THE STATE OF WORLD POPULATION 2001

FOOTPRINTS AND MILESTONES: POPULATION AND ENVIRONMENTAL CHANGE

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Human activity has affected every part of the planet, no matter how remote, and every ecosystem, from the simplest to the most complex. Everywhere we face critical decisions, according to *The State of World Population 2001* report from the United Nations Population Fund (UNFPA).

Our numbers have doubled since 1960 to 6.1 billion, with growth mostly in poorer countries. Consumption expenditures have more than doubled since 1970, with increases mostly in richer countries. Yet half the world still exists on less than $2 a day.

Increasing population and consumption, propelled by new technologies and globalization, are altering the planet on an unprecedented scale. Everywhere we see signs of stress—destroyed natural habitats, threatened and extinct species, degraded soil, polluted air and water, and melting ice-caps from global warming.

How can we ensure the well-being of growing human populations, and still protect the natural world? Key policy questions are: how to use available land and water resources to produce food for all; how to promote economic development and end poverty; and in doing so, how to address such environmental consequences of human activity as global warming and the loss of biological diversity.

Population and the environment are closely related, but the links between them are complex and varied, and depend on specific circumstances. Understanding the links requires consideration of the interaction among affluence, consumption, technology and population growth, but also gender relations, political structures and governance at all levels.

Achieving equal status between men and women and guaranteeing the right to reproductive health, including the right to choose the size and spacing of the family, will also help to slow population growth, reduce the future size of world population and relieve environmental stress.

World population will grow by 50 per cent, from 6.1 billion in mid-2001 to 9.3 billion by 2050. All of the projected growth will take place in today's developing countries. The 49 least-developed countries, already straining to provide basic social services to their people, will nearly triple in size, from 668 million to 1.86 billion people.

Whether world population in 2050 reaches the high projection of 10.9 billion, the low of 7.9 billion or the medium projection of 9.3 billion will depend on success in ensuring women's right to education and health, including reproductive health, and in ending absolute poverty.

The poorest countries are among the most severely challenged by soil and water degradation and food deficits. The vast bulk of consumption is in the industrialized countries, but it is rising fast elsewhere as incomes grow. Measures to conserve energy, curb pollution and promote sustainable use of natural resources are essential for sustainable development in the future.

There is a growing international consensus on actions to promote development while protecting the environment. The United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro in 1992, recognized that sustainable resource management has to be integrated with action to alleviate poverty and underdevelopment. The International Conference on Population and Development (ICPD) in 1994, linked environmental protection to individual decision-making and human rights, including gender equality and the right to reproductive health.

Implementing the ICPD recommendations for development (including better reproductive health and moves towards gender equality) will help defeat poverty and protect the environment. If women have only the number of children they want, families will be smaller and population growth slower, buying time in which crucial decisions can be made.

Next year's "Rio+10" review of UNCED will present an opportunity to incorporate the social agenda of the ICPD and other 1990s conferences—including education for all and universal access to reproductive health care and family planning—into initiatives to promote sustainable development.

ENVIRONMENTAL TRENDS

Water use has grown six-fold over the past 70 years. Worldwide, 54 per cent of the annual available fresh water is being used, two thirds of it for agriculture. By 2025 it could be 70 per cent because of population growth alone, or—if per capita consumption everywhere reached the level of more developed countries—90 per cent.

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In the year 2000, 508 million people lived in 31 water-stressed or water-scarce countries. By 2025, 3 billion people will be living in 48 such countries. By 2050, 4.2 billion people (over 45 per cent of the global total) will be living in countries that cannot meet the daily requirement of 50 litres of water per person to meet basic needs.

Many countries use unsustainable means to meet their water needs, depleting local aquifers. The water tables under some cities in China, Latin America and South Asia are declining over one metre per year. Water from seas and rivers is also being diverted to meet the growing needs of agriculture and industry, sometimes with disastrous effects.

The World Health Organization (WHO) estimates that 1.1 billion people do not have access to clean water.

In developing countries, 90-95 per cent of sewage and 70 per cent of industrial wastes are dumped untreated into surface waters where they pollute the water supply. In many industrial countries, chemical run-off from fertilizers and pesticides, and acid rain from air pollution require expensive and energy-intensive treatment to restore water quality.

Between 1985 and 1995, food production lagged behind population growth in 64 of 105 developing countries studied, with Africa faring the worst.

The Food and Agriculture Organization (FAO) of the United Nations classifies most developing countries as "low-income, food deficit countries" that do not produce enough to feed their people and cannot afford imports to close the gap. Some 800 million people are chronically malnourished and 2 billion people lack food security.

Food production capacities in poor countries are deteriorating due to soil degradation, water shortages, inappropriate agricultural practices and rapid population growth. Much agricultural land is devoted to crops for export, depriving local people of land to farm and food to eat.

Genetic erosion of wild strains of cereals and other cultivated plants threatens efforts to improve staple crops. As many as 60,000 plant species—one quarter of the world's total—could be lost by 2025.

