



An Update—People in the Balance: Population and Natural Resources

The updated People in the Balance database illustrates how population growth exerts pressure on available natural resources, especially in countries experiencing rapid growth. The database provides information about the availability of three critical resources—freshwater, cropland and forests. It also includes data for population growth, which has important implications for resource availability. In examining the data, PAI hopes that the user will note that investing in family planning programs, particularly in countries with rapid population growth, together with the sustainable use of these three critical natural resources, would ensure the well-being of future generations. The user can go to www.populationaction.org/data-and-maps/people-in-the-balance/ to view country- and region-specific charts and tables using data from the update. The data in its entirety, and the methodology and sources, are also available for download as a .CSV or MS Excel file.

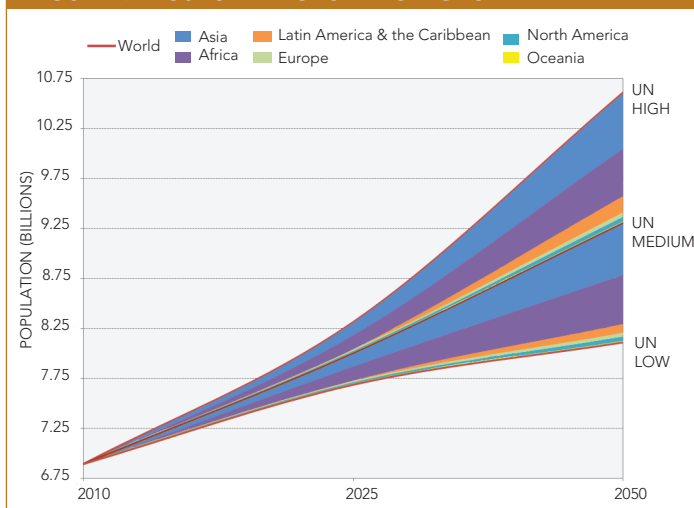


POPULATION TRENDS

World population reached 7 billion in October 2011 and continues to grow. UN population projections for the year 2025 range from 7.6 billion to 8.3 billion, growing to anywhere between 8.1 billion and 10.6 billion by 2050. The scope of these projections suggests the extent to which we, as human beings, can influence our demographic future through the decisions we make today. More people and higher incomes worldwide are multiplying our collective impact on the environment. It is likely that the rest of this century will witness even greater pressures on natural resources. Current demographic trends, however, offer some hope.

Over the past 60 years the average number of children born to each woman has fallen from five to less than three as people increasingly want to have children later in life and want families that are smaller than their parents¹. Nonetheless, this fertility preference varies among regions. For example, the projections note that the population of Eastern Europe will decline by 21 percent by 2050, whereas the population of Central and Western Africa will more than triple during the same period².

FIGURE 1: PROJECTED POPULATION GROWTH



Policymakers have a choice—and a window to take action. If they do nothing, the world’s population will grow to more than 10 billion by mid-century. If they take action by investing in family planning services, they can help ensure that the world’s population peaks in this century with slightly more than 8 billion people.



PEOPLE AND WATER

As global population increases, so does the demand for water. Today, more than 2 billion people live in 47 countries that are experiencing water stress or scarcity. By 2025, based on an estimate of medium projections of population growth, even more people

(more than 3.1 billion) may live under water-scarce or water-stressed conditions. For millions of people currently in the Middle East and North Africa region, fresh water shortages are a chronic concern that is becoming increasingly acute. The problem is worse than it often appears, because much of the fresh water now used in water-scarce regions comes

