Chapter: 2

Assessment of Economic Resources

The study and assessment of economic resources is vital from the point of view of economic development. It is particularly important because knowledge of resources furnishes the base and platform for planning economic development. The existence or absence and size of certain human or natural resources can facilitate or delay the progress of economic development.

The expansion of national output and economic welfare requires the combination of human, natural and capital resources in optimum measures and units. This task is not possible unless and until all these resources are properly assessed. Moreover, the characteristics and direction of any economy can only be determined after a proper assessment of the economic resources. Therefore, an assessment of economic resources is a prerequisite for development planning.

The objective of this chapter is to evaluate the viability of the Eritrean economy by evaluating its human and natural resources. The assessment of human resources [Section: 2.1] elaborates on the quality of Eritrean population by discussing population profile and growth, health status, standard of education, extent of poverty and employment. While the assessment of natural resources [Section: 2.2] includes the study of land resources and its utilization, the availability of water resources, mineral resources, forest resources and marine resources.

2.1 Human Resources

Human resource is the most important factor in the economy. Human beings are not instruments of production or consumption but ends in themselves. The Human Development Report [1996] published by the UNDP states, "Human Development is the end, economic growth a means'. Human resource as an instrument of production provides essential factors, viz. labour and entrepreneurial ability that make the other factors work. Planning of an economy, exploitation of its natural resources, the production process and distribution of both capital and consumer goods, are all the process of development, depending upon the human factor.

In a broad sense, the term human resource encompasses the entire population of a country. But, in defining the term, only the active human resources capable of undertaking productive work, be it mental or physical, is taken into account. In fact, defining human resource in this sense does not ensure adequate supply of human resources required for rapid economic growth because it is a quantitative measurement of manpower [Adhvaryu, 1996]. From economic development point of view, qualitative aspect of human resource is considered to be more important than its quantitative aspect [Narayana, 1983].

Human resource development or human capital formation is regarded as the precondition for economic growth. It is a process of increasing skills, knowledge and capabilities of the population of a country [Harbison, 1970], which involves investment in human beings in the form of formal and non formal education, training, health and sanitation programs, etc. [Schultz, 1970].

Human development is defined as a process of enlarging people's choice. Though, in reality, human choices are infinite and ever changing. The three important choices for people at all levels of development are: [i] to lead a long and healthy life, [ii] to acquire knowledge, and [iii] to have access to the resources needed for a decent standard of living. The availability of these essential choices is regarded as the key to access to many other opportunities [UNDP, 1995]. Hence, with this understanding or say with this approach in

mind, we started the compilation of data related to human recourses and the assessment of the status of human resource in Eritrea.

1. Objectives

The main objective of this topic is to assess the size and quality of human resources in Eritrea. The specific objectives are to study the:

a. Characteristics and major features of the Eritrean population
b. Health status of the Eritrean population,
c. Eritrea's education status
d. Extent of poverty prevailing in Eritrea
e. Level of employment in Eritrea

2. Data Source and Time Period

To accomplish the assessment of human resources, specific data is required in a specific format. Our prime task has been to compute and compile the required data in the appropriate format. The data used in this study have been computed from various domestic and international sources. The assessment study covers a period of 1950 to 2000, or otherwise mentioned.

The major source of data in this chapter has been compiled from various local and international sources. Of which the most important sources have been the documents provided by various Ministries of the Government of Eritrea and the publications of FAO, World Bank, United Nations and Government of Ethiopia.

a. Population Profile

All development activities aim at securing human welfare and the provision for human needs. The national produce of a country is consumed by its population. In economic terms, if the national product is less than the overall aggregate demand it means there is underproduction; and if the national product is more than the overall aggregate demand it means overproduction. From the economic point of view both the situations are not desired. Hence, for an optimum level of production and other economic necessities, it is essential to

have a complete demographic profile of a country. The first and the foremost facts one should know about a country's population would be: its size and growth, the size of the working and dependent population [age composition], sex composition, distribution and density of the population. This section discusses the characteristics and major features of Eritrean population by covering the following important demographic issues:

a.1 Size and Growth Rate of Population,
a.2 Gender Composition of Population,
a.3 Age Composition of Population,
- *Working Population*
- *Dependent Population*
- *School Age Population.*

a.4 Distribution of Population: Rural and Urban,
a.5 Density of Population.

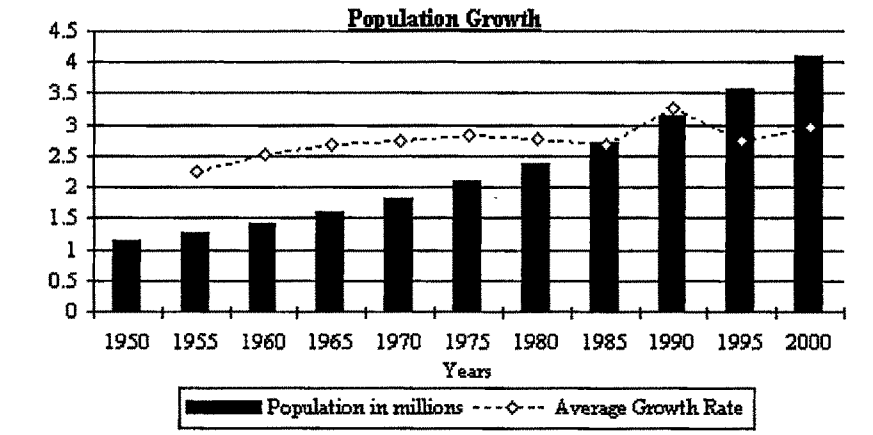
a.1 Size and Growth Rate of Population

The first and foremost fact to know about a country's population is its number and the rate of its growth. The size of population and its growth is one of the crucial elements affecting short and long-term planning and sustainability. Therefore, it represents a fundamental indicator for decision makers, at both national and sub national levels. Its significance must be analyzed in relation to other factors affecting planning and sustainability. Usually, the size and growth of population has implications on indicators related to education, health, infrastructure and employment. It is also related to human settlements and the use of natural resources.

The United Nations World Population Report [1998] provided a complete estimate of the size and growth of population in Eritrean, covering the period between1950 to 2000. As per this source, the size of the total population of Eritrea for the year 2000 is estimated at 4.1 million.

Eritrea's population increased by three and half times over a period of fifty years. The decade-wise growth rate of the population has seen erratic behavior all through the period from 1950-2000.

Chart: 1



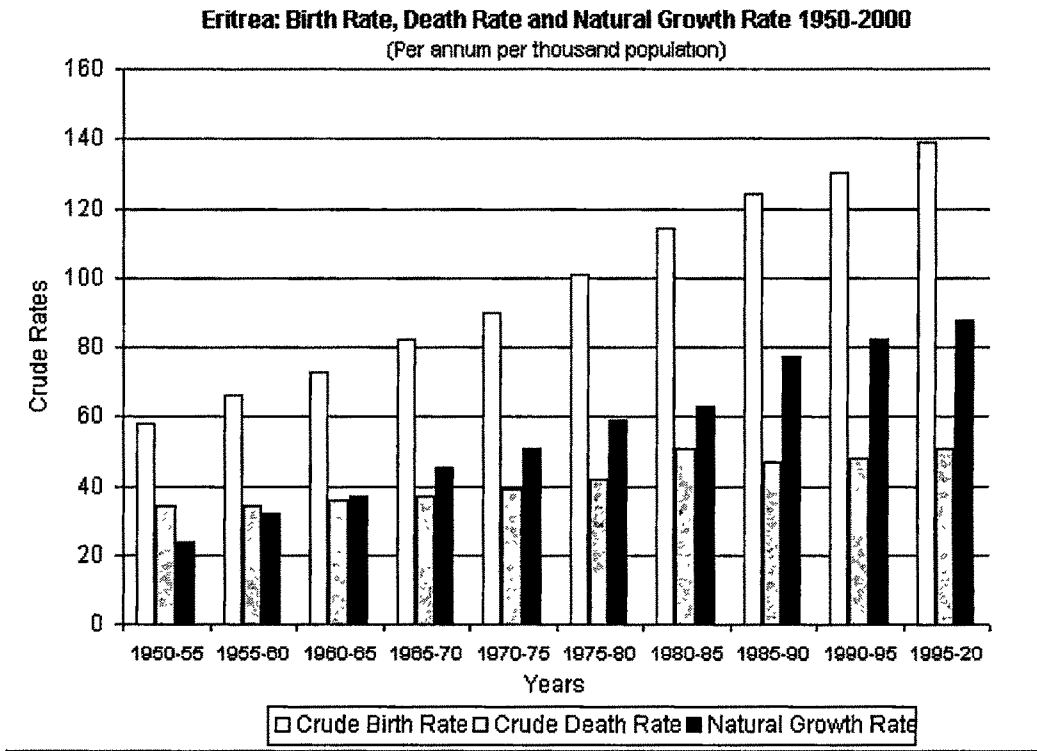
The natural growth rate of population is a function of migration, birth rate and death rate in a country. The change in population caused by net migration as a proportion of total population of a country is assumed to be almost insignificant and hence may be ignored [Visaria, 1990]. This fact leaves us with birth rate and death rate. Therefore, the difference between the birth rate and death rate measures the natural growth rate of the population.

