Impact of Environmental Audits on Air Quality in Bulgaria

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Air pollution with PM2,5 has increased up to 63 %, from 21 kt in 1990 to 34 kt. in 2014. In 2016 it dropped down to 31,85 kt.

- use of solid fuels for domestic heating (wood and coal)
- gas emissions from transport and industry

In 2016, more than 87 % of the 3.5 million population was affected in the regions where the measurement took place. As a result, diseases have been increased:

- acute respiratory diseases – children aged 0-17
- chronic lung diseases - adults.

Two performance audits were conducted, aimed to the problems of air pollution in 2016 and 2017.
Effectiveness of the Measures Undertaken by Sofia Municipality for Reducing Particulate Air Pollution for the period 2010-2015 (2016)

**AUDIT RESULTS:**

✓ exceeded target values of PM
✓ the main sources of pollution are road transport and the use of solid fuels for heating
✓ actions need to be taken at national level by initiating changes to the regulatory framework to limit the sources of pollution
✓ municipality of Sofia implements measures from the Air Quality Programme 2011-2014. Programme 2015 - 2020 has not been approved by the end of the audit
✓ the average annual rate of PM$_{10}$ was reached in two of the monitoring stations. The remaining 5 stations report a decrease insufficient to reach the average annual PM$_{10}$ rate
Recommendations from the audit conducted in 2016:

- two recommendations to the Chairman of the Municipal Council
- five recommendations to the Mayor of Sofia municipality

Result of the control over the implementation of the recommendations (June 2018)

- the recommendations to the chairman of the Sofia Municipal Council are being implemented
- two recommendations have been implemented by the Mayor of Sofia Municipality, two are under implementation and one is partly implemented

Impact of auditing:

- increased activity of non-governmental organizations to combat air pollution in Sofia
- new Air Quality programme adopted, taking into account the recommendations of the audit report
“Effectiveness and efficiency of the measures taken by national and local authorities to combat the main sources of air pollution in big cities” for the period 2014 –2016

The audit is part of the Air Quality Cooperative Audit within the EUROSAI Working Group on Environmental Audit

✓ Main findings:
• the government policy is being implemented without an adopted national environmental strategy
• continuing air pollution in big cities where 97 per cent of the population are exposed to PM10 levels exceeding the normal rate, 80 per cent to PM2,5 levels above the norm and 75 per cent to benzo (a) pyrene levels over the target rate
✓ Main findings (cont.):

• considerably less funds have been allocated for the policy on air quality improvement and for the National System for Environmental Monitoring compared to other environmental policies

• the main source of pollution is domestic heating with solid fuels during the winter season as the fuel poverty policy is not aimed at providing environmentally friendly fuels

• the measures at national and municipal level are not targeted at the main sources of pollution which is a challenge to achieve efficiency and effectiveness in their implementation

• the mayors of municipalities are not sanctioned for failure to fulfill obligations for development and implementation of programmes for improvement of air quality
Audit recommendations (2017):

24 recommendations have been given to the Minister of Environment and Water, three municipalities and other national institutions

Audit impact following disclosure of the audit results:

✓ accelerated implementation of operational programme "Environment 2014-2020" and absorption of funds under priority Axis 5 "Improvement of Air Quality"

✓ applying under measures targeted at:
  - development of municipal programmes and/or financing of measures under approved programmes of the municipalities with poor air quality
  - projects for replacement of heating devices of households on solid fuels
  - reduced emissions of harmful substances on the basis of integrated development of environmentally friendly means of transport

✓ implemented measures envisaged under sectoral policies on energy and transport
National/regional policies

Specific policies for big cities:

• installing air filtration devices on chimneys (under OPE)
• replacing solid fuels (coal and wood) with biofuels (ecopellets)
• modernization of public transport (replacing the car fleet with new, certified EURO 4 and EURO 6) and extension of Sofia subway
• increasing green areas
• taking measures by respective authorities to reduce air pollution in big cities and population morbidity rate
Thank you for your attention!