FOLLOW-UP AUDIT OF AIR QUALITY

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Air pollution in the Republic of North Macedonia

Most critical substances that affect air quality - \(\text{PM}_{10} \text{ and } \text{PM}_{2.5}\); 

Annual average concentrations of \(\text{PM}_{10}\) have exceeded the annual limit (40 \(\mu\)g/m\(^3\)) in all urban monitoring sites since 2005: the highest have been measured in Tetovo and Skopje, over 120 \(\mu\)g/m\(^3\);

Annual average concentrations of \(\text{PM}_{2.5}\) in the City of Skopje are twice as high as the level of the limit.
Annual average concentrations of PM$_{10}$
The main factors of air pollution

PM$_{10}$ emissions by sectors

PM$_{2.5}$ emissions by sectors
In 2017, SAO conducted PA on Air quality – as cooperative audit, with other EUROSAI members.

Audit conclusion: The undertaken activities in the period 2014 - 2016 were not sufficient for improving air quality.

Audit recommendations were regarding to:
- Organization of the air quality management system;
- Legal framework for air quality;
- Air quality policy on national/local level;
- Financing measures/activities;
- Air quality monitoring and reporting system.
Follow-up audit: To assess whether audit entities have implemented the recommendations in the final report and whether the actions taken have properly addressed the issues.

- **Period:** 2017 - 2019
- **Audited entities**
  - Ministry of environment and physical planning (MOEPP),
  - State environmental Inspectorate (SEI);
  - City of Skopje.

Follow-up audit - reporting phase.
Conclusions

- Unsatisfactory progress in strengthening administrative and technical capacity at central/especially local level.

- Low level of inspection controls mandated by the Law on Ambient Air Quality.

Organization of the air quality management system

Inspection controls 2017 - 2019

- by Law on Ambient Air Quality
- by other laws
Conclusions

Organization of the air quality management system

Ongoing activities - MOEPP:

✓ Establishing a National Environmental Information System that will ensure smooth flow of information to all stakeholders;

Ongoing activities - SEI:

✓ Implementation of data exchange procedure between MOEPP and SEI;
✓ Risk-based methodology - test phase;
✓ Draft Law on Environmental Inspection - in procedure for adoption.
Conclusions

Draft Law on changes and amendments of the Ambient Air Quality will provide:

- Allocation of responsibility for preparing air quality protection plans on local level according to defined criteria;
- Harmonization of inspection and misdemeanor policy, locating responsibility and appropriate penalties for not implemented measures in the plans;
- Complete transposition of EU Directive 2008/50/EC in national legislation
- EU Directives 2015/1480, 2016/2284 will be transposed within the IPA 2 project for air quality (expected to start at the end of the year 2020).

- Amendments to the Regulation on limit values of the threshold and types of pollutants in ambient air, for informing and alerting for PM$_{10}$. 

Legal framework
Conclusions

- A new five-year National Air Quality Plan yet to be prepared within IPA 2 project.
- Being strategic priority to reduce air pollution, the Government in 2019 has adopted a Plan for Clean Air with Programs for reducing the air pollution for 2019 and 2020.
- Still, many municipalities where levels of polluting substances exceed alert thresholds have no plans to improve air quality.
- There is no monitoring system for measures implementation on central/local level.
In the period 2017 - 2019, 26 measuring instruments, one mobile monitoring station and other equipment for monitoring sites were procured by budget and other projects funds.

Since 2019, the Government has started a Program for reducing the air pollution. Funds provided for both years (3.5 million euros) have been used for:

- Replacement of existing non-ecological heating systems in households, kindergartens, primary and secondary schools and administrative buildings;
- Arranging a green area in the school and health care institution;
- Purchasing air purifier.

Activities have been undertaken for accreditation of Central and Calibration Laboratory.

During 2020, 51 instruments and one fix monitoring site will be purchased.
The national air quality monitoring network includes 18 fixed stations and one mobile station.

The Cadastre of Air Pollutants is still not complete.

Despite the instructions from MOEPP, only 35% of the operators with A and B integrated environmental permit, have submitted data for conducted measurements in 2018 and 2019.
Project activities

- Transboundary Air Pollution Health Index Development and Implementation, IPA CBC Programme “Greece – North Macedonia 2014-2020”
- Development of Environmental Monitoring and Information System, Europe Aid/139107/IH/SER/MK
- Supporting North Macedonia in EU accession in the Environmental Field (SMEF) 2019-2021, SIDA
- Strengthening the administrative capacities at central and local level for implementation and enforcement of the environmental acquis”
What do households use for heating in Skopje?

1. Жаглен 0.5%
2. Огревно дрво 44.7%
3. Пелети 1.2%
4. Брикети 0.3%
5. Друго црсто гориво 0.1%
6. Екстра лесно 0.6%
7. Пропан-бутан 0.3%
8. Ел. енергија (термоакумулативна печка) 12.4%
9. Ел. енергија (гревачки или електричек котел) 13.4%
10. Ел. енергија (топлинска пумпа или климатизер) 5.3%
11. Централно градско грење 21.2%

Како се греат домаќинствата во Скопје?
Subsidizing - a measure to reduce air pollution (2016 - 2019)

- purchase of pallet stoves
- chimney cleaning services
- purchase of bicycles
- purchase of e-scooters
- modern heating appliances - inverter air conditioners
Due to the positive effects and great interest of the citizens, this measure should continue in the next years.
The problem of air pollution requires an integrated approach from all stakeholders (citizens, central / local level institutions and the private sector) in the long term.

The activities undertaken in the last three years are a positive step, but it takes time, additional activities and resources to achieve the target goals (reduction of air pollution).
In order to improve the effectiveness of air quality management, it is necessary to:

- Set up an appropriate and consistent human resource management policy and an integrated environmental system;
- Adopt proposed changes in legislation regarding air pollution and inspection.
- Provide sufficient financial resources for measures implementation.
- Continue and improve subsidy measures.
Thank you for your attention !!!!!

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