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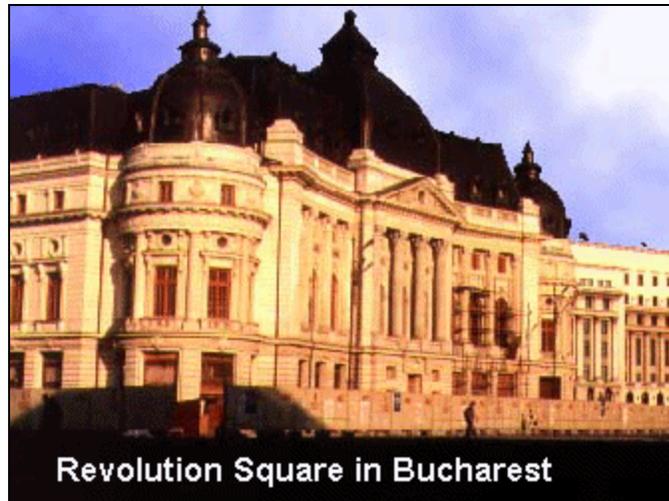
Romania: Environmental Issues

Introduction

Romania's natural environment is a study in contrasts. Much of the Romanian countryside remains unspoiled, and its fauna ranks among the most diverse in Europe. Dense forests continue to cover more than a quarter of the country's territory. These elements stand in stark contrast to other parts (especially urban areas) of the country which have suffered tremendous environmental degradation over the last 50 years. Industrial plants release large quantities of pollutants into the air, and the nation's water is polluted by industrial and municipal wastewater discharges, agricultural runoff, and insufficient treatment of toxic pollutants discharged by industry into the sewer system.

While much of the damage to the environment has its origins in Romania's communist past, even after the transition to democracy, the country has not made environmental protection a top priority. Not until December 1995 did the Romanian parliament adopt the Environmental Protection Law, which provides the basic framework for the protection of the country's natural resources. The Ministry of Agriculture, Forests, Waters and Environment is Romania's primary government agency charged with environmental matters.

In both 1999 and 2000, the European Commission's regular reports criticized the Romanian government for its failure to do more to protect the environment, and the last [official report by the Romanian government](#) on this issue in 2000 also found that the country suffered from numerous types of pollution. Progress will have to be made if Romania is to succeed in its wish to join the European Union (EU). In 2001, the U.S. Department of Commerce's Central and Eastern Europe Business Information Center estimated that the cost of coming into compliance with the standards necessary for accession to EU will be \$20 billion over 20 years.



In recent years, Romania has voiced a stronger commitment to environmental protection, but the country's faltering transition to a market economy has made enforcement difficult. The [Sofia Initiative on Economic Instruments](#) at the Regional Environmental Center for Central and Eastern Europe notes that Romania suffers from: a lack of social interest in the connections between economic and environmental policies; an insufficiently mature set of protective institutions; and a lack of the political will necessary to levy unpopular charges on dirty technologies. All of these factors make it difficult to apply economic instruments designed to reduce pollution.

Because in the past it has released pollution that has caused damage beyond its borders, Romania has agreements with some of its neighbors designed to prevent future occurrences. Bulgaria and Hungary are particularly concerned due to the damage caused by previous industrial releases into the Danube.

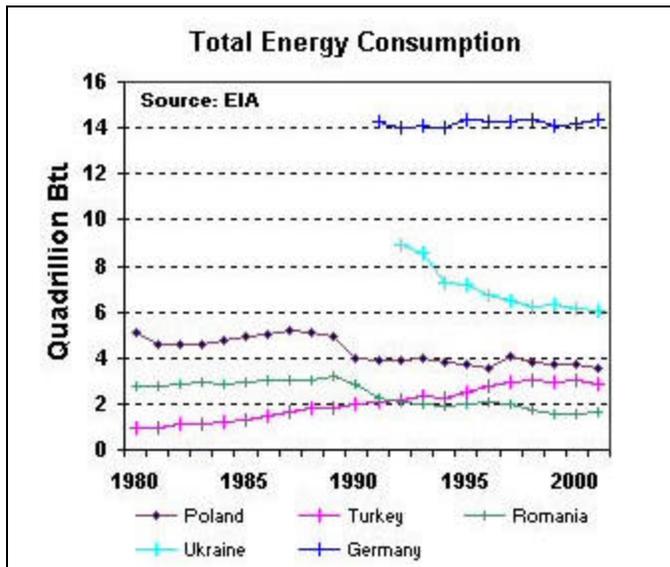
The United States, World Bank, European Union, European Bank for Reconstruction and Development, and several NGOs have donated money for environmental protection and/or energy efficiency. Romania has ratified both the U.N. Convention on Climate Change and the Kyoto Protocol.