As can be seen from Table: 1, the birth and death rates in Eritrea have clearly followed the continuous fall in consistency with the theory of demographic transition. As a result of this, the natural growth rate has shown a continuous rise till 1970 – 75, after which it also started falling, till it reached up to 27.6 per thousand in 1985 – 90, and then falling to 25.1 per thousand in 1995 – 2000. Chart: 2 provides a graphical presentation of Table: 1.

Table: 1 Natural Growth Rate of Population
[Per 1000 population]

Years	Crude Birth Rate	Crude Death Rate	Natural Growth Rate
1950-55	48.4	28.0	20.4
1955-60	49.1	25.7	23.4
1960-65	48.5	23.6	24.9
1965-70	47.6	21.7	25.9
1970-75	46.1	19.7	26.4
1975-80	45.1	18.9	26.2
1980-85	44.9	20.1	24.8
1985-90	44.6	17.0	27.6
1990-95	43.0	15.7	27.3
1995-2000	39.8	14.7	25.1

Chart: 2



a.2 Gender Composition of Population

Gender or sex composition of population shows the number of males per 100 females. Information on sex-composition together with that on age-composition is important for many reasons like marriage rate, population growth, etc. The sex distribution of population in Eritrea shows an almost constant sex ratio over the years. The data of the gender composition is shown in Table: 2.

a.3 Age Composition of Population

The age composition of the Eritrean population can be classified under three categories: the working population, dependent population and school age population. As can be seen from Table: 2, the working population as a percentage to total population has shown an almost stagnancy over the years.

As a result of this, the dependent population has also remained stagnant. However, a look into the two age groups within the dependent population needs special mention. The old age population [age 65 years and above] has shown upward movement from 1990 on wards, perhaps indicating a rise in the life span of the Eritrean population. However, during the same period of time, the child age population [age 0 – 14 years] has shown marginal drop. This could be due to increase in the infant and child mortality, and also the increase of death rate among the age group 5 to 14 years. This is a serious issue that needs urgent consideration.

a.4 Distribution of Population: Rural and Urban

Basically, Eritrea is said to be an agriculture-based country with above eighty percent of its population living in rural areas. Region-wise, Eritrea is divided into nine regions; three regions in the highland platue and the other six regions in the eastern and western lowlands. Except to few regional capitals, the majority of Eritrea's regions can be considered rural areas. However, the aggregate data shows a paradigm shift. It can be seen from Table: 2 that the urban population is continuously increasing. During the last decade, the urban population increased by 2.9 percent indicating the migration of the rural population towards the urban centers in search of job and services.

a.5 Density of Population

The term density of population implies the average number of persons living per sq. km. It is calculated as a ratio of the number of persons per sq. km. of land area. Given Eritrea's total population size for the year 2000 at 4.10 million and its land area to about 125,200 sq. km. the density of population in Eritrea for the year 2000 can be put at 32.8 person per sq. km., The density in rural areas is 26.7 person per sq. km, which is indeed very high, compared to the density in urban centers, which is only 6.1 people per sq. km. But if we see the population density in some countries of the world such as India and Bangladesh where the density of population is very high at, 2573.8 and 847.2 person per sq km respectively, or even in some neighboring country like Ethiopia where the population density is 44.8 person per sq km respectively; Eritrea could be considered among those countries with low

population density. Table 2 below presents the trends in the density of population in Eritrea for the periods 1950 – 2000.

Table: 2 Population Profile						
	1950	1960	1970	1980	1990	2000
Population						
Total [in millions]	1.14	1.42	1.83	2.38	3.14	4.10
Average Annual Growth Rate	2.10	2.54	2.74	2.78	3.26	2.96
Gender Composition						
Male	49.12	49.30	49.73	49.58	49.68	49.51
Female	50.88	50.70	50.27	50.42	50.32	50.49
Male per 100 female	96.55	97.22	98.91	98.33	98.73	98.07
Age Composition [%]						
Working Population	46.4	48.4	48.7	48.9	48.7	48.3
Dependent population	53.6	51.6	51.3	51.1	51.3	51.7
Age [0 – 14]	45.3	44.4	44.6	44.2	43.9	43.6
Age [65 – above]	8.3	7.2	6.7	6.9	7.4	8.1
Distribution [%]						
Rural	94.5	91.7	88.9	86.5	84.2	81.3
Urban	5.5	8.3	11.1	13.5	15.8	18.7
Density [Per Sq. Km]						
Total	9.1	11.4	14.6	19.0	25.1	32.8
Rural	8.6	10.4	13.0	16.5	21.2	26.7
Urban	0.5	0.9	1.6	2.6	4.0	6.1

b. Health

The quality of population is an important factor in the development process of the economy. A country with higher quality of population progresses more easily and faster than a country with poor quality of population. The quality of population can be judged from life expectancy, which is a reflection of health status of a country; and the levels of literacy and technical training attained by the people, reflecting the education status of a country.

Health is an important component of human welfare. From the economic point of view, any expenditure made for the improvement of health and nutrition is considered as investment and also consumption expenditure at the same time. It is so because better health and nutrition are desirable ends in themselves, as they bring substantial economic benefits by

increasing the capacity for learning, raising productivity and by prolonging potential working lives.

In general, health care is equated with medical services. However, it is a much wider concept that includes preventive, curative, protective and promotional aspects of health. Hence, health issues must be approached with much wider understanding in order to achieve better health status [Higgins, 1992]. Moreover, while planning, one must distinguish between the health care that increases productivity and health care that raises population. Generally, the elimination of debilitating diseases which do not kill or which kill slowly, such as malaria and dysentery, may raise productivity much faster than the population and thus increasing per capita income. On the other hand, the elimination of diseases from which one either recovers or dies quickly, such as yellow fever or bubonic plague, will raise population without much increase in productivity [Kothari, 1999].

The important health indicators used to evaluate the health status of Eritrea in this study are:

b.1 Life Expectancy at Birth,
b.2 Infant Mortality,
b.3 Child Malnutrition,
b.4 Access to Safe Water and Sanitation,
b.5 Daily Per Capita Calorie Intake

b.1 Life Expectancy at Birth

The life expectancy of people is closely connected with health conditions, which in turn are an integral part of development. Life expectancy reflects many social, economic, and environmental influences. It is closely related to other demographic variables, particularly the population growth rate.

Mortality, along with fertility and migration, determines the size of human population, its composition by age, sex, and ethnicity, and its potential for future growth. Life expectancy at birth is an indicator of mortality conditions and, by proxy, of health conditions. It measures how many years on an average a newborn baby is expected to live, given current age-specific mortality risks. It is also one of the most favored indicators of social development and is used as one of the components of United Nations Development Program's [UNDP] Human Development Index.

Today, in Eritrea, over three decades of destructive war, recurrent droughts and long years of miserable poverty have greatly resulted into the poor quality of human resources in the country and have left its deep scars on the health of the majority of the population. As a consequence to this trilateral distress, Eritrea's health and nutrition indicators are considered poor even by African standards.

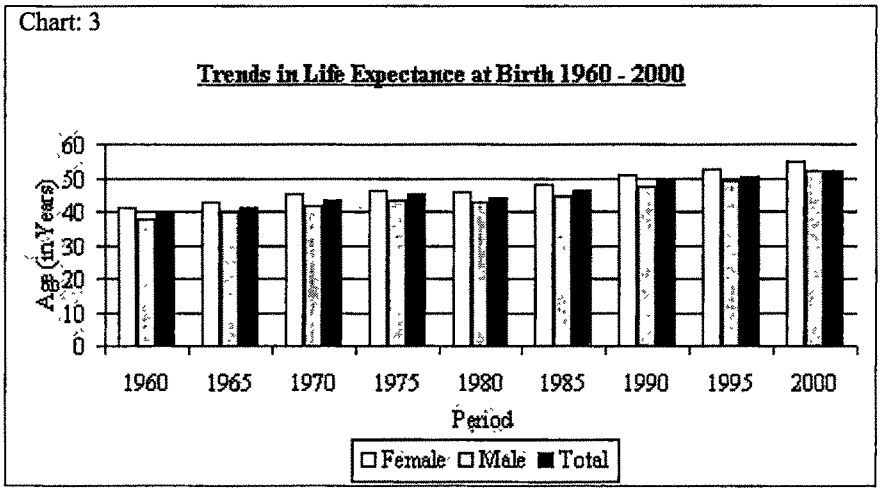
As can be seen from Table: 3, though the expectation of life at birth in Eritrea has significantly improved from 35.1 years in 1950 to 52 years in 2000, it may be noted that it is still very low not only in comparison to the developed countries which have achieved the 64.7 years mark in 2000, but also in comparison with neighboring countries with somehow comparable levels of economic development, such as Yemen and Sudan, where it has reached 60.6 and 56 years respectively in 2000. At this level of life expectancy, Eritrea is placed among the least developed countries where the life expectancy is 51.9 years for the same period. Contradictory to the general observations, in case of Eritrea, the female life expectancy is higher than male life expectancy, though marginally.

