

WATER

INTRODUCTION

- Fresh water available for use
- Historic world population growth
- Population growth for selected countries
- Water scarcity
- Water resources per capita
- Water – A global emergency
- Major problems related to water scarcity
- Arid zones of the world

AFRICA

- Major river basins in Africa
- African agriculture and water use
- Average annual precipitation in Africa
- Water-scarce countries in Africa
- Food insecurity in Africa
- African population growth rates
- Conclusions (2 pages)

CHINA

- Major rivers in China
- Per capita water resources by watersheds in China
- South to North water transfer routes
- Comparison of total annual river flow at mouth

ENERGY AND WATER

- Energy production
- Water in energy production

W A T E R

INTRODUCTION - A Global View

AFRICA

CHINA

ENERGY AND WATER

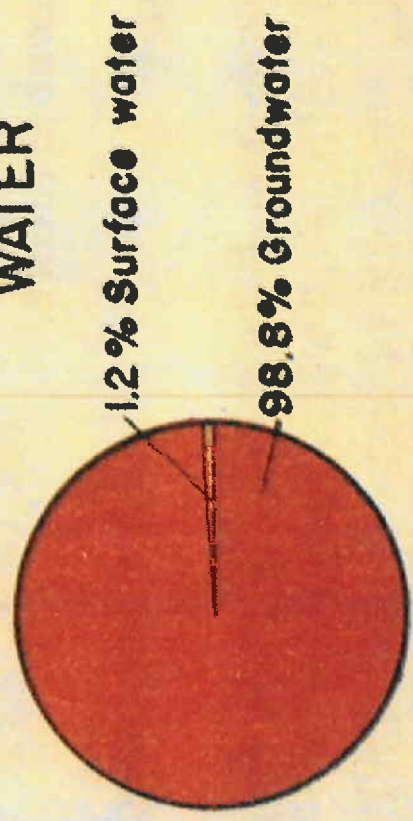
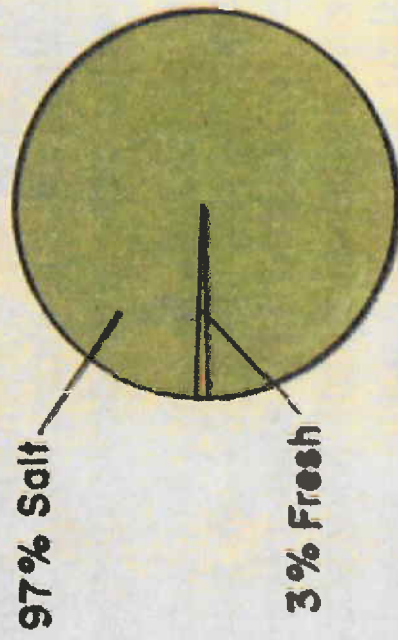
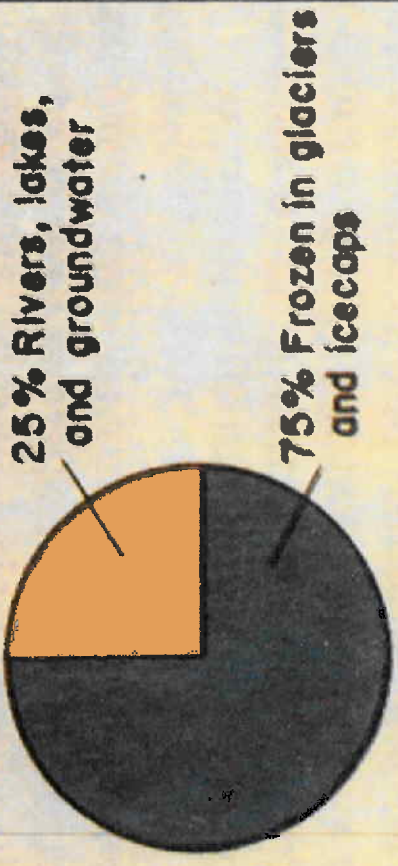