Fish stocks are also under threat. According to FAO, 69 per cent of commercial marine fish stocks are "fully exploited, over-fished, depleted, or slowly recovering".

To accommodate the nearly 8 billion people expected on earth by 2025 and improve their diets, the world will have to double food production and improve distribution. Most production will have to come from higher yields rather than new cultivation. However, new high-yielding crop varieties require specialized fertilizers and pesticides, which may disturb the ecological balance.

Even the poorest countries can safeguard their soil and freshwater resources, improve the productive capacity of land, and increase agricultural yields. Needed are responsible governance balancing many interests; community participation, including that of women; and the cooperation of the international community.

In the 20th century, carbon dioxide emissions grew 12-fold—from 534 million metric tons to 6.59 billion metric tons—contributing to a global warming trend that will have severe environmental and social effects. The Intergovernmental Panel on Climate Change (IPCC) estimates that the atmosphere will warm by as much as 5.8 degrees Celsius over the coming century, and sea-level will rise about half a metre.

In 1995, the 20 per cent of the world's population living in the countries with the highest per capita fossil-fuel use contributed 63 per cent of global carbon dioxide emissions. The 20 per cent in the lowest-emission countries contributed just 2 per cent of the total. The United States, with 4.6 per cent of the world's population, produces one fourth of global greenhouse gas emissions.

In industrial countries, per capita emissions have been relatively unchanged since 1970. While per capita emissions are still far lower in developing countries, the gap is narrowing. Sometime early in the 21st century, developing countries will contribute more than half of all emissions.

Climate change will have a serious impact including increased storms, flooding and soil erosion, accelerated extinction of plants and animals, shifting agricultural zones, and a threat to public health due to increased water stress and tropical disease.

In the last few decades as population growth has peaked, deforestation rates have reached the highest levels in history.

Tropical forests contain an estimated 50 per cent of the world's remaining biodiversity. At current rates of deforestation, the last significant primary tropical forest could be harvested within 50 years, causing irreversible loss of species. Deforestation also contributes to the build-up of carbon dioxide in the atmosphere.

While sustainable forestry holds some promise, projected population increases over the next few decades will present challenges and difficult choices. Many countries with the largest blocks of remaining tropical forest are also those with the highest population growth. One key to preserving forests and biodiversity may be the integration of reproductive health and family planning programmes with park and forest management efforts.

DEVELOPMENT, POVERTY AND ENVIRONMENTAL IMPACT

More people are using more resources with more intensity than at any point in human history. Population growth, increasing affluence—with rising consumption, pollution and waste—and persistent poverty—with the lack of resources and technology and lack of power to change these circumstances—are putting increasing pressure on the environment.

A huge "consumption gap" exists between industrialized and developing countries. The world's richest countries, with 20 per cent of global population, account for 86 per cent of total private consumption, whereas the poorest 20 per cent account for just 1.3 per cent.

A child born today in an industrialized country will add more to consumption and pollution over his or her lifetime than 30 to 50 children born in developing countries. The ecological "footprint" of the more affluent is far deeper than that of the poor and, in many cases, exceeds the regenerative capacity of the earth.

Nearly 60 per cent of the 4.4 billion people in developing countries lack basic sanitation, almost a third do not have access to clean water, one quarter lack adequate housing, 20 per cent do not have access to modern health services, and 20 per cent of children do not attend school through grade five.

Globalization has increased global wealth and stimulated growth, but it has also increased income inequality and environmental degradation. Poverty is causing many poor people to increase their pressure on fragile natural resources to survive. Limited land availability often leads poor people to settle in fragile areas.

Increasing urbanization presents another challenge. Every day about 160,000 people move from rural areas to cities. Today almost half of all people live in urban areas. Many cities in developing countries face serious environmental health challenges and worsening conditions due to rapid growth, lack of proper infrastructure to meet growing needs, contaminated water and air, and more garbage than they can handle.

Poor people often spend long hours gathering fuel and pay higher unit prices for energy, while electricity subsidies favour urban elites.

Only an integrated approach to defeating poverty and protecting the environment can result in sustainable development. Local control and respect for local knowledge will be essential. Investing in energy services and infrastructure, green technologies, and appropriate pricing policies for water, electricity and fertilizer are also important.

Human impact on the environment is exacerbating the intensity of natural disasters, and the poor suffer the consequences. There are 25 million environmental refugees.

WOMEN AND THE ENVIRONMENT

Women make up more than half of the world's agricultural workforce and typically manage food, water, fuel and other household resources. In the world's poorest countries, women head almost a quarter of rural households.

Despite this responsibility, national law or local customs often deny women the right to secure title or inherit land, which means they have no collateral to raise credit and improve their conditions.

High fertility and large families are still a feature of rural life, in part because women lack choice in the matter. They need control over family size and spacing, health care including reproductive health, and education.

With fewer opportunities on the land, many men migrate, increasing women's family burdens and responsibilities.

Urbanization offers women risks and opportunities. Pregnancy and childbirth are generally safer, because health care is more accessible. City life also offers broader choices for education, employment and marriage, but carries heightened risk of sexual violence, abuse and exploitation.