Air Pollution

Air pollution is a highly localized problem in Romania. While rural areas are often pristine, urban and industrial areas suffer from acid rain and high pollution levels. The 2000 state of the environment report lists 17 urban "hot spots" where air pollution systematically exceeds environmental quality standards.

Much of Romania's air pollution stems from its antiquated energy sector. Because of conditions imposed by the EU and foreign lenders, state-run energy companies are gradually being restructured, but progress is slow. Thermal power plants continue to burn low-efficiency solid fuels and high-sulfur content heavy fuel. Adding to poor air quality in urban centers is the reliance of low-income Romanian households upon low-quality coal for heat. Another major source of urban air pollution is Romania's transportation sector. Most cars on the road in Romania are old and poorly maintained, running on gasoline that has the highest lead content among Eastern European countries.

To reduce emissions and other pollutant discharges, Romania is attempting to improve its environmental management practices and technologies.



Water Pollution

Water pollution is an even bigger problem for Romania. Not only are there many water pollution "hot-spots," but Romania's poor record of curbing industrial releases into the Danube has placed it under considerable international pressure. The Bulgarian government contends that Romania has made no efforts to crack down on industrial discharges, which negatively impact the entire region. Bulgaria is considering boycotting the Romanian petrochemical industry in protest, which could cost the Romanian government \$40-\$65 million a year.

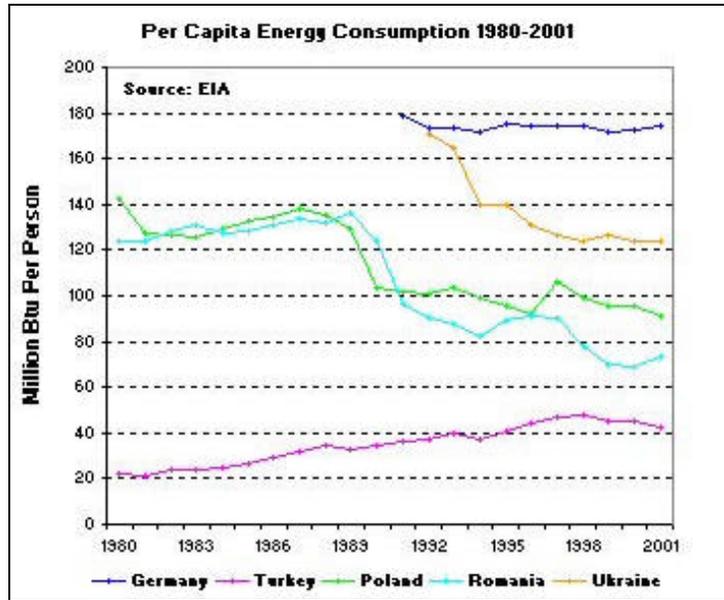
The most grievous example of water pollution occurred in 2000 when the river Tisza was seriously contaminated with cyanide and heavy metal wastes from the Romanian Aurul gold mine in Baia. The contamination was spread downstream into the Danube in Hungary. The environmental impact was so devastating that European environmentalists were referring to the disaster as an "aquatic Chernobyl." Hungary is now claiming almost \$30 billion in damages.

The Romanian government has imposed some water effluent charges, which appear to have helped reduce pollution, at least in the short-term. The Sophia Initiative hypothesizes that in the long run, the water authority's need for the income these charges provide may cause them to not aggressively promote actual abatement measures.