Fig. 2

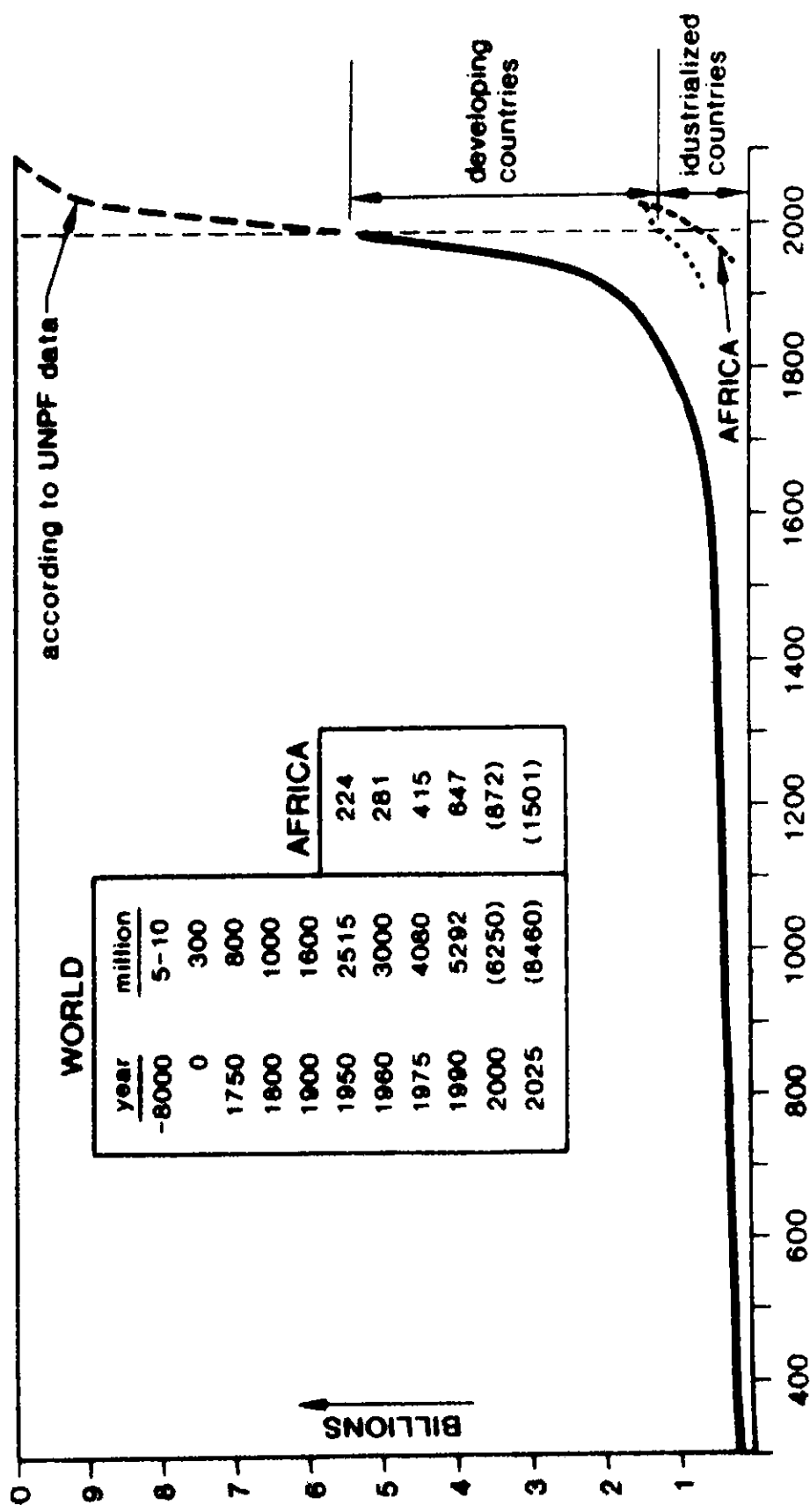
