

# RUSSIA'S POPULATION SINK

In the former heart of the Soviet empire, deaths are far outpacing births.

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In Nadvoitsy, a small Russian town near the Finnish border, an estimated 4,000 children have been poisoned by fluoride, which replaces calcium in the body, leaving its victims with blackened, rotting teeth and weakened bones. Although the town's aluminum plant no longer dumps fluoride into unlined landfills, the contamination persists because neither the authorities nor the company can afford a full-fledged clean-up. Today 5 to 10 percent of the town's kindergartners continue to exhibit signs of fluorosis.

Nadvoitsy's experience provides a glimpse into the myriad problems facing the countries of the Former Soviet Union (FSU). Years of environmental contamination have combined with economic instability to push the region into a public health crisis, and several FSU countries are now experiencing the most dramatic peacetime population decline in modern history. In Russia, which has more than half the FSU's population, the situation may be at its worst. As the country's birth rate falls and its death rate climbs, the population is expected to shrink by some 9 million between 1992 and 2005. More important, perhaps, is the rising incidence of birth defects and other health problems whose effects may linger for generations.

Russia's demographic decline began in the mid-1980s, well before the collapse of the Soviet Union in 1991 (see graph). Total live births in Russia dropped from a peak of 2.5 million in 1987 to 1.4 million in 1994, while total deaths climbed from 1.5 million to 2.3 million over the same period. The year 1994 brought the most precipitous decline on record, with deaths exceeding births by more than 880,000 and the population falling by 0.6 percent (excluding immigration, which compensated for two-thirds of the decline). Life expectancy, which provides the best general measure of a country's health conditions, also dropped sharply between 1987 and 1994, from 65 to 57

years for men, and from 75 to 71 years for women. This decline has no precedent in industrialized societies; Russian male life expectancy is now the lowest of all developed countries.

Russia's deteriorating social and ecological conditions have had serious consequences for the country's children as well. Infant mortality has climbed to at least 20 deaths per 1,000 live births, although some experts suggest the figure could be as high as 30 per 1,000—more than three times the U.S. rate and double that of Costa Rica, one of the most advanced developing countries. Birth defects occur in 11 percent of newborns, and 60 percent exhibit symptoms of allergies or the deficiency disease known as rickets, caused by a lack of vitamin D. Children's health tends to decline throughout childhood; scarcely one-fifth of Russia's children can be considered healthy by the end of their school years.

Maternal health, and the health of women of reproductive age in general, is also declining—a trend that will almost certainly intensify problems with infant health. Gynecological pathologies have been found in 40 to 60 percent of women in their child-bearing years, and even girls in their early teens are showing signs of reproductive abnormalities. Fully 75 percent of Russian women experience complications during pregnancy, and the death rate during childbirth is 50 per 1,000 births—more than six times the U.S. rate. Only 45 percent of Russian births qualify as normal by Western medical standards.

The factors underlying these trends are complex and numerous, but most can be traced to some combination of environmental contamination and economic instability. In part, the fertility decline is a matter of simple demographics: the number of marriages has decreased, and there are fewer women of childbearing age in the population due to a brief decline in births after World War II.