FIGURE 2: CURRENT AND PROJECTED POPULATION AND WATER AVAILABILITY

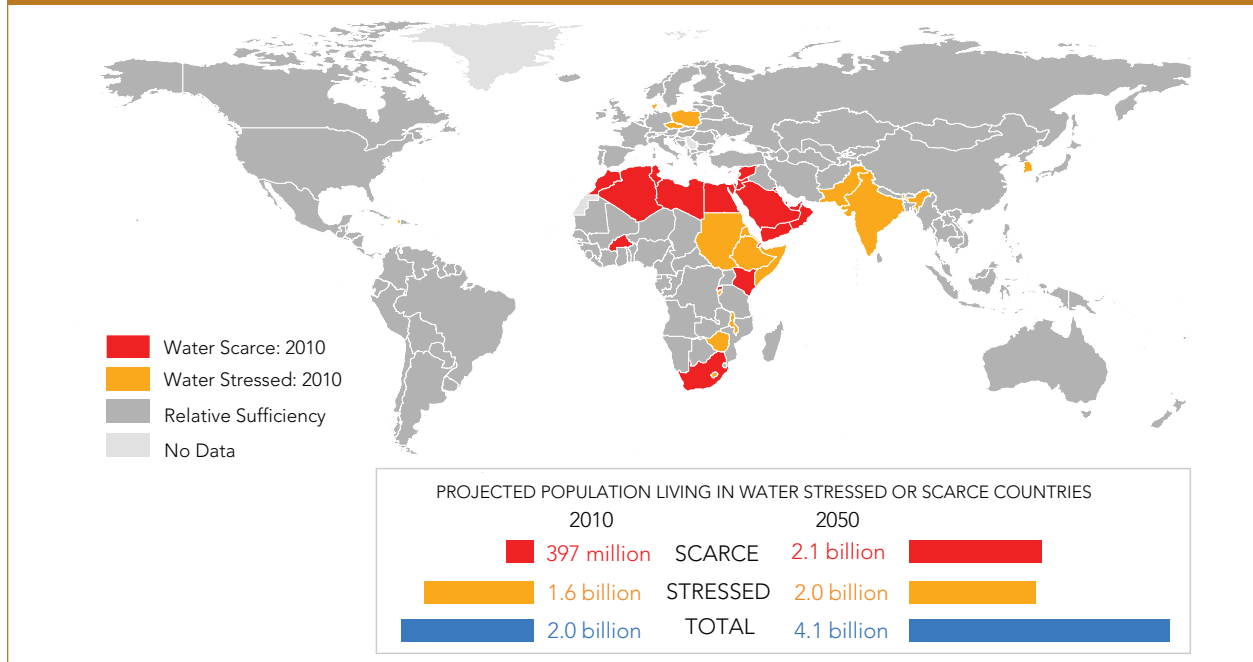
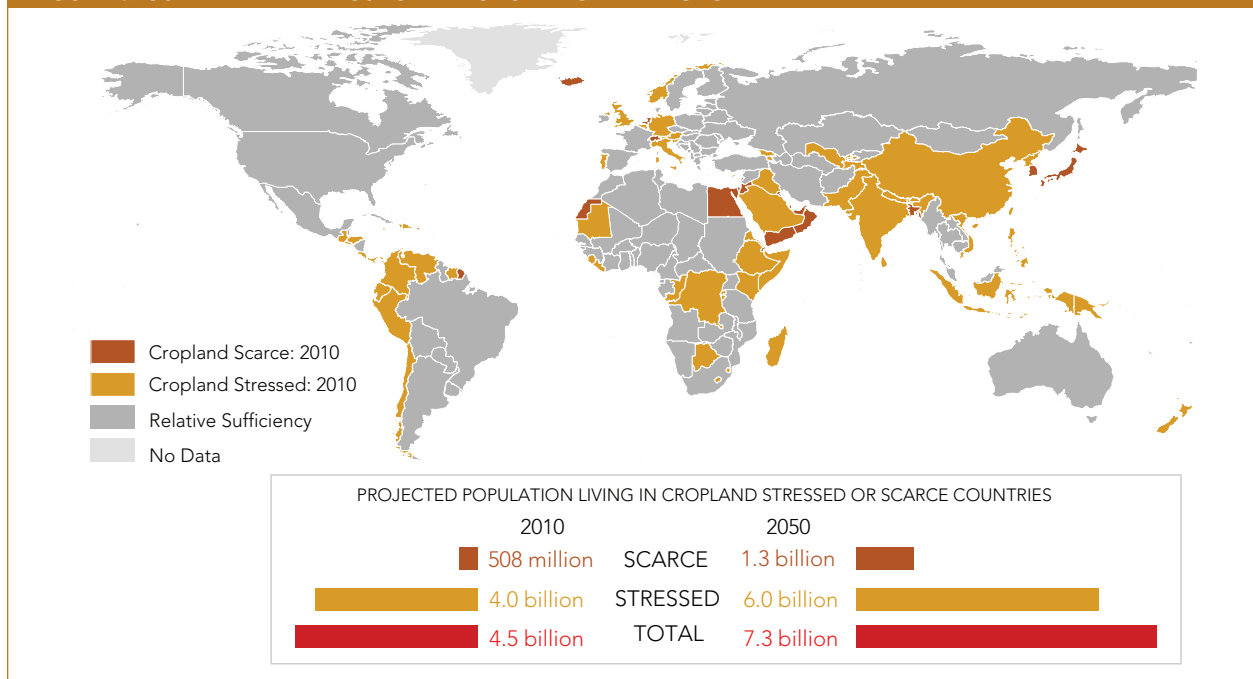


