS) highlighted?
	Is the impact of HIV/AIDS on the agriculture sector made explicit?
	Is the impact of rural/urban migration on rural and agriculture productivity highlighted?
	Awareness on the impact of household size on the use of natural and other related environment resources
	Is the linkage between urbanization and agriculture made explicit?
	Are appropriate resources allocated to health, taking into account population factors, especially for reproductive health including HIV/AIDS and targeting the most vulnerable?
Infrastructure	Are the linkages between the infrastructure sector and population dynamics (fertility, mortality and migration) made explicit?
	Are information/data infrastructure distribution and utilization and other infrastructure related interventions based on up-to-date population data and projections?
	Are the linkages between infrastructure, especially social infrastructures, and the other sectors (agriculture, environment, health and education) highlighted?
	Is the impact of HIV/AIDS on the infrastructure sector made explicit?
	Are the socio-demographic impacts of infrastructure investments being considered, especially when resulting in movement of people (forced migration, leading to Internal Displaced persons IDPs)?
	Are socio-demographic factors influencing/affecting (age, sex, culture, literacy, education) utilization of social services identified?
	Are appropriate resources allocated to infrastructure, in particular basic social services, taking into account population factors, especially reaching and bringing services to the most vulnerable?
Emergency and Conflict situations	Are there specific groups of people (age/sex) at higher risk as result of conflicts and emergencies?
	Are mechanisms to gather socio-demographic data/information in conflicts and emergency situations in place?
	Are the likely impacts of emergency and conflict situation on basic social services/ infrastructures (education, health) identified?

SELECTED SOCIO-DEMOGRAPHIC INDICATORS

A. GENERAL INDICATORS

- Population size (in million)
- Sex Ratio (100 female)
- Population under 15 years (%)
- Dependency ratio
- Urban Population (%)
- Population Density (per sq. km)
- Population per ha of arable land
- Adult Literacy rate by sex
- Labor force participation by sex

B. DEMOGRAPHIC INDICATORS

- Annual population growth rate (%)
- Urban population growth rate (%)
- Crude death rate (per 1000 population)
- Infant mortality rate (per 1000 live births)
- Maternal mortality rate (per 100000 births)
- Life expectancy (years) by sex
- Crude birth rate (per 1000 population)
- Total fertility rate (avg. # of children/woman)
- Population doubling time (years)
- % of women of childbearing age
- Median age population

C. INDICATORS OF VULNERABILITY

- % of aged people (60 years and more)
- % of jobless people
- % of women headed household
- % of girls of less than 15 years working like servants, maids, prostitutes,
- % of the children street, especially orphans, and those whose parents are without resources and jobless
- % of school drop-out among the less than 15 years
- % of refugees and displaced people (because of conflicts and natural disasters)
- % of displaced people because of projects' of development
- % of mentally handicapped people
- % of abandoned children taking under drug addiction, prostitution and crimes
- % of the children victims of the trafficking and other types of abuse

D. HEALTH AND NUTRITIONAL INDICATORS.

- Population per physician
- Population per nursing persons
- Access to safe water (per cent population)
- % of fully immunized children
- Babies born with birth weight <2500 gm (%)
- Prevalence of illness among children under five years by household income quintile
- Household behavior in response to child illness by household income quintile
- Worst indicators of health by regional divisions
- Women's health indicators by household income quintile
- Poverty versus population coverage of basic health facilities by divisions
- Malnutrition status among children under five years by divisions
- Iron deficiency in women of childbearing age by division
- Vitamin A deficiency in women of childbearing age by division
- Number of health centers
- Ration of population/health center
- Assisted deliveries
- Number of physicians, nurses, midwifes...
- Children with no immunizations by region
- Sexually active women using contraception
- Access to safe water
- Access to good sanitation
- Spending on Health; RH and HIV prevention
- Districts with VCT services
- Condom use
- Antenatal centers
- Counseling to pregnant women
- Number of people reached by information and sensitization campaigns on HIV/AIDS

Selected socio-demographic indicators (continued)

E. EDUCATION INDICATORS.

- Net primary enrolment ratio
- Net primary enrolment ratio (male/female)
- Gross primary school enrolment ratio (male)
- Gross primary school enrolment ratio (female)
- Proportion of pupils starting grade 1 who reach grade 5
- Ratio of girls to boys in primary education
- Net secondary enrolment ratio
- Gross Secondary school enrolment ratio (male)
- Gross Secondary school enrolment ratio (female)
- Ratio of girls to boys in secondary education
- Gross tertiary enrolment ratio (female)
- Ratio of girls to boys in tertiary education
- Combined primary/secondary/tertiary gross enrolment ratio
- Youth literacy rate (15-24 years old) (total/male/female)
- Adult literacy rate (15 and above) (total/male/female)
- Ratio of literate females to males
- Percentage of people above15 years that are illiterate) (total/male/female)
- Public expenditures on Education (as % of GDP)
- Public expenditures on Education (as % of total Government expenditures)
- Proportion of pre-& primary expenditures in Public Education expenditures
- Proportion of secondary expenditures in Public Education expenditures
- Proportion of tertiary expenditures in Public Education expenditures

F. AGRICULTURE INDICATORS

- Proportion of land covered by forest
- Deforestation (average annual %)
- Fresh water resources per capita (cubic meters)
- Ratio of area protected to maintain biological diversity to surface area
- GDP per unit of energy use (kg oil equivalent)
- Carbon dioxide emissions (metric tons) per capita
- % of employment in agriculture (male/female)
- Share of women in wage employment in non agricultural sector
- Plot size per family
- Land tenure
- Environmental situation

G. INFRASTRUCTURE

- Proportion of population with access to safe water
- Proportion of population with sustainable access to an improved water source, urban and rural
- Electricity consumption/use per capita (Kwh)
- Proportion of population with sustainable access to an improved sanitation
- Proportion of households with access to secure tenure
- Paved roads (% of total) by regions
- Proportion of people having access to potable water, sanitation, power, telecommunication
- Average time to selected social services
- Volume of passengers by roads
- Accident rate
- Number and structure of population involved in displacement/ resettlement
- Prevalence of environmental health problems (water-borne, respiratory, etc.)
- Labour migration