

WORLD POPULATION GROWTH AND SOME ASSOCIATED CHALLENGES

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Abstract. An analysis of change in global and regional data regarding human population has been conducted. Rapid ubiquitous growth in population and demo-geographic disproportions can be observed. Significant differences exist not only between continents and countries, but also within a certain country given urbanization of territories. Disproportions are distinctive for provision of food, water and mineral resources for different countries and continents. Even in rich countries a considerable part of population is undernourished, while in poor countries famine is a serious issue. Funds required to feed the undernourished children of school age are compared to spending on alcohol, tobacco, advertising, military, gambling, entertainment, etc. in the most developed countries (mainly in USA). In the United States alone the costs of food waste are so high, that these funds would be sufficient to provide the undernourished students with food for a period of 52 years; meanwhile, the US cigarette taxes could resolve the issue for 5 years. As a result of comparison of Life Expectancy at Birth (LEB) and GDP per capita it was concluded that in poor countries an increase in GDP per capita leads to a rapid increase in LEB. However, with the transition to richer countries this process slows down and eventually LEB becomes almost independent of the GDP per capita. Women's average life expectancy is by 5 years larger, but this only appears in countries with an average LEB of approximately 60 years. The difference in the LEB of women and men is abnormally large in the Post-Soviet states: 11–12 years compared to the world's average of 5 years. In poorer countries with small values of LEB and GDP per capita the difference between genders is insignificant. As a consequence of population growth, the negative impact on the natural environment increases: degradation of soil and water resources, shrinking mineral resources, particularly oil – the foundation of modern civilization. Due to the widely discussed possible climate change, global warming in particular, a collective analysis of data regarding temperature and carbon dioxide emissions was conducted. A similar character of long-term trends of the parameters does not contradict to the anthropogenic hypothesis. Nevertheless, saturation of temperature dependence on CO₂ volumes emitted into the atmosphere has been revealed. Further study needs to be conducted on this topic.

Keywords: world population, demo-geographic disproportions, exhaustion of natural resources, life expectancy at birth (LEB), gross domestic product (GDP), gender differences, global warming, carbon dioxide emissions.