UNIT SEVEN
GEOGRAPHIC ISSUES AND PUBLIC CONCERNS

Introduction: Population dynamics play a crucial role in national and global development. Today's primary challenge is meeting the needs of growing populations while preserving environmental resources. Key issues include:

- **Population-related Concerns:** Family size, income levels, education access, and employment.
- **Environmental and Social Issues:** Land degradation, desertification, unemployment, drought, famine, deforestation, and the digital divide.

Population-Related Challenges in Developing Countries (DCs):

1. **Population Growth Trends:**
    - **Historical Trends:** Developed Countries (MDCs) saw high growth rates decades ago, but these have declined. Developing Countries (DCs), especially in sub-Saharan Africa, continue to experience high growth rates.
    - **Current Predictions:** DCs will face the most significant growth, worsening poverty and straining resources and services like health and education.
2. **Challenges from Population Pressure:**
    - **Environmental Changes:** Land degradation, resource depletion, and air pollution.
    - **Urbanization Issues:** Expansion of slums, chronic poverty, and inadequate infrastructure.
    - **Health and Education:** Poor health, lack of education, and inadequate housing.
    - **Migration and Climate Change:** Increased rural-urban migration and climate-related hazards.
3. **Remedial Measures:**
    - **Investing in Human Capital:** Improve education, employment, and health services.
    - **Promoting Healthy Aging:** Support for older populations to integrate into development.
    - **Sustainable Urban Planning:** Ensure infrastructure meets the needs of growing urban populations.
    - **Supporting Vulnerable Groups:** Enhance adaptation to droughts and climate change.
    - **International Cooperation:** Address migration issues through international agreements.

- **Rural-Urban Integration:** Plan sustainable development that connects rural and urban areas.
- **Demographic Diversity:** Understand and address diverse demographic situations.
- **Changing Fertility Patterns:** Educate women and improve access to reproductive health services.

Family Size, Education, and Income:

1. **Family and Household Definitions:**
   - **Family:** Includes related individuals by kinship or marriage.
   - **Household:** Groups living together and sharing resources, which may or may not include blood relations.
2. **Household Types:**
   - **Single Person Household:** One individual.
   - **Couple-Only Household:** Married or partnered couples without children.
   - **Couple with Children:** Couples with their children.
   - **Single Parent with Children:** A single parent and their children.
   - **Extended-Family Household:** Includes extended family members.
   - **Non-Relative Household:** Contains at least one non-relative member.
3. **Household Composition and Impact:**
   - **Size and Configuration:** Influences childbearing, education, healthcare, and expenditure.
   - **Income Disparities:** Wealthy countries account for a large portion of global income, while DCs contribute less despite having a larger population.
4. **Impact of Family Size:**
   - **Educational Challenges:** Larger families may struggle with education costs, affecting quality.
   - **Income and Poverty:** Larger families often face more economic hardship and lower investment in education and health.

Population and Economic Growth Rates:

1. **Malthusian Views:**
   - **Pessimistic Perspective:** Thomas Malthus argued that population growth would outpace food production, leading to shortages and crises.
2. **Anti-Malthusian Views:**
   - **Marxist View:** Believes that economic systems and class struggles influence development rather than population alone.

- **Boserupian View:** Esther Boserup argued that population growth drives agricultural innovation and technological advancement, suggesting that increased demand leads to increased food production.

3. **Economic Implications:**
   - **Population as a Resource:** A growing population can boost economic productivity through increased labor.
   - **Demographic Dividend:** When the working-age population grows relative to dependents, it can enhance economic growth.
   - **Sustainable Development:** Effective policies, education, and equitable resource distribution are necessary for balanced economic growth.

Employment and Unemployment:

1. **Definitions:**
   - **Employment:** Engaging in activities that generate income or products for personal or household needs.
   - **Unemployment:** Lack of appropriate job opportunities for individuals actively seeking work.
   - **Underemployment:** When individuals work below their capacity or in jobs that don't fully utilize their skills.
2. **Economic Dependency Ratio (EDR):**
   - **Definition:** Ratio of non-workers to employed individuals, indicating the economic burden on the working population.

   Example (Ethiopia, 2018):

   - **Total Population:** 18,773,035
   - **Economic Dependency Ratio:** 149 (implying that 149 dependents are supported by 100 employed persons).

Understanding these concepts helps in addressing the complex interplay between population growth, economic development, and social challenges.

7.2. Land Degradation and Desertification

Land Degradation refers to the long-term decline in the quality and quantity of land resources, leading to a decrease in its productivity and ecological integrity. This decline impacts various components such as soils, water resources, and vegetation, and contributes to environmental issues like air pollution and scenic deterioration.

