The Challenger

AIR QUALITY

Poor
Kosovo

FACTS

Project Title
Supply of project management, air quality information management, awareness raising, change and communication services

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Millennium Foundation Kosovo

Beneficiaries
Ministry of Environmental Protection Agency (MEPA)
Kosovo Hydrometeorological Institute (KHMI)
National Institute of Public Health (NIPH)

Contractor
MAVA IC Sp. z o.o. (Poland) in consortium with Amodeam S.A. (Poland) and Umweltbundesamt GmbH (Austria)

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WORKING TOGETHER TOWARDS GREATER GOVERNMENT TRANSPARENCY AND PUBLIC ENGAGEMENT ON AIR POLLUTION

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During the last four years the Millennium Foundation Kosovo (MFK) supported Government institutions involved in environmental protection and health, such as the Kosovo Environmental Protection Agency (KEPA), the Kosovo Hydrometeorological Institute (KHMI) and the National Institute of Public Health (NIPH), to improve the quality of their report on selected environmental indicators to a variety of stakeholders, including the public.

The project was initially focused on helping the relevant institutions publish the air pollution in a manner consistent with higher standards in terms of transparency and data, the government and the civil society and private sector use the data to design better policies and programs, and the public and stakeholders can generate pressure and advocate to mitigate or prevent the risks related to the pollution.

Back in November 2019, we started the First Environmental Data Collection activity by relocating a few Air Quality Monitoring Stations to support proper measurement of Air Pollution in Kosovo. Also, we provided the Kosovo Hydrometeorological Institute with hardware and associated equipment in the 12 Air Quality Monitoring stations located around Kosovo.

This allowed real time air quality data to be fed wirelessly into an airqo.guru hosted by Makerere University, Uganda. This data is now available to the public on a real time basis, current and historical air quality data continuously available to the Kosovo public as well as three day air quality forecasts.

To foster a constructive relationship with civil society we organized a series of 6 workshops with the Kosovo Environmental Protection Agency and the Kosovo Institute for Journalists, and Government communication officials, who enhanced their knowledge of how to communicate with the public and how to engage with the media. Also, we made a small Social Inclusion approach in hand, special efforts were made to ensure participation of women's civil society organizations and those of social minority groups, to highlight environmental issues and how they are affected by pollution. The workshops also focused on how to use the data will contribute toward more informed decision making approach by the Government.

In order to make easier estimation of the location and amount of pollution being released into the air, Greenhouse Gases and Air Pollutant Inventories for Kosovo were developed, as one of the major tools used in air quality management to provide an understanding of the sources of pollution, and to be used as a decision support tool for the development of effective actions to reduce emissions and improve the quality of air. The Kosovo Emissions Inventory focuses on the following pollutants, all of which can negatively impact on human health and environment: Sulfur dioxide (SO2), nitrogen oxides (NOx), Sulfur dioxide (SO2), carbon monoxide (CO), total non-methane volatile organic compounds (NMVOC), arsenic (As), cadmium (Cd), mercury (Hg) and lead (Pb). It is the first detailed inventory for Kosovo, covering 2010-2014.

On the other hand, we carried classes with all interlocutors to implement a national behavior change campaign aimed to incentivize citizens to protect their health from the pollution and to change their behavior to contribute to the air quality improvement and results. TV ads, posters, brochures and informative days. NIPH support continued on development of an Air Quality Health Advisory page on their website, where for the first time ever, the public will be able to receive health advice based on the pollution levels and mitigate and minimize their exposure to air pollution. An advisory protocol for this work has been improved coordination and agreement between the beneficiaries regarding the responsibilities and responsibilities of the two institutions in regard to reporting AQ data and health advisories.

Building upon the legacy of a modern Air Quality Monitoring system in Kosovo, this grindstone project has made significant improvements in the way the public can access, making the sources, statistical reports and data available to the public, in an accessible format, readable and easy to be used as a modern pathway toward a culture of bridging environmental information with the public, and to provide the necessary tools for the public to actively help informed decision toward a new viable start of resolving the Air Pollution problem in Kosovo.

