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the resource clock



The IDRC Resource Clock,

located in the head office lobby of Canada's International Development Research Centre, shows both the dramatic increase in world population and the continuous decline of productive lands. Also called the World Human and Natural Resources Clock, it constantly reminds visitors to the Centre of how urgent it is that we solve the development problems confronting us.



World Population

From now until the middle of the 21st century, in only 50 years, the world's population will increase by 50% from 6 billion at the end of 1999 to close to 9 billion in 2050.

October 12, 1999 was chosen as the official date marking the advent of a planet with 6 billion inhabitants. This historic milestone served as a reminder that the rate of population growth has varied widely down the centuries.

Two thousand years ago, only about 300 million people lived on Earth. The world population grew rather slowly, taking 1,500 years to double. From 1750 onward, however, the rate began to accelerate, doubling to 1.7 billion in a mere 150 years. A decline in the mortality rate, coupled with scientific and technical progress, was responsible for this spectacular growth.

Population growth continued to accelerate. In 1950, the world had 2.5 billion inhabitants; only 50 years later, there were 6 billion, with most of the new births occurring in developing countries.



The world's population continues to increase, but we are living at the end of the fastest growth period of human demographics. Between 1995 and 2000, the growth rate was 78 million people per year; less than predicted only a few years ago, the equivalent of a new China every 15 years nonetheless.

The growth rate is slowing down. Between 2015 and 2020 the annual growth rate will decrease to 64 million and then to 30 million by 2045-2050. In 2050, the Earth will be inhabited by 8.9 billion humans. A much slower growth rate is predicted after this time even though the possibility remains that the world's population will continue to grow to one day reach 10 billion.

In 2050, Africa and Asia will be home to 20 and 60% of the world's population respectively. Developed nations will have twice as many elderly people as youth and the population of many of these countries will be in decline.



Productive Land

The world's productive land is a constantly changing resource. Climatic variations, natural disasters, and human intervention are ceaselessly at work changing the boundaries of productive land which include arable land, pasture land, and forest.

Arable land covers 3% of the world's surface. Despite the fact that arable land is continually being lost to urbanization, the total area under cultivation is rising because of deforestation.

Demand for agricultural land continues to increase in line with population growth, resulting in the clearing of marginal land, such as hillsides. The exploitation of marginal land is partly responsible for the erosion of the fertile soil layer, the loss of essential soil nutrients, and salt contamination – all reasons for abandoning the land.

Land used for pasture occupies twice the area of land now under the plow. Although livestock raising produces less protein per



hectare than grain, especially in developing countries, it enables farmers to take advantage of marginal land that is less suitable for growing grain.

The loss of productive land can be attributed largely to the destruction of forests, which is not compensated by the fraction transformed in arable land or pasture land. Finally, the land that produces our food, provides us with firewood and construction lumber, purifies the atmosphere, maintains precipitation levels, and slows down erosion is continually decreasing.

In Search of Solutions: IDRC

The Resource Clock clearly shows that the problems confronting us are global in scale and call for a coordinated international response.

Canada's International Development Research Centre (IDRC) is committed to the search for practical solutions to the world's development problems. By funding research in Third World countries, IDRC contributes to the pool of knowledge without which solutions would be difficult to find. More than 30 years of IDRC-supported research has shown that the problems, albeit complex, are not insurmountable.

Here are some examples:

- we have learned that education levels have a decisive impact on the size of households and that the more education people have, the smaller their family size;
- health and social science research have shown just how important it is for people from various countries to participate in research on environment-related diseases. Information campaigns have been introduced to combat these diseases;
- economic research identifies models that respect natural resources and incorporate sustainable development concepts;

- in agriculture, new sustainable farming methods more compatible with the environment have been developed. One example is agroforestry, which involves growing trees and plants on the same plot of land while maintaining soil productivity.

Research funded by IDRC has not only produced positive results, but has also developed the enormous potential of the women and men engaged in research in the countries of the South. Without them, the chances of success would be slim.

Sources

World population data are extrapolated from statistics obtained from the United Nations Population Division.

Data on productive land are extrapolated from statistics produced by the United Nations Food and Agriculture Organization. The Clock shows the loss of productive land which includes arable land, pasture land and forest.



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