

ECONOMICS POLICIES OF POPULATION AND ENVIRONMENT

Objectives

The learner should be able to:

- i. Explain various population concepts
- ii. Discuss the effects of population growth on the environment.

Population Growth

Population growth is the change in a population over time, and can be quantified as the change in the number of individuals of any species in a population using "per unit time" for measurement.

Population growth rate

In demographics and [ecology](#), **population growth rate** (PGR) is the [rate](#) at which the number of individuals in a population increases in a given time period as a [fraction](#) of the initial population. Specifically, PGR ordinarily refers to the change in population over a unit time period, often expressed as a [percentage](#) of the number of individuals in the population at the beginning of that period.

Rising population growth can lessen our quality of life because it:

- destroys resources, such as water and forests, needed to sustain us
- slows the dynamics of a healthy economy
- decreases the level of biodiversity upon which we depend

As the population grows, natural resources are under increasing pressure, threatening public health and development. Water shortages, soil exhaustion, loss of forests, air and water pollution, and degradation of coastlines afflict many areas. As the world's population grows, improving living standards without destroying the environment is a global challenge.

Most developed economies currently consume resources much faster than they can regenerate. Most developing countries with rapid population growth face the urgent need to improve living

standards. As we humans exploit nature to meet present needs, are we destroying resources needed for the future?

Effects of population growth on the environment

In the past decade in every environmental sector, conditions have either failed to improve, or they are worsening:

- **Public** **health:**
Unclean water, along with poor sanitation, kills over 12 million people each year, most in developing countries. Air pollution kills nearly 3 million more. Heavy metals and other contaminants also cause widespread health problems
- **Food** **supply:**
Will there be enough food to go around? In 64 of 105 developing countries studied by the UN Food and Agriculture Organization, the population has been growing faster than food supplies. Population pressures have degraded some 2 billion hectares of arable land.
- **Freshwater:**
The supply of freshwater is finite, but demand is soaring as population grows and use per capita rises. By 2025, when world population is projected to be 8 billion, 48 countries containing 3 billion people will face shortages.
- **Coastlines** **and** **oceans:**
Half of all coastal ecosystems are pressured by high population densities and urban development. A tide of pollution is rising in the world's seas. Ocean fisheries are being overexploited, and fish catches are down.
- **Forests:**
Nearly half of the world's original forest cover has been lost, and each year another 16 million hectares are cut, bulldozed, or burned. Forests provide over US\$400 billion to the world economy annually and are vital to maintaining healthy ecosystems. Yet, current demand for forest products may exceed the limit of sustainable consumption by 25%.

- ***Biodiversity:***

The earth's biological diversity is crucial to the continued vitality of agriculture and medicine — and perhaps even to life on earth itself. Yet human activities are pushing many thousands of plant and animal species into extinction. Two of every three species is estimated to be in decline.

- ***Global climate change:***

The earth's surface is warming due to greenhouse gas emissions, largely from burning fossil fuels. If the global temperature rises as projected, sea levels would rise by several meters, causing widespread flooding. Global warming also could cause droughts and disrupt agriculture.

Other consequences of population growth include;

- Decline in land per-capita
- Intensive cultivation
- Encroachment of forests and other NRs
- Increase in poverty rates
- Increase in unemployment rate
- Social crimes
- Poor services (education and health)
- Environmental pollution

Population and sustainable development

"Sustainable development" connotes the processes by which people satisfy their needs and improve their quality of life in the present while safeguarding the ability of future generations to meet their own needs. For most people, a better quality of life means a higher standard of living, usually measured in terms of income level and uses of resources and technology. Inherent in the concept of sustainable development is the principle of equity: in order to achieve economic and environmental goals, social goals – such as universal access to education, health care and economic opportunity – must also be achieved.

Environmentalists and economists increasingly agree that efforts to protect the environment and to achieve better living standards can be closely linked and are mutually reinforcing. Slowing the increase in population, especially in the face of rising per capita demand for natural resources, can take pressure off the environment and buy time to improve living standards on a sustainable basis.

- As population growth slows, countries can invest more in education, health care, job creation, and other improvements that help boost living standards. In turn, as individual income, savings, and investment rise, more resources become available that can boost development.
- In recent years fertility has been falling in many developing countries and, as a result, annual world population growth has fallen to about 1.4% in 2000 compared with about 2% in 1960. The UN estimated recently that population is growing by about 78 million per year, down from about 90 million estimated early in the 1990s.¹⁰ Still, at the current pace world population increases by about 1 billion every 13 years. World population surpassed 6 billion in 1999 and is projected to rise to over 8 billion by 2025. In many countries, births far outnumber deaths, creating overpopulation.
- Almost all population growth is in the developing world. As a result of differences in population growth, Europe's population will decline from 13% to 7% of world population over the next quarter century, while that of sub-Saharan Africa will rise from 10% to 17%. The shares of other regions are projected to remain about the same as today.
- As population and demand for natural resources continue to grow, environmental limits will become increasingly apparent. Water shortages are expected to affect nearly 3 billion people in 2025, with sub-Saharan Africa worst affected. Many countries could avoid environmental crises if they took steps now to conserve and manage supplies and demand better, while slowing population growth by providing families and individuals with information and services needed to make informed choices about reproductive health.
- Family planning programs play a key role. When family planning information and services are widely available and accessible, couples are better able to achieve their fertility desires. "Even in adverse circumstance — low incomes, limited education, and few

opportunities for women — family planning programs have meant slower population growth and improved family welfare,” the World Bank has noted. (<http://www.unfpa.org>)

In conclusion, it is very important for individuals to understand, appreciate and accept their role towards the enhancement of environmental quality. To do so, they need to be made aware of the interaction between population phenomenon and the natural, social and economic reality. The interaction influences the quality of life of the individual, the family, the nation and the world. It is important that people that peoples understand how population size, growth rate, age structure, and spatial distribution impact on both the natural environment and the social services/facilities.

Reflection Questions

1. “The deterioration of Kenya’s environment has been blamed on rapid population growth in the last 2 decades.” Discuss the relevance of this statement.
2. Identify 4 strategies that can be used to address the problem of population growth in Kenya.