A long life is the desire of all and the benefits of modern and advanced technologies of death control are possibly available for all at a moderate increase in expenditure on medicine and public health. Therefore, Eritrea as well holds the promise of a more rapid reduction in mortality than it had experienced so far.

Table: 3 Eritrea's Life Expectancy at Birth

Years	Female	Male	Total
1950	37.4	34.5	35.1
1960	40.9	37.9	39.3
1970	45.1	41.9	43.5
1980	45.9	42.7	44.3
1990	50.8	47.2	48.9
2000	54.9	52.2	52.0

Chart: 3



b.2 Infant Mortality

Infant mortality rate refers to the number of deaths under one year of age during a given period of time per 1000 live births during the same period. The significance and purpose of this indicator is to estimate the proportion of newborn, who die during the first year of life.

Beyond its obvious relevance to policy making for healthy children, the infant mortality rate is a sensitive indicator of availability, utilization and quality of health care, particularly pre-natal care. Moreover, given its association with GNP per capita, family income, family size, mothers' education and nutrition, it is also considered as one of the best indicators of overall socio-economic development of a community. This indicator, associated with access to pre-natal health services, is closely linked with life expectancy at birth. It is also more generally linked to many other social and economic indicators.

The available data in Table: 4 shows the significant decline in the rate of infant mortality, which has fallen from 181 infants per 1000 live births in 1950 to 64 infants per 1000 live births in the year 2000. This indicates improvement in health services particularly in pre-natal care. But, in spite of this improvement, the rate of infant mortality in Eritrea remains among the lowest in the world and invites a lot of work and reformation on the health sector. Though not entirely, this poor health status among others, is the result of protracted war, poverty and recurrent drought.

Table: 4	**Infant Mortality Rate** [Per 1000 births]					
Years	1950	1960	1970	1980	1990	2000
Infant mortality rate	181	156	137	125	108	64

b.3 Child Malnutrition

The nutritional status of children in relation to national standards refers to the children under age five, who's weight-for-age and height-for-age is between either 80 percent or 120 percent of the reference value of the country, or within two standard deviations of this value. The significance and purpose of this indicator is to measure long-term nutritional imbalance and malnutrition as well as current under-nutrition.

Health and development are intimately interconnected. Meeting primary health care needs and the nutritional requirement of children are fundamental to the achievement of sustainable development. Anthropometric measurements to assess growth and development, particularly in young children, are the most widely used indicators of nutritional status in a community. The percentage of low height-for-age reflects the cumulative effects of under-nutrition and infections since birth, and even before birth. This measure, therefore, should be interpreted as an indication of poor environmental conditions and/or early malnutrition. The percentage of low weight-for-age reflects both the cumulative effects of episodes of malnutrition or chronic under-nutrition since birth and current under-nutrition. Thus, it is a composite indicator, which is more difficult to interpret.

The child malnutrition of children under five years in Eritrea is very low. It is estimated at 102 per thousand live births in the year 2000 compared to 90 per thousand live births in sub-Saharan Africa in 1999.

b.4 Access to Safe Water and Sanitation

Like all the infrastructure bases, health and sanitation facilities in Eritrea were completely neglected by the concerned colonial authorities, besides being seriously destroyed. A world Bank comment on this issue would suffice the concern. *"The physical facilities of Ministry of Health [MOH] suffered significantly during the war. Approximately 60 % was damaged or destroyed, and mostly considered not fully functional. This is partly due to the war and in part due to the investment policies of the Ethiopian regime"* [World Bank, 1994].

Just only eight percent of the population has access to safe water compared to 44 percent in sub-Saharan and 71 percent in low-income countries.

b.5 Daily Per Capita Calorie Intake

The daily per capita calorie intake in Eritrea is estimated at about 1750, which is equivalent to 93 percent of minimum requirements; compared to 2096 for sub-Saharan Africa.

Table: 5 Health and Nutrition Indicators: Regional Comparison
[Year 2000]

Indicators	Eritrea	Sub-Saharan Africa	Low income Countries
Life expectancy at birth [years]	52	52	59
Infant mortality [per 1000 live births]	64	90	78
Child malnutrition [% of children under 5]	25	-	61
Access to safe water [% of population]	8	44	71
Population per physician [1000]	33	24	-
Population per nurse [100]	17.5	24.5	-
Daily per capita calorie intake	1750	2096	-

c. Education

It is knowledge that gives meaning and value to life. With knowledge nations occupy summit and lead a welfare life. Without it, mankind neither can have an ultimate object nor can utilize means. The value of education is an end in itself and a means that contributes to increasing output of other goods and services. Hence, a theoretically perfect approach would be to treat education as both an input and an output in an economic sense. The value of education as an end in itself would be treated as a part of the national income. While the part that contributes to the growth of the economy would be considered human factor of production.

Educational services create and improve capacity to produce and earn income, that is, development of human or labour resources. No doubt, investing in education means the production of quality human resource and hence social and economic advancement of the society. Yet, investment in human capital is in no sense restricted to the provision of either classical or vocational education. Therefore, investment in human capital should be guided by the kind and quality of education inputs required by the economy as a whole.

For many years, the world recognized the value of education and its vital role in the social and economic life of man. Since then, education occupied the top priority in development plans in many countries of the world. In spite of this fact, all the colonizers of Eritrea intentionally forbidden education in Eritrea in order to subjugate the people of Eritrea and lead them easily. Throughout the history of Eritrea no efforts have been made to eliminate illiteracy.

By the end of the British occupation [1941-1952], the education status in Eritrea was very low: the illiteracy rate was estimated 70 percent of the population. As the report of the United Nations Commission for Eritrea - 1952 states: *"The educational standard of the people is low. According to the Intellectual Association of Eritreans, only one of his members holds a university degree, some 70 percent of the people are illiterate. As yet, a little less than 10,000 Eritrean children attend school, which is approximately 6 percent of the Eritrean population of school age"* [United Nations, 1977]. This high rate of illiteracy

had remained almost unchanged for more than two decades; even in 1970 the rate of illiteracy in the country was estimated 71 percent of the above 15 years population.

The leading indicators to examine the education status in Eritrea, used in this section are as follows:

c.1 Adult Literacy Rate,
c.2 School Age Population,
c.3 Gross Enrolment Ratio.
c.4 Education Indicators: Regional Comparison

c.1 Adult Literacy Rate

Literacy is critical for promoting and communicating sustainable development and improving the capacity of people to address environment and development issues. It facilitates the achievement of environmental and ethical awareness, values and skills in consistency with sustainable development and effective public participation in decision-making.

Adult literacy rate refers to the proportion of the adult population aged 15 years and over which is literate. A literate person is the one who can, with understanding; both read and write a short simple statement related to his everyday life. While the person who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling himself to continue to use reading, writing and calculation for his own and also for the development of his community is known as a functionally literate person.

The purpose in determining this indicator is to provide a measure of the stock of literate persons within the adult population. It reflects the accumulated accomplishment of education in spreading literacy. Any shortfall in literacy would provide indications of efforts required in the future to extend literacy to the remaining adult illiterate population.

Today, the most recent estimate puts adult literacy rate in Eritrea at 55.7 percent and youth literacy rate at 70.2 percent. Illiteracy is very low among adults as well as youth females.

Currently, adult female literacy rate is 44.5 percent and youth females literacy rate is estimated 60.4 percent. The education status among males is by no means better off. Adult male literacy is estimated at 67.4 percent and the literacy rate among youth males is estimated at 80.1 percent. The trend in adult and youth literacy rates is shown in Table: 6 below.

Though, the literacy rate among males has been better off the improvement in this rate has been much faster in females than in males.

Table: 6 Literacy Rate
[In percentage]

Year	1970	1975	1980	1985	1990	1995	2000
Adult literacy rate							
Total [% of people]	29.0	33.0	37.3	41.9	46.4	51.1	55.7
Male [% of males]	39.5	44.1	48.9	53.8	58.5	63.0	67.4
Female [% of females]	18.8	22.1	26.0	30.3	34.8	39.5	44.5
Youth literacy rate							
Total [% of people]	40.7	45.7	50.8	55.1	60.9	65.7	70.2
Male [% of males]	53.0	58.4	63.4	68.1	72.5	76.5	80.1
Female [% of females]	28.3	33.2	38.3	43.7	49.3	54.9	60.4

c.2 School Age Population

Information regarding the total size of school age population and its education level wise distribution is very necessary for the assessment and planning of education in a country. It is needed to frame and implement educational policies. The number of teachers, schools needed and hence the size of the budget needed for education, cannot be determined unless the size and distribution of the school age population is known. The school age population in Eritrea falls into, the age group 6 to 23 years. It consists of four age groups, each related

to a specific education level. These groups are: primary level [6 – 11 years], secondary level [12 – 14 years], tertiary level [15 – 17 years] and higher education level [18 – 12 years]. The size of the total school age population and in its distribution in each level is given in Table: 7.

The trends in Table: 6 suggest that the school age population in Eritrea has crawled very slowly.

c.3 Gross Enrolment Ratio

Gross enrolment ratio refers to total enrolment in primary, secondary and tertiary education as a proportion of the population of primary, secondary and tertiary school age respectively, according to national regulations. It is a general indicator of the level of participation in the three levels of education. It provides at the same time a measure of the availability and utilization of school places to satisfy the educational needs of the eligible school-age population. In other words, this indicator is used in monitoring the general status and trends of participation in education and assesses the relation between demand and supply of educational opportunities.