Women's involvement in health and environmental decisions is essential, as are laws and policies on women's rights and equality. Without such support, many women are trapped in a vicious spiral of continuing environmental degradation, poverty, high fertility and limited opportunity.

Women's groups are organizing to integrate women fully into the political process, so they can take their full part in making policy decisions affecting their lives.

HEALTH AND THE ENVIRONMENT

There is a close relationship between the environment and health, particularly reproductive health.

Environmental conditions contribute significantly to communicable diseases, which account for 20-25 per cent of deaths worldwide. An estimated 60 per cent of the global burden of disease from acute respiratory infections, 90 per cent from diarrhoeal disease, 50 per cent from chronic respiratory conditions and 90 per cent from malaria could be avoided by simple environmental interventions.

Unclean water and associated poor sanitation kill over 12 million people each year. Air pollution kills nearly 3 million more, mostly in developing countries.

Changes in land use can have many effects on health. Dams and irrigation can create breeding grounds for disease carriers; increased use of pesticides and fertilizers can expose local populations to toxic chemicals.

Densely populated megacities subject their populations to air pollution far in excess of levels recommended by WHO.

Indoor air pollution—soot from the burning of wood, biomass and coal for cooking and heating—affects 2.5 billion people, mostly women and girls, and is estimated to kill more than 2.2 million people each year in developing countries.

Unplanned urban development and the opening of marginal, rural lands increases the number of people without access to reproductive health services, increasing the risks of maternal mortality and unwanted pregnancy. Lack of clean water at health facilities undermines reproductive health service quality.

Since 1900, industrialization has introduced almost 100,000 chemicals into the environment. Most have not been studied for their health effects. Some, banned in industrialized countries because of their harmful effects, continue to be widely used in developing countries.

Many agricultural and industrial chemicals have found their way into the air, water, soil and food—and human beings. Some are associated with pregnancy failures and with childhood developmental difficulties, illness and mortality. Exposure to nuclear radiation and some heavy metals has genetic impacts.

The HIV/AIDS crisis is closely linked to wider development issues, including poverty, malnutrition, exposure to other infections, gender inequality and insecure livelihoods. The epidemic, with its devastating impact on health and the family, complicates environmental protection, intensifies agricultural labour problems and adds to the burdens of rural women.

ACTION FOR SUSTAINABLE AND EQUITABLE DEVELOPMENT

Economic development; the state of the environment; the health of men, women and children; and the status of women are all intricately intertwined. Development requires improvements in the lives of individuals, usually by

their own hand; the status of women determines the state of development; and women require good reproductive health care for their status to improve. These understandings were spelled out at global meetings dealing with environment and development (1992), population and development (1994), and social development and women's rights (1995).

The 1994 ICPD recognized the interconnectedness of slowing population growth, reducing poverty, achieving economic progress, protecting the environment, and reducing unsustainable consumption and production. It emphasized the need to ensure women's rights, including the right to reproductive health, as essential in its own right and a key to sustainable development.

A 1999 review by 185 countries of progress in implementing the ICPD Programme of Action found that the goals and approach remained valid, that many governments had changed their health and population programmes to conform with the Cairo consensus, that a handful of issues—notably HIV/AIDS—had grown in urgency since 1994, and that funding was falling alarmingly short of goals expressed in Cairo. The review adopted new benchmarks and commitments to action.

Current resources for reproductive health and population programmes are well below the $17 billion the ICPD agreed would be needed in 2000. While developing countries are providing most of their two thirds share of needed resources, support from international donors is less than half of the $5.7 billion called for in 2000.

HIV/AIDS prevention was part of the ICPD package. But considerably more funds are needed for treatment and care of the millions of people living with HIV. The total elimination of unmet need for family planning by 2015 is now an internationally agreed goal; this will require further resources. Reducing maternal mortality is another major challenge.

The funding shortfall is already showing its effects: fertility declines have been slower than would be expected if more couples and individuals could have the family size they desire, and HIV/AIDS has spread faster than expected. The costs of delaying action will increase rapidly over time.

Policies addressing population growth, reproductive health and women's empowerment meet pressing human needs and advance human rights. They also have important environmental benefits. While it is hard to quantify these, it is clear that providing full access to reproductive health services would be far less costly in the long run than the environmental consequences of the population growth that will result if reproductive health needs are not met. There would also be substantial benefits in health and social opportunity.

Promoting human rights, eradicating poverty, improving reproductive health and achieving a balance between population and development needs and environmental protection will require a broad range of actions. Some priorities are to:

1. Implement—and adequately fund—the global consensus agreement of the International Conference on Population and Development.

2. Provide incentives for the dissemination, further development and use of more sustainable production processes.

3. Improve the information base for more-sustainable population, development and environment practices.

4. Implement internationally agreed actions to reduce poverty and promote social development.

Action on population, environment and development issues is both necessary and practical. The various international environmental agreements and the international consensus on population and development are being translated into working realities. These agreements only underline the need for broader and more extensive efforts.

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