USAID has agreed to assist the Romanian environmental authorities address water management and pollution problems. Assistance will reduce nitrogen and phosphorus discharges into the Danube, and will also go to developing norms for nitrate pollution, introducing ecological management systems, and increasing local capacity to monitor soil and water quality. USAID also will help enforce environmental laws and prepare for the privatization of water and waste services.

Energy Consumption

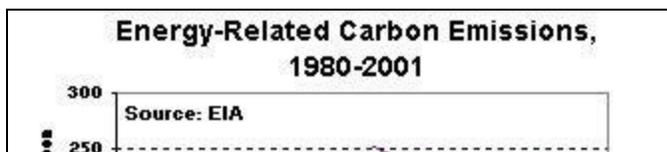
Romania has been at least partially successful in reducing inefficiency in its industrial sector. In 1989, Romania's energy consumption was 3.2 quadrillion Btu (quads). After that, consumption declined by about half, to just 1.64 quads in 2001. This pattern roughly mirrors that of Poland, another country emerging from communism. Poland's energy consumption fell from 4.9 quads in 1989 to 3.5 quads in 2001 (a 29% decrease). By comparison, Turkey, a developing but never-communist country, has seen its energy consumption rise 62% from 1.8 quads in 1989 to 2.9 quads in 2001.



Examining per capita consumption reveals the same trends. Romania's per capita energy consumption declined from 136 to 73 million Btu. Poland's average individual consumption dropped from 129 to 92 million Btu. Turkey on the other hand saw its per capita consumption rise from 33 to 42 million Btu.

Further efficiency gains are likely to occur only when Romania restructures its energy and industrial structures. Romania has made moves towards introducing competition as well as synchronizing domestic prices with international energy prices. These efforts are part of its campaign for membership in the EU. However, resistance from those with vested interests in the state monopolies has hampered energy sector restructuring.

The continued existence of state monopolies in all sub-sectors of the energy field has resulted in a lack of stimuli for energy saving, a shortage of financial funding for the acquisition of high-efficiency equipment and technology, and a preponderance of energy-intensive industrial enterprises with obsolete equipment. Although cutbacks in industrial production since 1989 (due to the shutdown of inefficient and unprofitable factories and plants) have reduced the country's total energy consumption, Romania remains a country characterized by high energy consumption and low efficiency.



The US Agency for International Development (AID) is trying to help spur reforms in Romania to revitalize the energy sector. US AID is looking to restructure

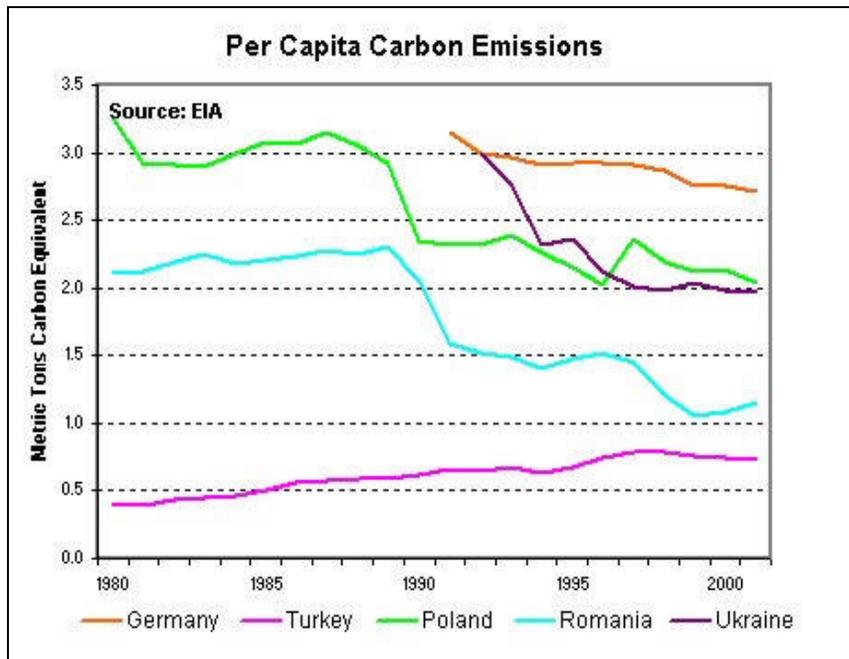
Romania's energy sector by pushing with oil and gas liberalization, power sector competition, and energy efficiency.