As is evident from the gross enrolment ratio data in Table: 7, on an average, the gross enrolment ratios has only been 25 percent. This implies that only 25 students out of every 100 students get the chance of education, while the remaining 75 students do not get education. This may be for two reasons: First, due to less number of schools to accommodate all the students. Or, second, poor response of the people to education. In regard to Eritrea, both the reasons are accountable side by side. As a mater of fact the poor response of the people to education, which once related to rural population, today exists even in the urban centers where many families prefer that their children miss education rather than be taken for national services or to the battlefields. The tough stand of the government to barter education for national services is one of the most failure policies of the government, which will be felt in the future.

Table: 7 **Education Indicators** [In percentage]				
Indicators	1992	1995	1998	2000
School age population	40.11	40.60	41.00	41.40
Primary level	16.31	16.50	16.65	16.80
Secondary level	6.71	6.90	7.05	7.20
Tertiary level	6.24	6.30	6.35	6.40
Higher education level	10.84	10.90	10.95	11.00
Combined gross enrollment ratio	25.00	29.00	27.00	26.00
Primary gross enrollment ratio	46.41	55.79	53.22	51.80
Secondary gross enrollment ratio	15.47	18.91	23.78	24.60
Tertiary gross enrollment ratio	13.12	12.30	4.00	1.60

c.4 Education Indicators: Regional Comparison

In general, the educational status in Eritrea is low even by the regional standards. The prevailing adult literacy rate of 55.7 percent is very low compared to 73.7 percent in developing countries, and also in comparison to Arab states and Sub-Saharan Africa, where the literacy rate is 62 percent and 61.5 percent respectively.

Further more, the situation of combined gross school enrolment ratio is even worse. The combined gross enrolment ratio in Eritrea has only been 26, compared to 62 in Arab States, 61 in developing countries and 42 in Sub-Saharan Africa.

Table: 8 **Education Indicators: Regional Comparison** [Year 2000]				
Indicators	Eritrea	Arab States	Sub-Saharan Africa	Developing Countries
Adult literacy rate	55.7	62.0	61.5	73.7
Combined gross enrollment ratio	26	62	42	61

d. Poverty

The world today approaches the peak of its civilization leaving behind millions of hungry, naked poor burning under the sun. If morals have any meaning at all, it is a shame for mankind to be proud or even to appreciate this material civilization unless the hungry are fed, the naked clothed, the homeless sheltered and all the misfortune given their right to live healthy, knowledgeable and a prosperous life with a ray of hope.

Poverty is generally manifested in terms of low incomes, inadequate housing, poor health, limited or no education, high infant mortality, low life as well as work expectancy, and in most cases, a general sense of despondency and despair [Joseph, 1987].

A poor man in a developing country is caught-up in a vicious circle of poverty. Being poor, he lacks the means to prosper, and since he lacks the means to prosper, he must remain poor. The vicious circle is complete. Poverty leads to inefficiency and incapacity to do well, and both inefficiency and incapacity must end in poverty [Dewett, 1996]. As such in this vicious circle, the poor in developing countries even remain poor, inheriting poverty from generation to generation.

The phenomenon of poverty has been one of the most persistent and unmanageable problems facing many countries of the so-called third world, with more concentration in South East Asia and sub-Saharan Africa. Today poverty is among the main obstacles to economic growth of developing countries and international peace. About one third of the world's populations go to sleep hungry at night. Famine occurs periodically in many parts of Asia and Africa. The World Bank has estimated the poor of the developing countries at more than one billion i.e. nearly one out of every three parsons, the majority of them living in South Asia and sub-Saharan Africa [World Bank, 1985].

Though poverty is the most unpleasant problem that exists in developing as well as developed countries, yet the concept of poverty is not clearly defined. The standard of living varies from one society to another and from one point of time to another. Hence, each country has its own definition of poverty based on its minimum standard of life.

The standard of living of the poorest citizens in the industrial countries of the west is much higher than that of average citizens of some African and Asian nations. In developing nations the poor lack even the most necessities of life such as access to food, drinking water, clothing and shelter. While many poor in the west enjoy diversified diet, electricity and minimum requirements of health and education services.

Poverty as a concept is closely related to inequality and unemployment. High levels of inequality and unemployment in an economy tend to be associated with a higher level of poverty. The word "poverty" means different things to different people. While virtually everybody agree that poverty occurs when people have inadequate incomes, nonetheless the exact line between poor and the non-poor is hard to draw [Samuelson and Nordhaus, 1989]

There are many definition for poverty provided by different economists and concerned organizations. Among them Kurien [1978] defined poverty as the socio-economic phenomenon whereby the resources available to a society are used to satisfy the wants of the few while many do not have even their basic needs met. While the World Bank [1990] defines poverty as "The inability to attain a minimum standard of living. Hence we may define poverty as: *"A socio-economical phenomenon in which an individual or a family or a section of the society is unable to secure its daily victuals and/or basic necessities".*

Discussion on the extent of poverty in Eritrea involves the following relevant points, as discussed below:

d.1 Poverty line In Eritrea
d.2 Causes of Poverty in Eritrea

d.1 Poverty Line In Eritrea

Apart from South Asia, poverty is at it's worst in sub-Saharan Africa especially among farmers. Describing the status of the African poor is almost like writing a literature on human misery and Eritrea's poor are among the most unpleasant part of that tragedy.

In 1994, the World Bank conducted a Rapid Appraisal Survey to estimate the proportion of the population that is poor. Using the widely accepted methodology of constructing a *"Poverty Line"*, [defined as the minimum cash and non-cash expenditure needed to be made by a person or household in order to be able to consume a minimum number of calories, plus a small number of non-food items such as housing and clothing]; the World Bank estimated the proportion of the Eritrean population below the poverty line with food aid at 53 percent.

Further, because a large number of the Eritrean households receive food aid, the World Bank calculated a second poverty line by deducting the amount of food aid typically received by households from the original poverty line. This adjustment had lowered the poverty line. Thus, the proportion of population below the poverty line had risen from 53 percent with food aid to 69 percent without food aid, concluding that about 69 percent of the Eritrean population lives below the poverty line, subsisting on as low a level of consumption of Nak'fa 1000 per household of six members per year [167 Nak'fa per person per year].

Table: 9 Estimates of Poverty Line in Eritrea

Poverty Line	% Of Population Below Poverty Line
With food aid	53
Without food aid	69

Source: World Bank, "Eritrea Poverty Assessment" [June, 1996].

Perhaps the ugliest facet of Eritrea today is the abject poverty which holds large many people in its vice grip. Today, Eritrea is considered among the poorest countries of the world. The three decades of war and recurrent droughts have deepened the roots of poverty in the society. More than half of the population lives below the poverty line. The incidence of poverty is large in rural areas and among refugee returnees. The rural areas constitute 86

percent of the poor population. The rural and refugee poor lack even the most necessities of life such as excess to food, drinking water, proper shelter and minimum health and education facilities.

Table: 10 Geographical Distribution of Poverty in Eritrea
In percentage

	Urban	Rural	Total
Distribution of Population	16	84	100
Distribution of Poor	14	86	100
Incidence of Poverty [% of Population]			69

Source: Derived from Rapid Appraisal Survey, 1994 and population Estimates of GSE.

d.2 The Causes of Poverty in Eritrea

In general the reasons behind the poverty of the rural, urban and refugee groups in Eritrea may be summed up in:

i. The natural environmental in the rural areas, that is irregularity and scarcity of rains, recurrent droughts and the limitation of agriculture land in the high land rural areas.

ii. Unemployment and underemployment, this is mainly in the urban areas. [Unemployment is discussed in the next topic]

iii. Lack of means, skills and low income.

iv. Lack of sustainers [supporters], this is the case when a person is either an old-aged, or an orphan teenager, or a widow or a retired or a disabled and have no supporter.

v. Ill social practices, such as reliance on aids, supports from relatives and friends.

vi. Demobilization of civilian employers and freedom fighters.

vii. With all these, the thirty years of war with all its evil touches remained the main cause of poverty and the greatest obstacle in the path of any poverty elimination attempts.

e. Unemployment

Apart from poverty, one of the serious problems challenging the world economy today is unemployment. Unemployment and underemployment do exist in both developed as well as developing countries, though for different reasons. Yet, the consequences of the problem are almost same everywhere.

Unemployment creates economic and social problems in the society and has a negative impact on the nation's GNP. It represents a loss of current and future productive resources that can be utilized in the economy to produce goods and services and thereby increase the national income of the country. The loss of productive labour is a loss of human, mental and physical efforts that would have participated in the production of capital goods and the provision of savings for future investment. The social effects of unemployment are more complicated and of an expanding nature. Poverty, family instability, moral sickness and crime are some social problems associated with unemployment.

