

## 12 Health and Population Status

### 12-a Introduction

Health and population are among the main interests of development efforts and environmental protection and improvement programs in the Arab Republic of Egypt during its modern history in general and over the last two decades in particular. Focusing on the environment came response to the impact degenerated environmental conditions could have on declined population health level, and consequently on the economic well-being, which represents significant challenge against achieving sustainable development. In this context, overpopulation and public health level constitute a major challenge facing Egypt's efforts not only with respect to economic development, but to environmental quality preservation as well.

### 12-b Pressures

The relationship between environment and population is twofold. First, the state of environment is among the main factors affecting population health status in general. According to WHO report, 1997, 23% of disease load can be directly attributable to environmental degradation. Therefore, the WHO Constitution sets forth that in order to achieve the Organization objectives, represented in "the attainment by all people of the highest possible level of health"; the WHO main task shall be enhancing the various environmental reform aspects. Improvement of environmental and health conditions is also regarded as a key factor of sustainable development. Consequently, the health and population sector has been one of the most closely related sectors to the environment and its protection.

Secondly, the relationship between population and the environment is that many of the population issues are the latent reasons behind the emergence of many environmental problems. The majority of developing countries undergoing a rapid growth in population, usually face, besides many economic and social problems, an aggravated deterioration in the environmental state .

All the above entails the necessity of taking population issues into consideration when addressing the various environmental issues. Within this framework, recommendations of the Cairo Conference on Population and Development, held in 1994, have recognized that addressing some population issues, such as gender equality and reducing natural population increase rates may assist in the environmental protection.

Egypt's population has increased from 26 million in 1960 to about 69 million in 2003. According to estimates, around 37% of the total population of Egypt live in informal areas in deteriorated living and housing conditions. The prevailing declining environmental conditions in these areas exert many social pressures on their population. Expectedly, such degenerated environmental conditions in informal settlements and their generated social pressures would have adverse impacts on residents of such areas, as the deterioration in environmental quality is usually associated with the spread of many diseases. This would adversely health impact on public health level and productivity, and consequently on the sustainability of development.

The significant increase in population would also lead to more pressures on the environment and natural resources in Egypt, either due to the increase in production, provision of employment opportuni-

ties or the provision of population basic needs. Increased investment in industrial and service sectors, along with land reclamation, may, if not properly planned, result in more pressures on the environment, due to increased air, water and soil pollutants and damage to natural resources.

## **12-c Challenges**

### **Raising Life and Environment Standard**

Raising individuals' standard of living, particularly in view of the successive increases in population, requires increasing production, and the provision of job opportunities and population basic needs. The major challenge in this respect is the attempt to reach some kind of equilibrium between the expansion in the diverse productive activities either industrial or agricultural, required to raise the individual standard of living and the preservation of environmental quality, through the limitation of air, water and soil pollutants.

Increase in industrial activities is usually coupled with an increase in pollution levels, either affecting the population living in proximity of an industrial facility or its workers. This relation may adversely impact the environment and consequently harm population health and available natural resources. This requires directing due attention to environmental considerations when developing and implementing industrial development projects and programs.

The challenge in the agricultural sector is manifested in increasing production without overuse of pesticides and herbicides. The accumulation of leftovers from the majority of such pesticides and herbicides may have serious toxic impacts on soil, water, plants, and growing crops on which

humans and animals depend for nutrition, as toxins are transmitted to animal products such as milk, meat and other agro-industrial products. Further more, many of the results of the reaction of such pesticides in the soil may continue and persist for long periods, sometimes reaching many years. The accumulation of reaction results in the soil over successive seasons lead to an increase in harmful impacts on human and animal health, and may reach the tiny living organisms in the soil, which perform vital environmental functions.

### **Food Security and the Environment**

Food security is among the main issues closely related to the population health condition, due to its effective role in determining population health levels. Egypt is considered among the countries that have low malnutrition rates, which range between 2.5 and 4%. However, the problem mainly lies in the great reliance on imports to provide population nutrition needs; i.e. it is likely that providing such food products may be affected by external factors, or price fluctuations of such food products, which poses a threat to population food security.

Moreover, attempts to provide the increasing food needs are faced by conflicting approaches. On the one hand, there is the necessity to provide safe food for human use, and the production of high-quality fodder to protect human and animal products safety and preventing the pollution of the food chain within the ecosystem. On the other hand, achieving remarkable surge in agricultural production through extensive use of chemical fertilizers and pesticides leads to the chemical pollution of soil and the resulting agricultural and food products, as well as to the pollution of environ-

mental components in general.

Many studies conducted in this respect indicate that agricultural products – used as human food – contain high concentrations of nitrates, due to the excessive use of nitrogenous fertilizers, which disturbs hemoglobin compounds functions in blood, especially in children. This causes unbalance in their growth rates and results in many diseases. The presence of concentrated amounts of heavy elements such as lead, zinc, cobalt, nickel and the like in nutrients, in higher rates than approved limits (WHO), results in the disorder in some vital reactions and in many diseases.

### **Women and the Environment**

Though women play a vital role in environment protection, due to their potential significant effects on society, either at household or workplace levels, however, many constraints prevent women from playing such role. Among the main constraints are the high illiteracy rates among women and their limited participation in the development process due to social restrictions. Reports indicate that illiteracy among women is higher than in men, amounting to 45.8%.