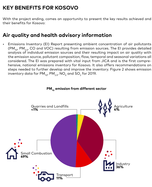
PROJECT FINALIZATION

The main part of the project Supply of project management, air quality information management, behavior change and communication services financed by Millennium Challenge Corporation (MCC) and Government of Kosovo, implemented by MAVA IC Sp. z o.o. Poland etc. One of the last large components of the project was a public campaign, designed to inform the public about the air quality in Kosovo and how it affects their health, and to inform the public about good and reliable sources of air quality (AQ) data and individual behaviors that can lead to improved air quality and better health. The campaign was completed in July 2021 with Air Quality info-Days organized in eight municipalities in Kosovo (Fushe Kosovo, Drenas, Pristina, Lipjan, Hani i Elezit, Mitrovica, Gjilan, Ferizaj). Representatives from the Ministry of Health, the Ministry of Environment, and MFK to use the tools developed by the project: the Air Quality Portal, Smartphone App and the AQ bulletin of National Institute of Public Health (NIPH). Events included outdoor activities with the NGOs representing the vulnerable groups, NIPH officers with citizens, as well as play & learn activities dedicated to school children.

Figure 1
Qendra Bujanori, representative of the Prishtina Municipality

During the final stage of the project, on the job training on environmental health impact assessment and the use of databases for quantification of health risks was delivered to the staff of the Ministry of Health, NIPH, Ministry of Environment, Kosovo Environmental Protection Agency (KEPA) and other stakeholders. Two days of on-the-job training sessions included:

- A session on Changing behavior in dealing with air pollution was held on May 18-21, 2021 to increase knowledge and skills for applying behavior change models for dealing with air pollution and for improving air quality.
- A session on Governance and policies in Air Quality Management took place on June 28 – July 1, 2021.
- A session on Health impact and air pollution risk communication in Kosovo was organized on July 6-8, 2021.



The Gender and Social Inclusion (GSI) policy has been integrated in key relevant project activities from start to end. The gender activities included special support for males and females, involvement of minorities and vulnerable groups in workshops and dissemination of information, and consideration of gender issues in the selected vulnerable groups. In May and June 2021 during AQ info-Days, visual materials and activities were prepared for the vulnerable groups, such as children, people with disabilities, and were produced in three languages and were shared with the NGOs representing different minority groups.

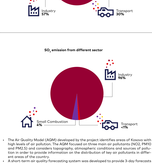
KEY BENEFITS FOR KOSOVO

With the project ending, comes an opportunity to present the key results achieved and their benefits for Kosovo:

Air quality and health advisory information

- Emissions Inventory (EI) Report presenting detailed information of all pollutants ($PM_{2.5}$, PM_{10}, CO and VOC) resulting from emission sources. The EI provides detailed information on the emission factors, activity data, and the methods used to calculate the emission sources pollutant composition flow, temporal and spatial variations of considered. The EI was prepared with and input from JICA and is the first comprehensive emission inventory for Kosovo. The EI report is a tool for decision makers and stakeholders needed to further develop and improve the inventory. Figure 2 shows emission inventory data for $PM_{2.5}$, PM_{10}, NO_x and SO_2 for 2019.

Figure 2
$PM_{2.5}$, PM_{10}, NO_x and SO_2 emission sources estimated in Kosovo in 2019



- The Air Quality Model (AQM) developed by the project identifies areas of Kosovo with high levels of air pollution. The AQM focused on three main air pollutants (NO2, PM10 and PM2.5) and considers topography, atmospheric conditions and sources of pollution. The model provides information on the extent of pollution and the population and areas of the country.
- The Air Quality Forecasting system was developed in parallel to the Emissions for PM10, PM2.5,NO2 and CO concentrations. It was developed using dispersion modeling and the Kosovo Emissions Inventory and Air Quality Model. The Air Quality Forecasting is based on the use of statistical models based on historical data as well as meteorological conditions and emission data.
- The Air Quality Portal (AQP) provides the public through a purpose-built Air Quality Portal (AQP) which also provides public access to the Kosovo air quality information as well as historical data sets. AQP system presents real time information as we passed from the Air Quality Portal (AQP) to the Air Quality Portal (AQP) and the last hour of them. It is available on the Air Quality Portal simpaqkosovo.eu.gov.xx. It also provides information on air quality and health advisories and recommended behaviour corresponding to AQ conditions. The AQP has demonstrated its popularity with the public and has been used by 1,000 users.
- Real time air quality information can also be accessed through a Smartphone Application, available for download for iOS and Android platforms. The app provides an overview of the current air quality in Kosovo, including information on the pollutants, the EU Air Quality Index (AQI), and health advisories, similar to the AQI Portal.
- NIPH for Quality website mph-rks.org provides information on recommended behavior and health advisories based on the AQI. The information provided aims to protect and project health of citizens and improve air quality.
- Air Quality Bulletin (AQB) is a quarterly report. The Bulletin for the year included monthly placement of AQ diffusion tubes at selected locations in Kosovo. A total of 12 locations were selected and monitored for the year 2021. The results of monthly concentrations of benzene at the various sites show that the level in Kosovo are below the guideline limits but above the target value set by the EU and WHO. The results of the monitoring campaign indicate that the main sources of benzene are expected for further investigation of the composition of fuels in widespread source of benzene other than traffic. Results will guide policy makers on the currents status of BTEX pollution in Kosovo and help decide on the next steps.