The present topic discusses the level of employment in Eritrea for the period 1992 to 2000, covering the following relevant points:

e.1 The Concept of Unemployment,
e.2 Eritrea's Labour Force,
e.3 The Extent of Unemployment,
e.4 Nature of Unemployment in Eritrea,
e.5 Causes of Unemployment.

e.1 The Concept of Unemployment

The total population of a country may be divided into two categories: the working population i.e. the labour force, and the non-working population or the dependent population. The dependent population, as indicated by the United Nations, refers to all those who are below the legal working age of 14 years and above the legal retirement age of 65 years, and perhaps this differs from one country to another.

The labour force includes all those who are between the age group of 14 to 65 years, either they are employed for pay or profit or unemployed during any part of some short period of time [United Nations, 1996]. Within this age range, the adult population that is going to school, keeping the house, too ill to work or simply not looking for work are not included in the labour force.

The labour force of a country can further be classified into: employed people and unemployed people. The employed people are those who perform any paid work, as well as those who have jobs but are absent from work because of illness, strikes or vacations. While the unemployed people are those who are not employed but are actively looking for work or waiting to return to work [Samuelson and Nordhaus, 1989].

e.2. Eritrea's Labour Force

Working population being a primary factor in the production processes, its size is of great importance for the level of economic activity in the country.

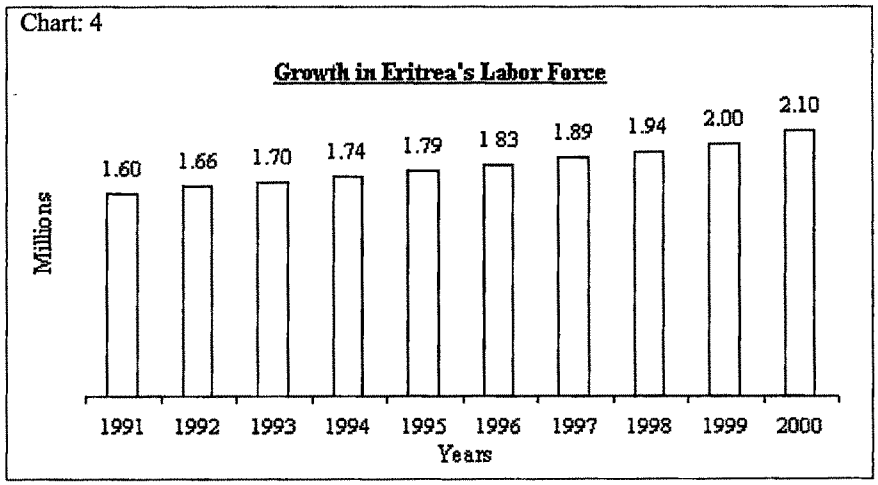
As it is clear from Table: 11, Eritrea's labour force has significantly increased in the last decade from 1.60 million in 1991 to 2.10 million in the year 2000. The annual growth rate of labour force has shown a fluctuating tendency. It has declined from 3.75 percent in 1992 to 2.23 percent in 1996 and then started to rise till it reached 5.00 percent in the year 2000. On an average Eritrea's labour force has remained 3.07 percent during the period 1992 to 2000.

Labour force as a percentage of total population has also increased marginally from 49.69 percent in 1991 to 51.22 percent in 2000. On an average, it has remained at 50.15 percent for the same period.

Table: 11 Eritrea's Labour Force

Years	Labor force [In millions]	Annual Growth Rate	As % of Population	Dependent Population [%]
1991	1.60	--	49.69	50.31
1992	1.66	3.75	50.15	49.85
1993	1.70	2.41	50.15	49.85
1994	1.74	2.35	50.00	50.00
1995	1.79	2.87	50.14	49.86
1996	1.83	2.23	49.86	50.14
1997	1.89	3.28	50.13	49.87
1998	1.94	2.65	50.00	50.00
1999	2.00	3.09	50.13	49.87
2000	2.10	5.00	51.22	48.78
Average		3.07	50.15	49.85

Chart: 4



e.3 The Extent of Unemployment

Estimates of employment and unemployment, according to the international standards, can in practice be made most reliably on the basis of data collected through household surveys and population censuses. Some of the criteria specified in the international standards can only be implemented precisely through personal interviews. This is the only data source which, on a regular basis and with an appropriate survey design, can cover virtually the entire population of a country, all branches of economic activity, sectors of the economy, types of activity status and categories of workers and which allow joint, mutually exclusive measurement of the employed, unemployed and economically inactive. There has not been any such exclusive even carried out in Eritrea.

In the absence of total employment or unemployment estimates, an indirect method is quite often used to estimate the extent of employment and unemployment in a country. This method uses the statistics of the labour office on the registrations and replacements of the job seekers in the country. This method is based on the following assumptions:

1. All employment exchanges are done only through the labour office,
2. All job-seekers get themselves registered with the labour office, and
3. All job-seekers once employed do not continue to exist on the registers of the labour office.

Due to the absence of total employment or unemployment estimates in Eritrea, we adopted the indirect method to find out the extent of employment created by the economy during the period 1991 to 2000 in Eritrea.

Official records have only the following statistics related to employment in Eritrea:

1. Total Number of Registered job-seekers during the year [TR]
2. Total Number of Registered job-seekers who got employment during the year [TE]

Using various statistics available from the labour office, we computed the extent of employment and unemployment created during the period 1991 to 2000, As explained in Table: 12.

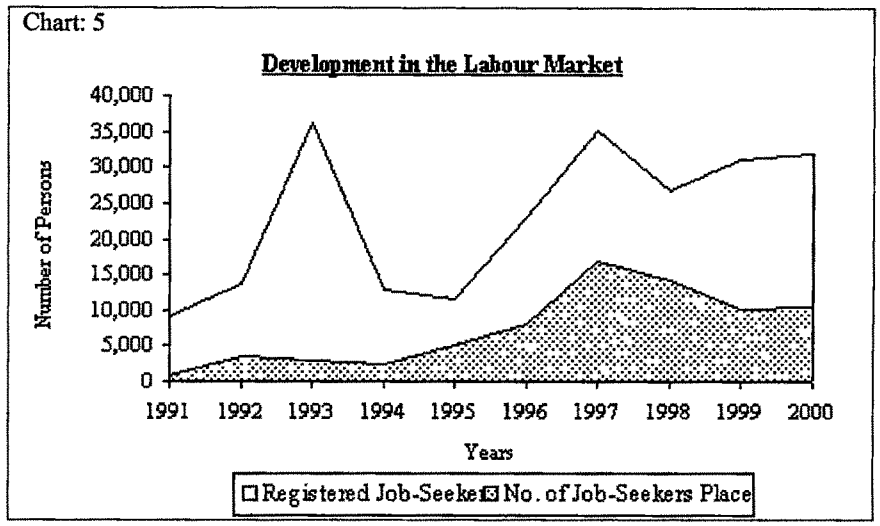
The labour market data from Table: 12 reveals a serious unemployment problem in Eritrea. So far the Eritrean economy has never been able to create jobs for even 50 percent of the registered job seekers. From 1991 to 2000; the total number of registered job-seekers reached 231,944 Eritreans. Out of them only 74,258 [32 percent] were placed. For the remaining 68 percent, the economy failed to secure a job for them.

e.4 Nature of Unemployment in Eritrea

A serious aspect of the problem of Eritrea is the very large number of unemployed in addition to those many underemployed. The Eritrean problem of unemployment is similar to that of many developing countries though it has some of its own peculiarities; being a consequence of long years of colonial policies and war situation that paralyzed Eritrea's economy for decades. Like all the other sectors of the economy, the labour market in Eritrea needs proper planning.

Table: 12 Development in the Labour Market

Year	Registered Job-Seekers [1]	No. of Job-Seekers Placed [2]	Placement Percentage	Unemployment [1 - 2]	Unemployment Percentage
1991	9,220	768	8.33	8452	91.67
1992	13,753	3,530	25.67	10223	74.33
1993	36,367	3,081	8.47	33286	91.53
1994	13,009	2,385	18.33	10624	81.67
1995	11,440	4,988	43.60	6452	56.40
1996	22,986	7,939	34.54	15047	65.46
1997	35,252	16,910	47.97	18342	52.03
1998	26,736	14,173	53.01	12563	46.99
1999	31188	10144	32.53	21044	67.47
2000	31993	10340	32.32	21653	67.68
Total	231,944	74,258	32.02	157686	67.98



Eritrea today suffers of direct and indirect consequences of decades of war, negligence and devastating policies of the Ethiopian colonial regime. In fact, the problem of unemployment in Eritrea is almost a problem of disposing huge backlogs of unemployment inherited from the past, more than a consequence of failed economic or political policies. Though recently these have also added to the problem. The problem of unemployment in Eritrea can be identified as a structural unemployment, which is said to exist when large numbers of workers are unemployed or underemployed, because of a mismatch between the supply of and demand for workers.