### **12-d State Efforts**

Despite these pressures, the state has succeeded in achieving an improvement in the environment quality in Egypt in recent years. For instance, monitoring stations results indicate a relative improvement in Nile water quality and air quality. EEAA has also cooperated with the Ministry of Agriculture to limit the excessive use of all types of pesticides, and the prohibition of the use of persistent organic pesticides (POPs). The situation has indeed improved; different types of pesticides used in agriculture were reduced from 15,830 tons in

1988 to 616 tons in 1995. The state has also implemented a number of procedures that contribute to decreasing air pollution levels, consequently, preserving Egyptian population health. These procedures included promoting the use of compressed natural gas (CNG) as fuel for cars, shifting to lead-free gasoline and introducing improvements to exhaust pipes (catalytic converters).

### **Population Conditions**

Concerning population pressures, the government was able to achieve a relative improvement in population and health conditions, with respect to limiting population growth and improving social aspects. The annual population growth rate average has declined from 2.4% during 1960 – 1996 to 2.1% during 1996 – 2001. This is attributable to the government family planning efforts. Fertility rates have declined from 6.5 child/woman in 1976 to 3.5 child/woman in 2002. Though population increase rate was 2.8 % in 1986, it has reached 1.9 % in 2002. Further, relative birth rate has also dropped from 43/1000 in 1960 to 26.3/1000 in 2002.

Thus, health status indicators include the average expected age, death-at-birth rates, children deaths (less than 5 years old), and vaccinated children percentages. Death-at-birth rates fell from 108/1000 in 1960 to 30/1000 in 2001. This fall can be attributed to the increase in children vaccination, reaching 97.9 % in 2001. Death-at-birth rates have remarkably plunged from 37/1000 in 2000 to 30/1000 in 2001. This improvement had an impact on the expected age of Egyptians. The average expected age for women has increased from 63.5 in 1986 to 70 in 2002. Likewise, average expected age for men has increased from 60.5 in 1986 to 66.8 in 2002.

### **Social Conditions**

The social aspects are mainly related to education, health and women status in society. In education, usually enrollment rates in primary and secondary education as well as illiteracy rates among adults (more than 15 years old) are the main indicators. Concerning the first indicator, enrollment in primary and secondary schools has increased from 42% in 1960 to 86% in 2001 – a figure that can be attributable to increased awareness of the importance of education and to the establishment of large numbers of schools by the government. On the other hand, illiteracy rates among adults have dropped from 74.2% in 1960 to 34.4% in 2001.

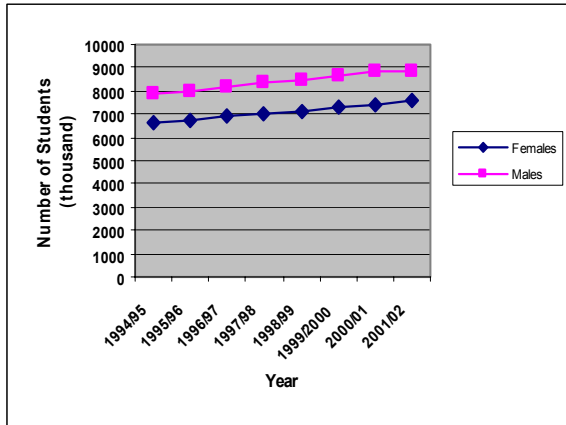
As for the population health status, the Government has exerted relentless efforts to achieve an improvement in the provision of health services. Health care units have increased by 26.1% in 2002 compared to 1995. Hospitals and Chest diseases clinics have also gone up from 176 units in 1994 to 201 units in 2002, leading to a remarkable improvement in Egyptians health. This improvement can be attributed, even partially, to the improvement witnessed in the quality of the environment in Egypt over recent years.

### **Women's Role in Environment Protection**

Women constitute about half the total population, and their average age expected at birth is more than men. Despite the improvement in illiteracy, employment and unemployment indicators for women compared to previous periods, however, such rates are still less than those in men.

Worth noting, enrolment rates in primary and secondary education surged with re-

spect to women compared to men – a fact that can be attributed to the fact that males drop out of school at an early age to join the informal labor sector.



Development of Students' Numbers According to Gender (1994/95 - 2001/2002)

## 12-e Future Vision

In view of the state efforts in recent years in the fields of providing health care and improving environmental quality, it is expected that population health conditions in Egypt would improve, contributing to improvements in their productivity, and consequently, accelerating economic growth rates and the achievement of comprehensive development.

With the continuous improvement in educational levels of men and women, and the increase in women's participation in the labor market in all fields, it is expected that population natural increase rates will retreat as a result of raising awareness of development issues and their impact by the population problem.

It is necessary in this respect to disseminate environmental education among citizens, in order to activate their role in preserving ecosystems equilibrium, as well as factors

that might threaten such balance.

Given the deceleration in population increase, it is expected that pressures on the environment and its resources would decline contributing indirectly and on the long term to environment quality improvement in Egypt, particularly in highly populated urban areas.

Furthermore, it is necessary to pay more attention in EIA studies to the process of identifying and assessing health impacts, including secondary and indirect health impacts.

## 12-f References

- Central Agency for Public Mobilization and Statistics (CAPMAS), Statistical Yearbook 2003.
- Ministry of Agriculture – Central Laboratory for Estimating Toxins and Pesticides Remains.
- UNDP, Egypt Human Development Report, 2003.
- Information and Decision Support Center (IDSC).
- The Sixth National Conference on Environmental Studies and Research – Environmental Studies and Research Institute – Cairo 1999.
- WHO, 1997: Health and Environment In Sustainable Development – Five Years After the Earth Summit, Geneva; World Health Organization, 1997.
- FAO: Crops and Drops, Rome, Food and Agriculture Organization (FAO), 2000.
- WHO: Implementation of the global strategy for health for all by the year 2000. Third evaluation- General protection of the environment (air, water, soil, food safety, housing, workplace). Alexandria, WHO Regional Office for the Eastern Mediterranean, 1997.