FIGURE 3: CURRENT AND PROJECTED POPULATION AND CROPLAND AVAILABILITY



from over-pumped groundwater reserves that are not being replenished by rainfall or snowmelt³. Increasing variability of precipitation patterns resulting from climate change further complicates such water challenges⁴. In most of the countries where water shortage is severe and worsening, high rates of population growth exacerbate the declining availability of renewable fresh water.



PEOPLE AND CROPLAND

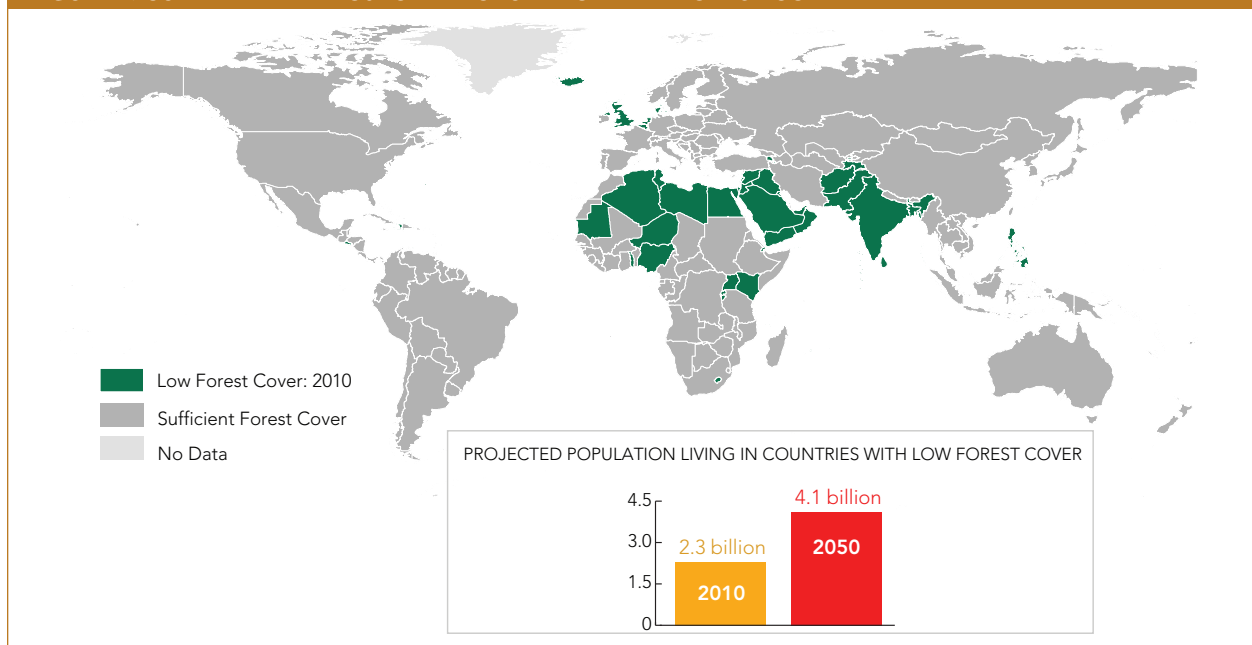
Global food production depends on two critical inputs: cropland and water availability. These two inputs are currently under pressure from increasing human population. Cropland acreage in some key food-producing countries has begun shrinking as a result of competing land use pressures such as urbanization⁵. The number of people living in countries where cultivated land is critically scarce is projected to increase from 508 million today to between 903 million and 2.1 billion by 2050. Pressure on cropland often leads to the destruction of critical forest reserves, or the overexploitation of land. This land overexploitation increases the possibility that staple crop production will fail, ultimately undermining food availability. Ensuring food security in the world's poorest regions will become progressively difficult if population growth continues growing as is projected.