In the Eritrean content, whether abroad or within the country, schools, universities, training institutions and the society, in addition to refuge returnees and demobilized ex-fighters, yearly pump in more and more skilled and unskilled workers to the labour market. This increases the indisposed huge backlogs in the labour market. In contrast, this increasingly fast supply of labour is faced by a comparatively very low and slow demand for labour, because the entire economic system of the country is not yet in a position to increase the rate of demand for labour at least to match the recent rate of supply of labour if not to exceed it. In the Eritrean case, the huge indisposed backlogs of unemployment make even

the long-run market adjustment difficult unless some social and economic policies are introduced to help in the disposal of the available unemployment stocks in the market.

e.5 Causes of Unemployment

The increasing migration of the rural population and refugee returnees towards the provincial capital specially the capital city Asmara, in search of job, is increasing the pressure of urban unemployment in these areas. The absence of infrastructure bases in the rural areas of the country, accompanied by a high pressure of population on limited agricultural lands in the highland's rural areas had left the rural labour force with no choice but to migrate to urban centers. The problem of unemployment among the educated, especially among elementary school and senior secondary graduates, is serious. Most registered job seekers in urban labour offices are elementary school and senior secondary graduates, with the female to male ratio being roughly two to three.

i. Causes of Urban Unemployment

After independence the urban centers [Asmara and the provincial capitals] became the destination for many Eritrean workers from the rural areas of the country, and other countries specially the neighboring.

The industrial sector, which is mainly expected to generate employment opportunities to drain the urban labour market, is currently operating at its lowest capacity and is facing many constraints. On the other hand, the tertiary and administrative sectors, which are supposed to be the second source of employment for the urban labour, are currently run by ex-fighters and returnees and functioning below optimum levels. With the inability of these sectors to generate more employment opportunities on one hand and the increasing new entrants to the labour market on the other, urban unemployment continues to increase. Both, open unemployment and educated unemployment are the main characteristics of the urban unemployment in Eritrea.

ii. Cause of Rural Unemployment

Eritrea is an agricultural country with about 80 percent of its population living on traditional crop cultivation, animal husbandry and related trade activities. The agricultural sector of the country is mainly a subsistence farming, primarily relying on household labour. It still suffers the consequences of decades of destructive war and recurrent droughts that resulted to the destruction of the rural areas and the migration of its population for many years. Currently the agricultural sector is handicapped by many enormous problems such as population pressure on the high lands rural areas, extremely low productivity levels, erratic rainfalls, lack of access to foreign exchange. These problems, associated with widespread rural poverty and chronic food deficit in the country, are the main reasons behind the problems of rural unemployment. The rural unemployment scene in Eritrea is not free of the existence of underemployment, seasonal unemployment and disguised unemployment.

iii. Causes of Educated Unemployment

Educated unemployment is one character of the urban unemployment. The rate of unemployment in the urban centers is higher among the educated than among the uneducated workers. During 1991-98, it was 76 percent of the total unemployment. It was highest among elementary school and senior secondary school graduates. Graduates from foreign countries and graduates of the national education system are the main sources of educated labour, which dominate the urban labour market in the country. The new policy of the Ministry of Education, which reduced the years of schooling from 12 years to 11 years; will further increase this percent.

2.2 Natural Resources

Natural resources are the gift of the Mighty creator to his creations. Without them mankind could never survive on Earth. Natural resources are all the things in nature which man utilizes directly or indirectly to satisfy his wants.

Production is the direction of human labour to create utility in resources furnished by nature by changing them into more useful items and forms. Natural resources are essential factors in the process of production. It is almost impossible to name a single product which does not contain at least a single element of natural resource. Most of the natural resources a man uses in production goes back to land and that is why economists frequently use the word 'land' to mean natural resources.

In order to achieve high levels of economic development, it is essential for developing countries to develop and utilize their available natural resources to the optimum extent with maximum efficiency. Under developed countries usually have to begin with and concentrate on the development of locally available natural resources as an initial condition for lifting local levels of living and purchasing power, for obtaining foreign exchange with which to purchase capital equipment and for setting in motion the development process [Mithani, 1996].

The natural resources of Eritrea, as the preliminary surveys indicate, are valid and provide an adequate basis for building a diversified modern economy. In this chapter, we will discuss the various natural resources of Eritrea, such as:

a. Land Resources,
b. Water Resources,
c. Mineral Resources,
d. Forest Resources, and
e. Marine Resources.

a. Land Resources

Land, well defined as the gift of God Almighty, is the most important resource and the mother of almost all resources. Indeed, it is very difficult to name a single resource, which is not originated from land in one way or the other.

The total land area available for a country sets definite limits within which the land base can be stretched horizontally during the process of economic development. As the development process advances, the demand for land for different uses such as industrial, construction, trade, infrastructure and other purposes increases. Due to the fixed supply of land, the increase in demand for land is generally maintained by diverting from the agricultural use of land to non-agriculture use of land. Obviously, this shift may have its negative impact and consequences on the agricultural sector and thus adversely affect the whole process of growth. Therefore, it is in this context that the statistical data relating to the land utilization pattern becomes significant.

Eritrea is strategically located in the northern part of Africa with a total land area of about 125,000 sq. km. [12,189,000 hectares] and a coastline of about 1,000 Kms. and 365 islands in the Red Sea.

The discussion on Eritrea's land resources can be classified into:

a.1 Land Utilization Pattern
a.2 Climate, Rainfall and Soil.

a.1 Land Utilization Pattern

Table: 13 describes the land utilization pattern in Eritrea. The total available land [12.189 million hectares] is utilized for agricultural [9.1 percent] and non-agricultural [90.9 percent] uses.

Non-agricultural land includes forests, browsing and grazing land and barren land. Forests occupy just 0.5 percent of the total land area. Browsing and grazing land occupy the largest share [57.2 percent] of the total land. Barren land, which includes desert area, towns, villages and unusable steep slops, occupies one third [33.2 percent] of the total available land in Eritrea.

Table: 13 Land Utilization Pattern		
Land Use	Area In million hectares	% Of Total
Agricultural Land	1.112	9.1
Forest Land	0.063	0.5
Browsing & Grazing Land	6.967	57.2
Barren Land	4.047	33.2
Total	12.189	100.0

a.2 Climate, Rainfall and Soil

Eritrea is a land of varied climate, rainfall and topography. Climate ranges from hot aridadjacent to the red sea, to temperate sub-humid in isolated micro-catchments within the eastern highland escarpments. The central highlands enjoy a cool temperate climate with minimal seasonal variations.

The total annual rainfall tends to decrease from south to north. It varies from an average of 400 to 650 mm in the highlands and from 200 to 300 mm in the lowlands. During draughts, the average rainfall decreases to 200 mm in the low lands. A small area on the eastern escarpment known as the "green belt" receives on an average over 900 mm. The problem of inadequate total rainfall over most of the country is often compounded by the high variability of both, the total annual rainfall and its distribution [FAO, 1994].

Primitive methods of land tilling and indiscriminate deforestation have resulted in enormous soil erosion, as a consequence of which fertility and moisture retaining capacity are declining. The amount of soil eroded each year is estimated to cover an area equivalent of 60,000 hectares with the depth of one meter. The problem of erosion is serious and it endangers life throughout the country.

b. Water Resources

Water is the most important element for the survival of mankind, animals and plants on Earth. Water resources and their proper uses are of great significance for a country like Eritrea, which faces continuous threat of recurrent draughts and famine. The important sources of water can be classified into two parts [b.1] Surface water, which is available from such sources as rivers, lakes etc. and [b.2] Ground water, which is available from wells, springs etc.

b.1 Extent of Surface Water

Five major rivers and river basins can be identified, namely: Mereb. Gash Basin, Barka and Anseba Basin, Tekeze - Setit Basin, Red Sea Basin and Dankalia Basin [Govt. of Ethiopia, 1989]. The total area drained by these rivers is estimated to be about 143,150 square kms. The amount of water drawn is 49.6 billion cubic meters annually.

Table: 14 Eritrea's Water Resources

Rivers	Area Drained [in Sq. Kms]	Amount of Water [in billion cubic meters]
Mereb - Gash Basin	23,500	10.5
Barker and Anseba Basin	41,460	11.5
Tekeze - Setit Basin	7,280	17.0
Red Sea Basin	44,000	0.2
Dankaliya Basin	26,910	10.4
Total	143,150	49.6

b.2 Extent of Ground Water

The extent of ground water in Eritrea is yet unknown. So far no systematic investigation has been carried out to explore the extent of ground water and all the data available for this resource is based on interpretations of aerial photography and satellite imagery, and the yields are estimated and not measured.

With the lack of permanent surface water and adequate dams, ground water had been the main source of water supply for irrigation in small forms. As a result of the recurrent droughts of the 1980s, the level of the water table declined to unprecedented low, though to some extent it started recovered after the 1992 plentiful rains.

However, fairly good potential from ground water appear to exist for irrigation from the aquifers underlying the western lowlands, the northern section, the coastal plain, and along the banks and basins of the main rivers.

c. Mineral Resources

The economic development of a country depends to a great extent on the availability of minerals, which are vital necessities for the generation and growth of the industrial sector. No geological survey has so far been conducted in Eritrea to estimate the mineral resources. Historically, the country has been known for its abundant minerals. Under the Italian colonization [1936 - 40] much prospecting took place, particularly for petrol, gold, copper and iron.

