

POPULATION AND THE ENVIRONMENT (OPTION)

3.2.4.1 INTRODUCTION	R	A	G
The environmental context for human population characteristics and change			
Key elements in the physical environment: climate, soils, resource distribution including water supply			
Key population parameters: distribution, density, numbers, change			
Key role of development processes			
Global patterns of population numbers, densities and change rates			
3.2.4.2 ENVIRONMENT AND POPULATION	R	A	G
Global and regional patterns of food production and consumption			
Agricultural systems and productivity. Relationship with key physical environmental variables – climate and soils			
Characteristics and distribution of two major climatic types to exemplify relationships between climate and human activities and numbers			
Climate change as it affects agriculture			
Characteristics and distribution of two key zonal soils to exemplify relationship between soils and human activities, especially agriculture			
Soil problems and their management as they relate to agriculture: soil erosion, waterlogging, salinisation, structural deterioration			
Strategies to ensure food security			
3.2.4.3 ENVIRONMENT, HEALTH AND WELL-BEING	R	A	G
Global patterns of health, mortality and morbidity			
Economic and social development and the epidemiological transition			
The relationship between environmental variables e.g. climate, topography (drainage) and incidence of disease			
Air quality and health			
Water quality and health			
The global prevalence, distribution, seasonal incidence of one specified biologically transmitted disease e.g. malaria; it links to physical and socio-economic environments including impacts of environmental variables on transmission vectors. Impact on health and well-being. Management and mitigation strategies			
The global prevalence and distribution of one specified non-communicable disease , e.g. a specific type of cancer, coronary heart disease, asthma; its links to physical and socio-economic environment including impact of lifestyles. Impact on health and well-being. Management and mitigation strategies			
Role of international agencies and NGOs in promoting health and combating disease at the global scale			

3.2.4.4 POPULATION CHANGE	R	A	G
Factors in natural population change: the demographic transition model, key vital rates, age-sex composition; cultural controls			
Models of natural population change, and their application in contrasting physical and human settings			
Concept of the demographic dividend			
International migration: refugees, asylum seekers and economic migrants; environmental and socio-economic causes, processes. Demographic, environmental, social, economic, health and political implications of migration			
3.2.4.5 PRINCIPLES OF POPULATION ECOLOGY AND THEIR APPLICATION TO HUMAN POPULATIONS	R	A	G
Population growth dynamics. Concepts of overpopulation, underpopulation and optimum population			
Implications of population size and structure for the balance between population and resources; the concepts of carrying capacity and ecological footprint and their implications			
Population, resources and pollution model: positive and negative feedback			
Perspectives on population growth and implications: Malthusian, neo-Malthusian and alternatives such as associated with Boserup and Simon			
3.2.4.6 - GLOBAL POPULATION FUTURES	R	A	G
Health impacts of global environmental change: ozone depletion – skin cancer, cataracts; climate change – thermal stress, emergent and changing distribution of vector borne diseases, agricultural productivity and nutritional standards			
Prospects for the global population. Projected distributions. Critical appraisal of future population-environment relationships			
3.2.4.7 - CASE STUDIES	R	A	G
Case study of a country/society experiencing specific patterns of overall population change – increase or decrease – to illustrate and analyse the character, scale and patterns of change, relevant environmental and socio-economic factors and implications for the country/society			
Case study of a specified local area to illustrate and analyse the relationship between place and health related to its physical, socio-economic character and the experience and attitudes of its populations			