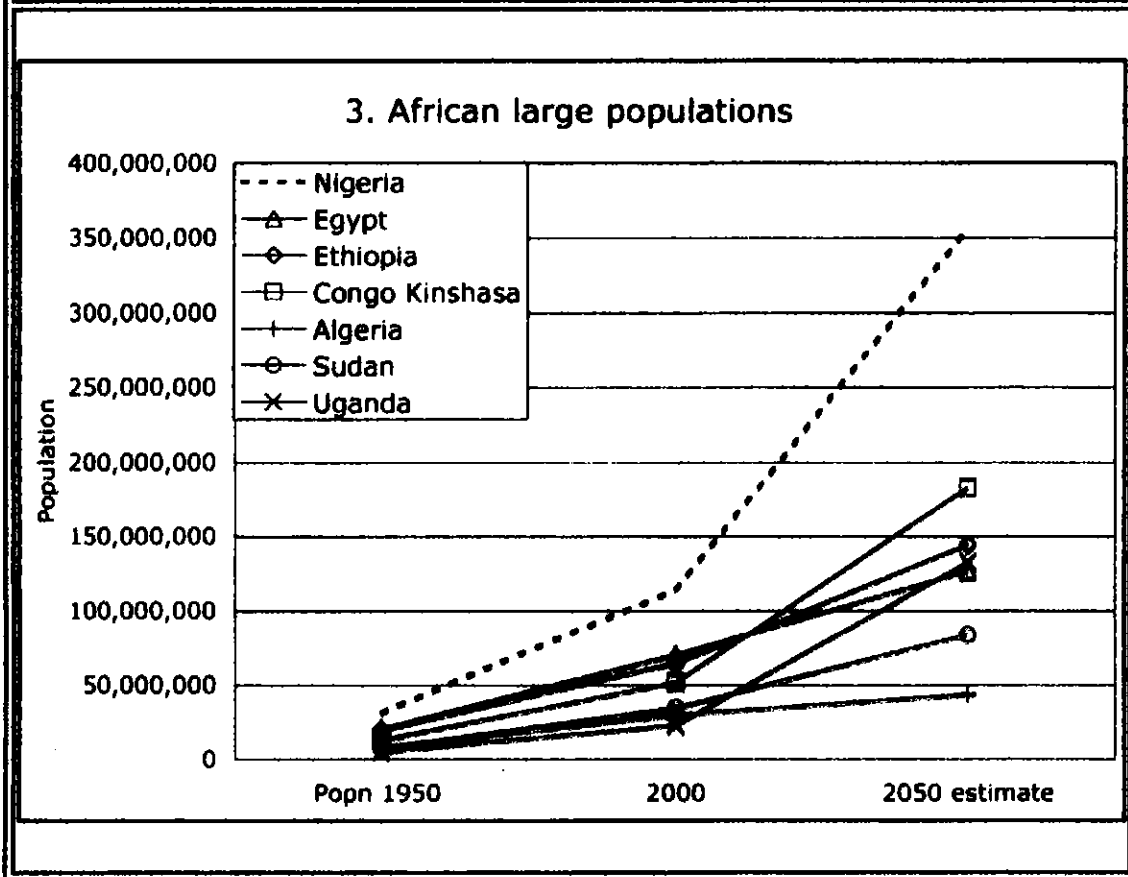