However, after the proclamation of the federation with Ethiopia in 1952, the Eritrean government signed an agreement with a German company for the exploitation and development of iron near Asmara the capital city, and had contracts with several Italian and American companies to extract the minerals. An Italian company started drilling for oil on the Dahlak islands in 1935. Exploration for oil- gas deposits started in earnest in the 1960s before the war with Ethiopia drove the oil companies out of the area. Unfortunately, most of these mining activities were hampered and abandoned after the direct annexation of Eritrea by Ethiopia in 1962 and the breakout of the liberation war [Seb'be, 1983].

The mineral resources of Eritrea can be classified under four categories:

Metallic minerals: Metallic minerals consist of gold and base metals such as copper, iron and manganese. From 1935 to 1941, gold production was about 1000 kg per year. According to the northern Ethiopia Regional planning office, gold deposits in Eritrea were estimated at about 1.5 million tons [World Bank, 1994; Govt. of Ethiopia, 1989]. By 1998, two gold mines alone produced about 450 kgs of gold per year and production is expected to increase further to about 900 kgs of gold per year by 2003.

Considerable copper and other base metal deposits were identified at Debarwa [28 km south of Asmara]. The reserve of base metal in Debarwa and three other explored mines is estimated at about 17.6 millions tons. The four mines are expected to produce 1.2 million tons per year of mixed grade metal, containing a mix of metals such as cu, zn, pb, ah, ag, etc.

Industrial minerals: Generally, the reserve potential of industrial minerals in Eritrea is quite high. It is about 6 million tons for gypsum, 1.5 million tons for kaolin, 15 million tons for potash, 3.5 million tons for silica and 120 thousand tons for feldspar. There are also significant deposits of talc and asbestos. In addition, potash has been identified in the northern part of the Danakil depression [one of the hottest places on earth].

Building minerals: Eritrea possesses a verity of building minerals including Marble and Granite. Eritrea has extensive reserve of good quality of marble and granite in at least five mines. In the past, between 1966 and 1970, a single marble mine used to produce 500 tons per year. So far the main market for marble products are the Middle East, the Far East and Europe.

Energy mineral: If economics were to breath, energy would have definitely been its air. Energy is a basic input required to achieve economic growth. Though coal is the largest naturally occurring source of energy, still oil and natural gas are the main sources of energy in today's world.

Eritrea has considerable oil potential, though scarcely any exploitation has begun until now. The geological formation of Eritrea is said to be similar to that of the Middle East countries and previous attempts of exploration along the Eritrean coast indicated the availability of gas and oil deposits in the Red Sea area. Beside oil, Eritrea has considerable coal potential. In the past, there has been several successful attempts for coal mining.

d. Forest Resources

Forests are an important natural resource with great economic and non-economic values. Besides soil conservation and the protection of wild life and environment, forests provide the requisite raw materials for households and for a number of important industries.

In the 19th century, shortly before the Italian colonization, Eritrea was covered with thick forest. The total area under forests was estimated at roughly 3.4 millions hectares, about 28 percent of the total land area [United Nations, 1977]. But, during the last hundred years, Eritrea had lost about 3.3 million hectares of forest covered area, mainly due to extension of cultivation and the plundering of the factories by the local population for building materials and charcoal, in addition to the war, which had a destructive effect on the forest and wood lands of the country. A recent estimate has shrunk the area under forests to only 63 thousand hectares, which is only 0.5 percent of the total geographical area. Out of this, only 0.1 percent is covered by forest and the remaining 0.4 percent is under disturbed forest. The loss of forest has brought a number of serious ecological problems besides the enormous devastation caused to the economy.

Till the 1940s, forest products were having a significant importance in the Eritrean economy as a source of income and national wealth. But, today after the serious loss in the forest resources of the country, forests contribute a very little to the economy.

d.1 Forest Products

Timber and fuel wood are the main forest products in Eritrea, but the important products with commercial values are [United Nation, 1977; Seb'be, 1983]: -

i. Dum Palm Fruit, which is used in the manufacture of buttons. Sawdust from the bottom process services as animal feeding stuff. The palm leaf is used in the manufacture of different traditional house equipments, and quality fiber.

ii. Sanseviera Plant, also known as snake plant provides expensive and good quality of fiber.

iii. Incense, which is derived from "Boswellia Pepyrifera" and, although inferior in quality to true incense, finds a ready market for industrial purposes.

iv. Gum Arabic, which is collected from various species of lowland acacias and is mainly exported.

v. Comnipera Myrrha, which is used in the manufacture of various medicines and other industries, locally it is used to treat fractures, stomach problems and to get ride of insects and raptiles.

vi. Euphorbia Candilapra, which is used in the manufacture of match sticks, available on the platue and northern highlands.

In addition to these forest products, Juniper, Balanities and Eucalyptus are capable of exploitation.

e. Marine Resources

Eritrea has a long coastline of about 1000 km along the Red Sea coast and a continental shelf of 25,000 sq. kms. Traditionally, the Red Sea has been an important source of wealth in salt, pearls, mother-of-pearls and fish for Eritrea. Even today the Eritrean part of the Red Sea is rich in great variety of edible fish, tunny - fish, soles and sharks which are important for the fishing industry and major source of foreign exchange earnings.

e.1 Fisheries

After 1934 onwards, the Italian regime took an interest in the fishing industry and introduced measures to regulate it. In 1937, they allocated a credit of 4 million Italian lire by special decree for the establishment and promotion of fisheries, and in 1940, they established an institution of hydrobiology at Massawa, planned to study problems connected

with fisheries. During this period, native fishermen and about 100 Italians were engaged in fishing activities. A few small factories were engaged in the production of the fishmeal, fish products and in canning tunny-fish, both for home consumption and exports, mainly to Palestine. The main and important products of the fishing industry were oil derived form sharks, tunny-fish, fishmeal and fish-skins. Fishing activities also included mother of pearls, trochas and bilbil, usually used in manufacturing buttons and fancy goods. But after the defeat, the Italians scuttled the greater part of the fishing fleet [United Nations, 1977].

According to the 1992 survey, the number of fishermen including part time and foot fishers has declined from 23,000 in the fifties to 2,300 i.e. to one tenth [FAO, 1994]. While the yields have almost doubled; they are estimated over 50 thousand tons per year of high value fish such as lobster and shrimp besides a considerable amount of informal trade. About 80 percent of the catches were exported [World Bank, 1994].

Like all the economic sectors, the prolonged liberation war has seriously affected the fishing bases of Eritrea and disrupted fishery activities.

e.2 Salts

During the Italian occupation, a private company with monopoly rights established Saltpans at Massawa and Asseb. Since then, Eritrea was exporting marine salts regularly to far of regions in Europe and Far East. Since late 1970's, salt production and exports declined due to war conditions.

The favorable hot climate, sea water salinity and site location make the Eritrean salt of high quality and command a premium prices. Once the salt works are established again, Eritrea could easily retain its early position and take advantage of the market.

2.3 Conclusions

a. Assessment of Human Resources

a1. Population

i Growth of population in Eritrea has shown an upward movement till 1990 and then after it has shown a sudden fall in the nineties, co-inciding with the post–independence period.

ii. Eritrea's population increased by three and half times over a period of fifty years. The decade-wise growth rate of the population has seen erratic all through the period from 1950-2000.

iii. Sex–wise and age–wise composition of population has shown almost stagnancy over a period of time.

iv. The birth and death rates in Eritrea have clearly followed the continuous fall in consistency with the theory of demographic transition. As a result of this, the natural growth rate of population has shown a continuous rise till 1990, after which it also started falling.

v. The proportion of child population has been remarkably declining from 1970 onwards whereas; the proportion of old age population has been improving. This indicates the decline in the birth rate and improvement in life expectancy in Eritrea.

vi. Basically, Eritrea is said to be an agriculture-based country with above eighty percent of its population living in rural areas. However, the aggregate data shows a paradigm shift. The urban population is continuously increasing. During the last decade, the urban population increased by 2.9 percent indicating the migration of the rural population towards the urban centers in search of jobs and services.

vii. The density of population in Eritrea for the year 2000 is put at 32.8 persons per square km. The density in rural areas is 26.7 person per square km, which is indeed very high if compared to the density in urban centers, which is only 6.1 people per square km. But if we consider the population density in India and Bangladesh, where the density of population is as high as 2573.8 and 847.2 person per square km respectively, or even in neighboring country Ethiopia where the population density is 44.8 person per square km; Eritrea could be considered as a country with low population density.

a2. Health

i. There has been a significant decline in the rate of infant mortality, which has fallen from 181 infants per thousand live births in 1950 to 64 infants per thousand live births in the year 2000. This indicates improvement in health services particularly in prenatal care. But, in spite of this improvement, the rate of infant mortality in Eritrea remains among the lowest in the world and invites a lot of work and reformation on the health sector. Though not entirely, this poor health status among others is the result of protracted war, poverty and recurrent drought.

ii. Though the expectation of life at birth in Eritrea has significantly improved from 35.1 years in 1950 to 52 years in 2000, yet it may be noted that it is still very low in relation to the life expectancy in developed countries, where it reached the 64.7 years mark in 2000..

iii. The child malnutrition of children under five years in Eritrea is very low. It is estimated at 102 per thousands live births in the year 2000 compared to 90 per thousand live births in sub-Saharan Africa in 1999.