Outreach and Behavior Change

- Health advisories for early warning messages during air pollution. Provide AQ early warning information and health advisories to the public, specifically to the general population and the sensitive groups, with a comparison based on how to reduce exposure to air pollution. Information on air quality and health advisories are available and it is used by the Health Authorities to provide more information to the public.
- A study on Health Impact of Air Pollution in Kosovo. Represented analysis of the Kosovo public health in relation to the current levels of air pollution exposure, observed and projected health impacts, and the health benefits of air quality improvements indicated to future improvements in air quality. It is the first comprehensive report of Kosovo and provides an analysis of the current status, assessment of needs and recommendations for future actions. The study provides a comprehensive report for improvement of the air quality monitoring data, improvement of the capacities of the institutions responsible for air quality management and training of the relevant professionals.
- Air Quality Info-Days Campaign. The campaign mobilized a wide variety of media tools in order to raise public awareness of air quality issues with a special focus on health linked within the scope of the project. An estimated 300,000 people were reached through the campaign. Special attention was given to vulnerable groups, such as children, people with a purpose built warm banner on Ozone Layer, Tobacco, Insulin Kidney, Kian Kosovo, Invalidsorite, Gusaxe Mesra, Kalise and Grupacesa online. A social media campaign was implemented with the support of the Kosovo Institute for Journalists through social media channels. Nearly 11,000 copies of printed posters in Albanian, Serbian and Bosnian were distributed to the public in the eight municipalities before and during the events. Among the materials produced were two video clips and one animation, which were broadcasted on the national TV channels. The clips were presented scenes and people with chronic diseases. An infographic on Facebook (notorious, an online campaign through web-banner advertising through the most popular Kosovo web portals, and a special section on the project website was created, presenting real time information on air quality and Air Quality Days.All formed on legal components of the outreach campaign and provided the population with information on air quality and health advisories. The Air Quality Info-Days campaign was a substantial capacity building activity for project implementing partners and contributed to organizing awareness campaigns with the aim of encouraging behavior change.

FUTURE

While the project is coming to an end, the work on improving the air quality in Kosovo continues. The project itself has been extended until March 2022, to accommodate the final activities, such as the Air Quality Awareness Campaign, which is being implemented by the GoK. A donor coordination meeting was held on December 21 2021, hosted by MFK, with participation of key donors active in Kosovo and representatives of the Government of Kosovo, MFK, MAVA, Millennium Challenge Corporation, the Ministry of Environment, Spatial Planning and Infrastructure, headed by the Deputy Minister Linda Gusheborgaj. The meeting invited an opportunity to discuss the results of the project and the future plans for the sector, with a focus on the Air Quality Awareness Campaign. Presentations and discussion were held on the needs of the health institutions in Kosovo, the Ministry of Health, and the Ministry of Environment, with a focus on the importance of the Development of Integrated Environment and Health Information System, the importance of the Air Quality Health Advisory Protocol, the need for capacity building for NIPH staff. Dr Calushe Latifi, representing NIPH, elaborated on the environmental side, stressing the importance of the maintenance and increase of the number of air quality monitoring stations in Kosovo, the need for further development of monitoring stations' analyzers, increasing the number of monitoring stations and parameters monitored, integration of AQ portal with other online websites and systems, and the need for further capacity building for staff. The meeting was successful in regarding the plans of donors, providing potential areas of coordination and cooperation, and highlighting the need for further capacity building in the sector, and underlining the very high hopes for the sustainability of the results of this project and further progress in Kosovo's fight for cleaner air in the future.

Figure 3
The smartphone application.

Figure 4
Illustration from an awareness video clip

Figure 5
Cover on pocket brochure

Figure 6
Fact sheet on air pollution and its on children health.

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