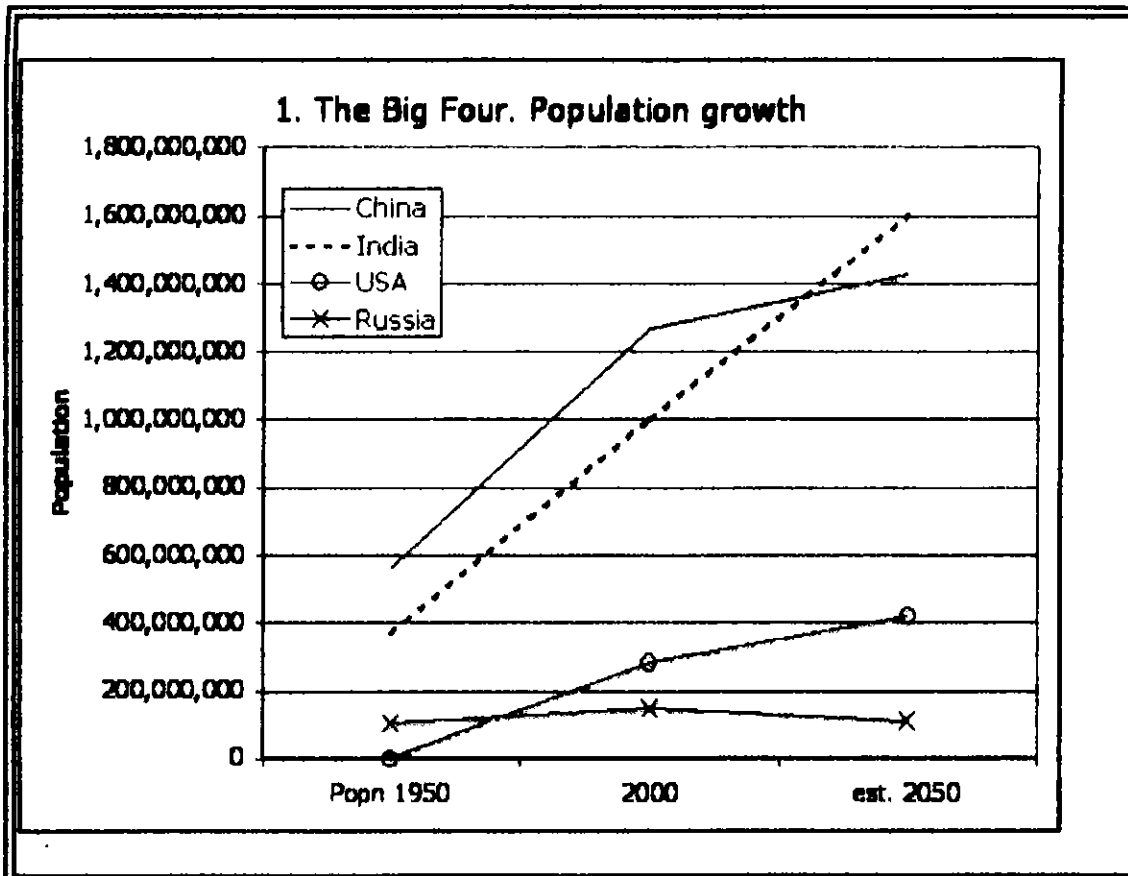