iv. The daily per capita calorie intake in Eritrea is estimated at about 1750, which is equivalent to 93 percent of minimum requirements; compared to 2096 for sub-Saharan Africa.

v. Like all the infrastructure bases, health and sanitation facilities in Eritrea were completely neglected by the concerned colonial authorities, besides being seriously destroyed. Only 8 percent of the population has access to safe water compared to 44 percent in Sub-Saharan countries and 71 percent in low-income countries.

vi. Having all these problems, it is indeed possible to think boldly and aim high. The government can work hard in order to achieve the targets set in the UNDP's Millennium Development Goals. For this, the government should mobilize more resources towards health sector, encouraging non-governmental organization and media to play an active role.

a.3 Education

i. In general, the educational status in Eritrea is low even by the regional standards. The prevailing adult literacy rate of 55.7 percent is very low compared to 73.7 percent in developing countries, and also in comparison to Arab states and Sub-Saharan Africa, where the literacy rate is 62 percent and 61.5 percent respectively.

ii. Further more, the situation of combined gross school enrolment ratio is even worse. The combined gross enrolment ratio in Eritrea has only been 26, compared to 62 in Arab States, 61 in developing countries and 42 in Sub-Saharan Africa.

iii. The reasons for low level of education in Eritrea are two folds. First, less number of schools to accommodate all the students seeking admissions and second, poor response of the people to education. As a mater of fact, the poor response of the people to education, which was once restricted to rural population only, today exists even in the urban centers.

a.4 Poverty

i. Apart from South Asia, poverty is at it's worst in sub-Saharan Africa. Describing the status of the African poor is almost like writing a literature on human misery and Eritrea's poor are among the most unpleasant part of that tragedy.

ii. Perhaps the ugliest facet of Eritrea today is the abject poverty which holds large many people in its vice grip. Today, Eritrea is considered among the poorest countries of the world. The three decades of war and recurrent droughts have deepened the roots of poverty in the society. More than half of the population lives below the poverty line. The incidence of poverty is large in rural areas and among refugee returnees. The rural areas constitute 86 percent of the poor population. The rural and refugee poor lack even the most necessities of life such as excess to food, drinking water, proper shelter and minimum health and education facilities.

a.5 Unemployment

i. A country's total population is divided into working population [labour force] and non-working population [dependent population]. The working population, known as labour force, is further divided into employed and unemployed population.

ii. Eritrea's labour force has significantly increased in the last one decade. The annual growth rate of labour force has shown a fluctuating tendency. On an average, annual growth rate remained 3.07 percent during the period 1992 to 2000.

iii. Labour force as a percentage of total population has also increased marginally from 49.69 percent in 1991 to 51.22 percent in 2000. On an average, it has remained at 50.15 percent for the same period.

iv. The labour market data reveals a serious unemployment problem in Eritrea. In last one decade, only 32 percent of the total number of registered job-seekers could be placed in jobs. For the remaining 68 percent, the economy failed to secure a job for them.

2.2 Assessment of Natural Resources

i. The total available land of Eritrea is utilized for agricultural [9.1 percent] and non-agricultural [90.9 percent] uses.

Non-agricultural land includes forests, browsing and grazing land and barren land. Forests occupy just 0.5 percent of the total land area. Browsing and grazing land occupy the largest share [57.2 percent] of the total land. Barren land, which includes desert area, towns, villages and unusable steep slops, occupies one third [33.2 percent] of the total available land in Eritrea.

ii. The management and utilization of land in Eritrea is not proper. In spite of quite big areas of virgin land, only 9.1 percent of the total land is utilized for agriculture. To tackle the reoccurring shortages in food and agricultural products, more area should be brought under cultivation.

iii. Primitive methods of land tilling and indiscriminate deforestation have resulted in enormous soil erosion, as a consequence of which fertility and moisture retaining capacity are declining. The amount of soil eroded each year is estimated to cover an area of 60,000 hectares with the depth of one meter. The problem of erosion is serious and it endangers life throughout the country.

iv. The problem of inadequate rainfall over most of the country is quite serious and is often compounded by the high variability of both, the total annual rainfall and its distribution.

v. Eritrea's water resources are very scarce compared to its neighbors. However, fairly good potential from ground water appear to exist for irrigation from the aquifers underlying the western lowlands, the northern section, the coastal plain, and along the banks and basins of the main rivers.

Water in Eritrea should be treated as a precious resource and hence preserved and utilized properly and efficiently. Moreover, the assessment of the water resources in Eritrea should be among the important priorities of the government and concerned parties.

vi. In the last hundred years, the forest cover in Eritrea has declined drastically from 28 percent of total land area to just 0.5 percent. Till the 1940s, forest products were having a significant importance in the Eritrean economy as a source of income and national wealth. But today, after the serious loss in the forest resources of the country, forests contribute only a little to the economy. Unless certain rules and regulations are strictly enforced to save the forest resources and tackle the present problem, forests are not expected to contribute much in the near future. Thus, deforestation and all the environmental problems facing Eritrea have to receive the serious and urgent attention from the government, the concerned authorities and the general public. The responsibility of forest protection and development should be on

the shoulders of the general public, forest-based industries and the state, which are the interested parties in the forest issue.

vii. Eritrea has been known for its abundant minerals. The main mineral resources of Eritrea are: *Metallic minerals, Industrial minerals, Building minerals and Energy mineral.* In the past there have been several successful attempts in mining various mineral resources.

Beside these minerals, Eritrea has considerable oil and coal potential, though scarcely any exploitation for oil has begun until now. The geological formation of Eritrea is said to be similar to that of the Middle East countries and previous attempts of exploration along the Eritrean coast indicated the availability of gas and oil deposits in the Red Sea area.

viii. Eritrea is rich in various natural resources hence it can build a diversified modern economy. However like any developing economy, the development and growth of the Eritrean economy depends upon the proper identification and utilization of natural resources. This requires the formation of a complete knowledge of natural resources. Mapping, systematic surveys and investigations of natural resources should be among the top priorities of Eritrea and should precede the framing of any development policy for the Eritrean economy. Moreover, the environment friendly use of natural resources is vital necessity to protect the environment and for the conservation of natural resources for future generations.

References

1. Adhvaryu, J. H. [1996], "Investment in Human Resources", Indian Economics Association Conference Papers, Bombay, 1996.

2. Dewett, K. K. [1996], Modern Economic Theory, Khanna Publishers, Third Edition, Delhi.

3. FAO, [1994], "Eritrea: Agricultural Sector Review and Project Identification", In Three Volumes, FAO, Report, Rome, April 1994.

4. Government of Eritrea [1996], Ministry of Energy, Mines and Water Resources, [Unpublished Documents],

5. Government of Ethiopia [1989], Planning Committee of Eritrea Autonomous Region, "Statistical Abstract of Eritrea Autonomous Region", Asmara, May 1989.

6. Harbison F. and Myres M. Charles [1970], Education, Manpower and Economic Growth, Oxford and IBH, Bombay.

7. HDR [1990 to 2001], Human Development Report, UNDP, Human Development Report Office, New York: Oxford University Press. Various Issues: 1990 to 2001.

8. Higgins, Benjamin [1992], Economic Development: Problems, Principles and Policies, Universal Book Stall, New Delhi.

9. Joseph, S. E. [1987], "A Strategy To Eradicate Rural Poverty", *Yojana*, October 1978.

10. Kothari, V. N. [1999], "Issues in Health Care Policy in India", A Paper Presented to the National Seminar on Role of Government in Social Sector, Department of Economics, M. S. University of Baroda, March 1999.

11. Kurien, C. T. [1978], Poverty, Planning and Social Transformation, Allied Publishers, Bomby.

12. Mithani, D. M. [1996], Money, Banking, International Trade and Public Finance, Himalaya Publishing House, Bombay.

13. Narayana, D. L. [1983], "Human Resources and Productivity", *The Indian Journal of Labour Economics*, Vol. XXVI, [1 & 2] July 1983.

14. Samuelson, Paul A. and Nordhaus, William D. [1989] Economics, McGraw-Hill Book Company, New York, U.S.A.

15. Seb'be, Osman Saleh [1983], Geography of Eritrea, Beirut - Lebanon, [Arabic Text].

16. Schultz, T. W. [1970], "Investment in Human Capita", in M. Blaug [ed], Economics of Education, Vol. I, Penguin Book.

17. United Nations, [1977], "Report of the United Nations Commissioner for Eritrea", Vol. I, September 1977, Reprented by the Eritrean Libration Front – The Peoole's Libration Forces.

18. United Nations, [1998], "World Population Prospects: The 1996 Revision", Population Division, Department of Economics and Social Affairs of the United Nations Secretariat, New York.

19. Visaria, Pravin, [1990], "Population Growth and Development in India: A Perspective for the Eighth Plan", *Yojana*, January 26 1990.

20. WDR [1995], World Development Report, World Bank, New York: Oxford University Press. Various Issues: 1989 to 1990.

21. World Bank [1994], "Eritrea: Options and Strategies for Growth", In Two Volumes, November 1994, Country Operations Division, Eastern Africa Department, Africa Region.