PEOPLE AND FORESTS



Forest resources and their products are essential for human well-being. Overall, they contribute to our development through preserving biodiversity, purifying water and air, providing raw materials, and offering opportunities for recreation. Most of the world's forests are being lost due to expansion of human activities, particularly in the agricultural sector and through urbanization. While deforestation rates are currently declining in several countries, they are still high in others⁶. The future availability of forest resources for food, fuel and shelter looks discouraging in those countries experiencing high deforestation rates. Currently, more than 2.3 billion people live in 51 countries with less than 0.1 hectare of forested land per person, an indicator of critically low levels of forest cover. Based on current deforestation trends, the number of people living in forest-scarce countries may increase to 3.1 billion by 2025 and to 4.1 by 2050. Forests also play an important role in mitigating and adapting to the impacts of climate change. While forests have the capacity to absorb greenhouse gases from the atmosphere, when destroyed, overexploited or burned, they can serve as a source of CO₂ emissions. Rapid deforestation, coupled with climate change, will cause the loss of livelihoods of millions of people who depend directly on forest resources. It will also increase the concentration of greenhouse gases in the atmosphere.

FIGURE 4: CURRENT AND PROJECTED POPULATION AND FOREST COVER





POLICY CONSIDERATIONS

The environmental and human challenges arising from natural resource scarcity will become more difficult to address if the number of people on the planet continues to increase. Population dynamics influence resource availability on local, regional and global levels. Incorporating population and family planning policies into national development plans

is central to ensuring sustainable population growth and development. Such development plans should emphasize access to reproductive health services, to education and to economic opportunities; ensure improved energy and natural resource technology development and use; and lower consumption levels, particularly in industrialized countries. Together, these can help us balance environmental protection, natural resource use, and human well-being.

Notes

- 1 United Nations Population Division, Department of Economic and Social Affairs from *World Population Prospects: The 2010 Revision*
- 2 Guttmacher Institute and United Nations Population Fund. 2009. *Adding It Up: The Cost and Benefits of Investing in Family Planning and Maternal and Newborn Health*. New York: Guttmacher Institute and UNFPA.
- 3 Brown L. R. 2006 *Plan B 2.0: rescuing a planet under stress and a civilization in trouble*. New York, NY: W.W. Norton & Company
- 4 Population Action International (PAI)'s *Mapping Population and Climate Change* website: http://www.populationaction.org/Publications/Interactive_Databases/climate_map.shtml
- 5 Prasad S. Thenkabail. 2010. *Global Croplands and their Importance for Water and Food Security in the Twenty-first Century: Towards an Ever Green Revolution that Combines a Second Green Revolution with a Blue Revolution*. *Remote Sensing* 2010 (2), 2305-2312
- 6 Food and Agriculture Organization of the United Nations, 2010. *Global Forest Resources Assessment 2010*. Rome: FAO

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Population Action International advocates for women and families to have access to contraception in order to improve their health, reduce poverty and protect their environment.

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