Fig. 1. World population

EXAMPLES OF WORLD POPULATION GROWTH IN 100 YEARS

How it will rise from 6 billion now to 9 billion in 2050 unless . . .

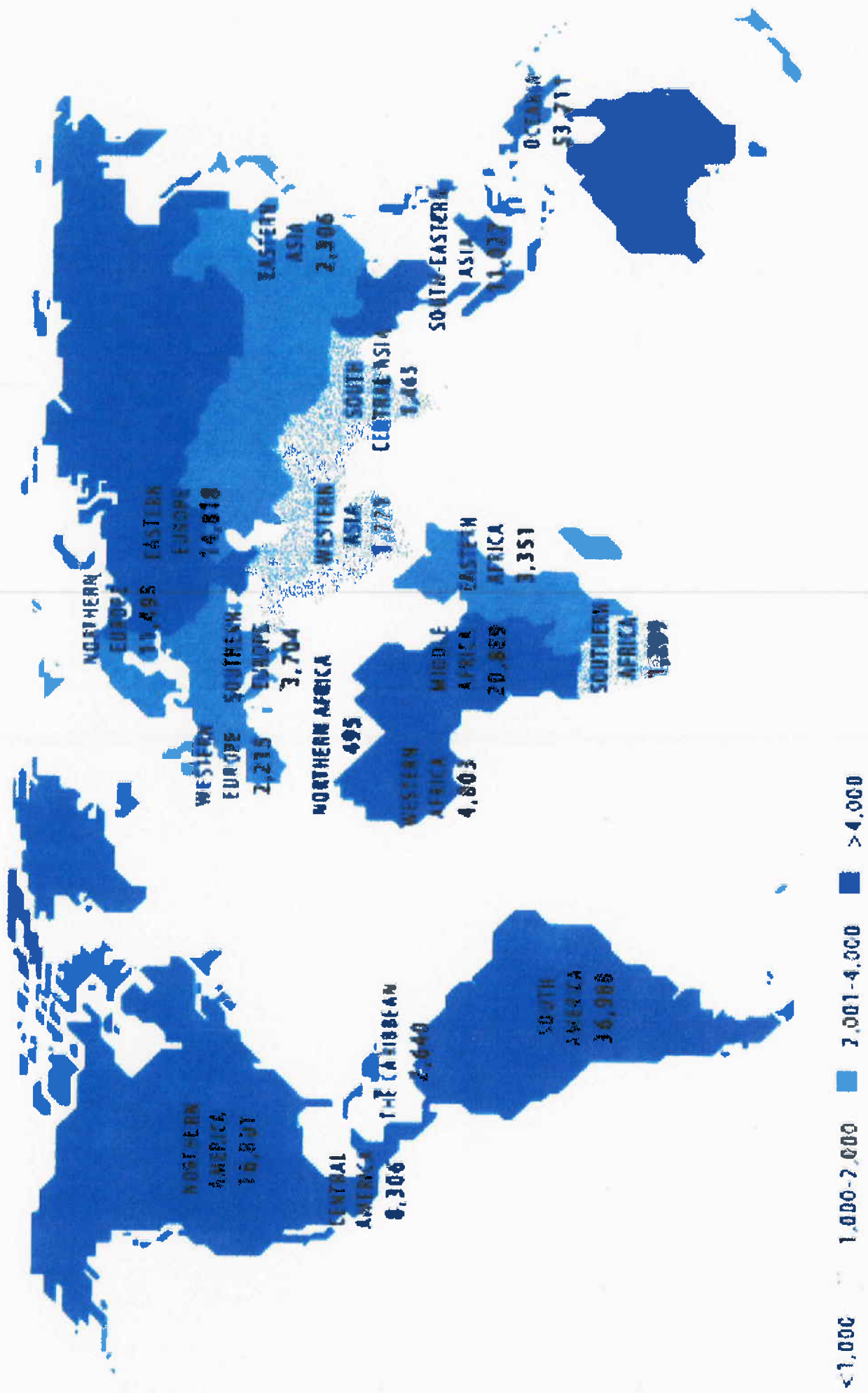
Figures from 1950 – 2000, and estimated for 2050 (not even Europe going below 1950)



WATER SCARCITY:

- **Arid zones cover about 1/3 of the planet.**
- **Eleven of the 26 countries that face water scarcity are in Africa.**
- **By year 2010, water scarcity will affect:**
 - **Six more African countries.**
 - **400 million people in Africa.**
 - **37 percent of African population.**

FIGURE 2: WATER RESOURCES PER CAPITA, BY SUBREGION, 2000
 (average annual cubic metres)



WATER – A GLOBAL EMERGENCY

Insufficient water supply adversely affects:

- **Human health and well-being**
- **Agricultural production**
- **Ecosystems**
- **Industrial productivity**
- **Economic development**

Major problems related to water scarcity:

- **Population pressures**
- **Pollution**
- **Gender issues in water supply**
- **Maintenance of water distribution system**
- **Water conservation**
- **Lowered water tables; preserving wetlands**
- **Irrigation efficiency**
- **Soil erosion and waterlogging of agricultural lands**
- **Equitable water pricing and subsidies**
- **Private vs public development of water supplies**
- **Capacity building (scientists, engineers, and technicians)**

