Clean Air and Health Policy Considerations in South Caucasian Countries

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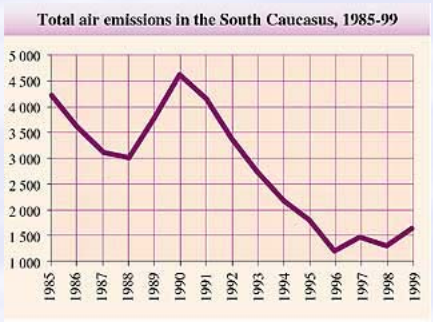
AIRNET
A Thematic Network on Air Pollution and Health

NERAM
Network for Environmental Risk Assessment and Management

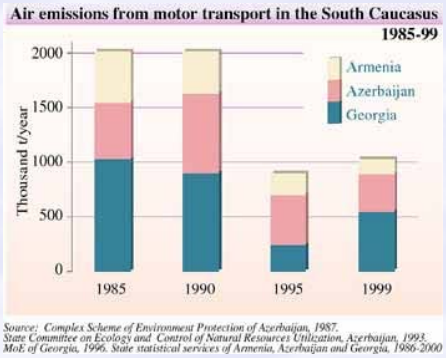
Major Sources of Air Pollution and their Emissions.

During the 1970s and 1980s, transport and industry were the major sources for air pollution in the Caucasus region. In the early 1990s total emissions fell due to the general economic decline (Table 1).



Source: Complex Scheme of Environment Protection of Azerbaijan, 1987. State Committee on Ecology and Control of Natural Resources Utilization, Azerbaijan, 1993. MoE of Georgia, 1996. State statistical services of Armenia, Azerbaijan and Georgia, 1986-2000

Historically, the percentage of emissions from transport, with some exceptions, was higher than stationary source emissions in most of parts of the region. For example, whereas in Georgia and Armenia mobile sources contributed over 60% of total emissions, in Azerbaijan with large industrial capacities, the figure varied from 30% to 40% (Table 2).



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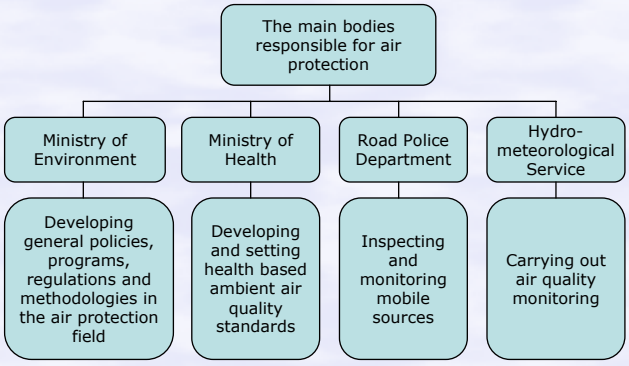
In the early 1990s, industrial emissions declined even more dramatically, increasing the transport share of total emissions to 80%. The reasons for high vehicle emissions were heavy traffic in urban areas and high emissions from cars lacking pollution control devices.

Urban Air Quality

High ambient concentrations of CO, NO_x, phenol and formaldehyde indicate a significant impact from traffic. The problem with ground level ozone is a concern. Cities such as Tbilisi, Yerevan, Vanadzor, Ararat, etc. with valley type terrain or/and poor ventilation may suffer the most.

It is expected that in the future sulphur dioxide and nitrogen oxide emissions will soar, as the number of vehicles and industrial activities increase. Moreover, the problem may become very acute, taking into account the inefficient and out of date technologies employed. In the short-term, the major threat can be expected from rapidly growing road transport with its obsolete fleet and poorly maintained vehicles. Hence, the problem with NOx emissions is becoming acute. The implementation of TRACECA project will significantly increase traffic in major highways and may highly contribute to trans-boundary air pollution as well.



Policy Measures and Responses

After independence, all the South Caucasus countries adopted framework laws on environmental protection. At present, Georgia is ahead from other South Caucasus countries in terms of harmonisation Georgian and EU legislation. National air quality legislation is proposed for Georgia which will include a list of air pollutants, limit values and a definition of monitoring requirements based on the EU Air Framework Directive. These provisions will come into force on the 1st of January 2005 by a specific order of the Environmental Minister, taking into consideration all recent amendments made in EU Directives. Fuel quality and mobile source emission standards shall be developed on the basis of appropriate EU Directives and introduced by 1 January 2003.

Even if the legislation were perfect, poor enforcement system would preclude compliance of existing laws and regulations. At present, the countries lack finances to develop modern compliance assurance monitoring and control systems. Environmental law enforcement officers are untrained and poorly equipped with measuring devices and there is no legal basis for the frequency and quality of inspections and emission measurements. Administrative penalties imposed on violators, including permit conditions, are symbolic, encouraging illegal activities. On a whole, the Caucasus countries lack legislation and practical experience related to environmental damage, liability and compensation issues, and public court suits.

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