Carbon and Energy-Related Emissions

Under the Kyoto Protocol, which Romania signed in 1999 and ratified in March 2001, the country is an Annex I country required to reduce its emissions of greenhouse gases 8% below 1990 levels by 2008-2012. Since Romania's total carbon emissions in 1990 were 48 million metric tons, the 2001 level of 26 million tons represents a 46% drop from that year's levels. However, much of Romania's reduction in carbon emissions is due to industrial production cutbacks rather than energy efficiency measures.

To preserve its low emissions levels once economic growth returns, Romania will need to upgrade the local environmental protection agencies (EPAs), giving them the ability to implement environmental management programs capable of modeling, monitoring, and regulating pollution sources.

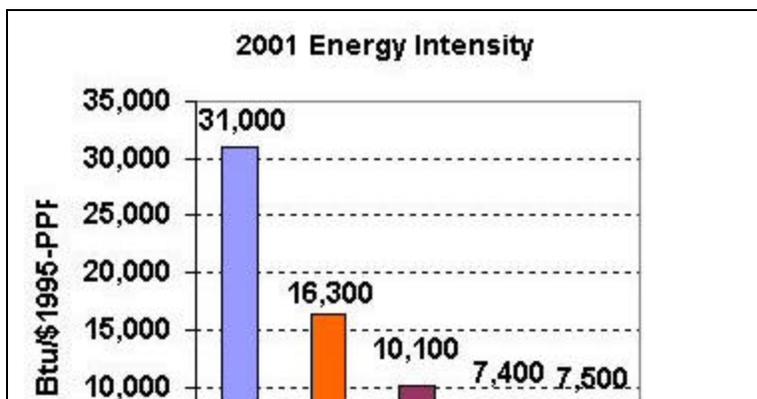
Romania has established a National Committee on the Ozone Layer in order to implement some of the international treaties the country has signed.



Energy and Carbon Intensity

Romania's energy intensity (Btu consumed per dollar of GDP*) tends to be quite high compared to other countries in the region. In 2001, Romania's energy intensity level was 16,300 Btu/\$1995-PPP. Among those countries surveyed, only Ukraine had a higher energy intensity in 2001 (31,000 Btu/\$1995-PPP).

The figures for carbon intensity (the amount of carbon consumed per dollar of GDP*) show a similar pattern. Romania's 2001 carbon intensity was 0.22 metric tons of carbon/thousand \$1995-PPP, as was similarly coal-rich Poland. Turkey (0.13) and Germany (0.12) were significantly lower, while Ukraine (0.49) was substantially higher.



Romania in the 21st Century

Communism's industrial policies continue to haunt Romania's environment, but the past cannot be blamed for all of the country's problems. As noted above, post-transition Romanian governments consistently have shied away from dealing aggressively with the issue because of the possible socio-political consequences.

In the short term, Romania must continue to clean up its environment while endeavoring to halt ongoing pollution and environmental degradation. For example, the government must move to contain the hot spots of industrial air and water pollution by enforcing the Environmental Protection Law more forcefully.

Improvement in the long-term will be contingent upon more politically difficult changes. Romania will have to address: the insufficient financing mechanisms, monitoring, enforcement, and information dissemination capacity of the local environmental protection agencies; an insufficient legal framework and regulatory capacity for compliance with EU standards; and a lack of analytical capacity to develop and implement policy and strategy for sustainable environmental management.

The scale and scope of the problems facing Romania are daunting, but they will need to be dealt with if the country is to achieve its oft-repeated aim of joining the EU. In the years ahead, Romania's challenge will be to comply with EU environmental laws, overcome the legacy of environmental degradation from the communist period, and make an environmentally sound economic recovery.

**GDP figures are based on OECD figures using purchasing power parity (PPP) exchange rates.*

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