



45.7 million est. pop. 2010

Ukraine, long known as the “bread basket of Europe,” is a large and fertile country in Eastern Europe that is perhaps best known, unfortunately, for the meltdown of a nuclear reactor at Chernobyl nuclear power station in 1986, which caused huge amounts of radiation (over 100 times the amount released by the bombings of Hiroshima and Nagasaki) to travel as far as Northern Europe and eventually the entire world. In recent years, however, Ukraine has attempted to improve its environmental standing.

Ukraïne has been an independent nation in Eastern Europe since 1991. Formerly a republic within (member nation of) the Soviet Union, it is now a member of the Commonwealth of Independent States. Ukraine shares borders with Poland, Slovakia, Hungary, Romania, Moldova, Russia, and Belarus. It is bordered by the Black and Azov seas on the south. Ukraine encompasses 603,700 square kilometers—for comparison, France covers 643,000 square kilometers—and administratively is divided into twenty-four regions, one autonomous republic (Crimea), and two urban centers (Kiev and Sevastopol).

About 73 percent of the population is Ukrainian and 21 percent Russian. The remainder is divided among 110 ethnic groups including Jews, Belarusians, Moldovans, Bulgarians, Poles, Greeks, Hungarians, Crimean Tatars, Armenians, Germans, and Gypsies (Romani). Ukrainian is the official language, and Eastern Orthodox Christianity the dominant religion.

About 95 percent of Ukraine is flatland, of which about 70 percent is lowlands. Ukraine is divided by its main river, the Dnieper, into two sections—Right

Bank Ukraine (Volyns’ko-Podil’s’ka highland, eastern Carpathy, Polyssia) and Left Bank Ukraine (Dnieper lowland, Donets’ka highland). The Black Sea lowland is situated at the south. The two major mountain ranges are the Crimea Mountains and the Carpathians (the highest point in Ukraine is Mount Goverla at 2,061 meters). The most important rivers are the Dnieper, Pivdenny Bug, Dniester, and Danube (all of which empty into the Black Sea) and their tributaries, including the Psel, Goryn, Desna, and Ingulets. Natural lakes are concentrated in Ukrainian Polyssia and in the lower Danube region; along the Black Sea coast there are numerous brackish (semi-saltwater) estuaries. *Chernozem* (rich humus) is the most widespread soil type.

Ukraine has more than thirty thousand natural floral species and about forty-five thousand natural faunal species. The four main geographical zones are forest (average afforestation level is 14 percent; mixed forests dominate), mixed forest-steppe, steppe (arid and semiarid, about 40 percent of the territory of Ukraine), and the Crimea Mountain zone. The climate is moderate, warm (with moderately cold winters), and continental, being located at the southern part of the Crimea littoral-subtropical zone. Average temperatures in January are -8°C in northeastern Ukraine and 4°C in Crimea; in July, 17°C in northwestern Ukraine and 23°C in southern Ukraine. Average annual precipitation is 300–500 millimeters in the Black and Azov seas region, 600–700 millimeters in northeastern Ukraine, 1,000–1,200 millimeters in the Crimea Mountains, and more than 1,500 millimeters in the Carpathians.

Combustible mineral resources (hard coal, oil, natural gas), metals (iron, manganese, uranium, titanium, mercury), ores, and nonmetallic mineral sources (graphite, fireclays, rock salt, building materials) create a natural

resource base and determine the direction of international trade and national production development. The country established its first nature reserve, Askaniya-Nova, in 1921 and stresses the conservation of natural resources as a national priority (US Department of State 2011).

In matters of environment, Ukraine is well known as the site of the 1986 Chernobyl nuclear power station accident, which contaminated 21 percent of the territory of Ukraine, as well as neighboring nations, with cesium isotopes. On 26 April 1986, one of the four reactors at Chernobyl nuclear power station exploded. The accident released at least one hundred times more radiation into the atmosphere than the dropping of atomic bombs on Hiroshima and Nagasaki. Most of the radiation hit other areas of Ukraine, Belarus, and Russia, but much of Northern Europe was also affected (BBC News 2006). The diffused radiation eventually spread to the entire world. The last reactor at Chernobyl was shut down in 2000. A new shelter surrounding the original one, which covers the damaged reactors that caused the accident, is scheduled to be completed in 2014.

Ukraine is a signatory of the international Kyoto Protocol calling for reduced greenhouse gas emissions. Ukrainian soil is considered a national asset thanks to its excellent fertility and agricultural quality; the country has long been known as the “bread basket of Europe.” Agriculture comprises 72 percent and forests 17 percent of total land area (UNDP 2011). The country has a pollution fee system, whereby taxes are levied on air and water emissions and solid waste disposal; enforcement of this tax, however, is lax. Issues of natural environment protection, water pollution, and air pollution are discussed by representatives of the Ukrainian Ecological Association “Green Light” and by members of the Ukrainian Green Party. The Green Party was represented in the Ukrainian Parliament after the elections of 1998, though it failed to gain seats in the 2002 elections.

Since the end of the 1990s a major environmental concern has involved the Danube estuary, which covers a total area of 7,000 square kilometers—roughly half the size of Puerto Rico. As waterways from several states feed into the Danube river (it is Europe’s second longest river), this has caused pressure on the river’s watershed, and the runoff into the Black Sea is controlled by dams.

Levels of chemicals, especially nitrates and phosphorus, have increased in the estuary in recent years, causing the over-enrichment known as eutrophication, which encourages plant growth to the point of depleting oxygen. Water quality and sediments have deteriorated in the estuary and northern part of the Black Sea, causing fish numbers and biodiversity to decrease. An international organization, the International Commission for the Protection of the Danube River, is a body set up to sort out the transnational problems affecting the river.

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See also Balkans; Central Asia; Danube River; Mediterranean Sea; Russia and the Soviet Union; Scandinavia; Transboundary Water Issues; Volga River

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