Desertification is a specific form of land degradation occurring in dry, arid, and semi-arid areas. It leads to the formation of deserts where there was previously productive land. While land degradation can happen in both dry and wet regions, desertification is unique to dryland areas.

7.2.1 Forms of Land Degradation

1. **Physical Degradation**
    - **Definition**: Involves physical changes to land resources.
    - **Manifestations**: Includes soil compaction, crusting, hardening, and color changes.
    - **Causes**: Mechanical damage from activities like excessive use, pollution, and translocation.
2. **Chemical Degradation**
    - **Definition**: Involves changes in the chemical composition of soil and water.
    - **Manifestations**: Includes nutrient loss, soil becoming more acidic or alkaline, and eutrophication of freshwater.
    - **Causes**: Changes in the chemical components due to human activities or natural processes.
3. **Biological Degradation**
    - **Definition**: Involves changes to the biological mass of an area.
    - **Manifestations**: Includes deforestation, overgrazing, and reduced biodiversity.
    - **Causes**: Human activities like deforestation and overgrazing, as well as natural events.

7.2.2 Causes of Land Degradation

- **Natural Factors**: Volcanic eruptions, floods, tsunamis.
- **Human Factors**: Population pressure, climate change, improper farming practices, deforestation, rapid urbanization, and weak environmental policies.

7.2.3 Impacts of Land Degradation

- **On Ecosystems**: Damages freshwater and marine ecosystems.
- **On Climate**: Contributes to climate change by increasing greenhouse gas emissions and reducing carbon sequestration.
- **On Livelihoods**: Affects people dependent on natural resources, causing food insecurity, poverty, and migration.

7.2.4 Desertification

Definition: Desertification is land degradation that specifically affects drylands. It involves the transformation of fertile land into desert-like conditions due to human activities and climatic changes.

Causes:

- **Anthropogenic**: Population pressure, expansion of farming, forest burning, inappropriate land use, and human-induced climate change.
- **Effects**: Increased aridity, barren soils, sparse vegetation, reduced agricultural productivity, loss of biodiversity, and increased soil salinity.

Mitigation Measures:

- **Indigenous Knowledge**: Use traditional practices like dry farming and irrigation.
- **Technological Options**: Apply site-specific technologies and water harvesting techniques.
- **Farming Practices**: Employ terracing, relay cropping, intercropping, and reduce tillage.
- **Livelihood Diversification**: Encourage non-farm work and other income sources.
- **Early Warning Systems**: Enhance mechanisms to predict and respond to desertification.

7.3. Recurrent Droughts and Famines

Drought: A prolonged period of deficient moisture leading to water shortages and hydrological imbalances. Drought types include meteorological, hydrological, agricultural, environmental, and socioeconomic.

Famine: Severe and prolonged hunger caused by food and water scarcity, often exacerbated by drought. Famines result in malnutrition, illness, and death.

7.3.1 Drought

Types:

- **Meteorological**: Extended period of below-average rainfall.
- **Hydrological**: Reduced water levels in lakes and streams.
- **Agricultural**: Deficiency of moisture in topsoil affecting crop growth.
- **Socioeconomic**: Imbalance between supply and demand of resources.

Global Trends:

- Increasing in regions like West Africa and the Mediterranean.
- Decreasing in areas like Central America and northwest Australia.
- Intensified by climate change.

Impacts:

- Direct: Reduces agricultural production, water supply, and biodiversity.
- Indirect: Affects business, employment, food prices, health, and can lead to migration and conflict.

Mitigation Strategies:

- Improved drought monitoring, water and crop management, public education, and early-warning systems.

7.3.2 Famine

Causes: Includes recurrent droughts, natural disasters, conflict, inequality, and poor resource distribution.

Strategies for Minimization:

- Humanitarian aid for immediate needs.
- Community rebuilding and strengthening local food systems.
- Long-term economic strategies including diversification and market liberalization.

7.4. Deforestation

Definition: The removal of forests through logging, land clearing, and other activities.

Causes:

- **Underlying Causes**: Climate change, population pressure, flawed policies.
- **Proximate Causes**: Clearing land for farming, fuel-wood collection, logging, mining, and overgrazing.

Consequences:

- Reduction in carbon stock, loss of biodiversity, disruption of hydrological cycles, increased erosion and flooding, and worsened global warming.

Mitigation Strategies:

- Afforestation and reforestation, controlling forest burning, restricting logging, and alternative energy use.

Summary

Understanding land degradation, desertification, droughts, famines, and deforestation helps us recognize the complex interplay between environmental challenges and human activities. Addressing these issues requires a combination of traditional knowledge, technological advancements, and effective policy measures.