



Project

ADDITIONAL DEVELOPMENT OF EU ENVIRONMENT APPROXIMATION FOR AIR, CHEMICALS AND HORIZONTAL ACQUIS

(EuropeAid/138598/IH/SER/RS)

Multi-Criteria Analysis of the 3 With Additional Measures Scenarios

Instructions and Simplified Technical Information for Stakeholder
Participation

September, 10 2021



AUTHORS:

Gonçalo Cavalheiro

Expert

Disclaimer

The opinions expressed in this document are those of the authors and do not necessarily reflect the opinions of the European Union or any other organisation mentioned.



Table of Contents

Contents

1	Introduction	1
2	The procedure	1
3	Stakeholders Engaged.....	1
4	Objectives of the Programme of Air Protection of the Republic of Serbia with Action Plan.....	2
5	The three possible scenarios to be adopted under the Ambient Air Protection Strategy and Action Plan.....	2
6	Criteria and Indicators	3
6.1	Environmental Criteria	3
6.1.1	Environmental Indicator 1: – Number of exceedances of daily PM10 concentrations	5
6.1.2	Environmental Indicator 2: – Annual mean PM10 concentrations	6
6.1.3	Environmental Indicator 3: exceedances of limit values of any pollutants per city in each scenario.....	7
6.2	Health Criteria	7
6.2.1	Health Indicator 1: number of premature deaths per year associated with air pollution.	8
6.3	Economic Criteria	8
6.3.1	Economic Indicator 1: Additional Costs	8
6.3.2	Economic Indicator 2: Net Benefits (health benefits minus additional costs)	9
6.4	Weighing the criteria	9
7	Questions for the online questionnaire	10
7.1	Questions based on the project technical information.....	10
7.1.1	Questions regarding environmental criteria	10
7.1.2	Questions regarding health criteria	11
7.1.3	Questions related to economic criteria	11
7.2	Questions based on stakeholder perception	12
7.3	Weighing the criteria	14
8	Annex: list of measures per scenario.	16



List of Tables

Table 1 - Exceedances of limit values of any pollutants per city in each scenario (red means exceedances are observed for the pollutants mentioned, green means no exceedances are observed)	7
Table 2 - Measures included in scenario WAM A.....	16
Table 3 - Measures included in scenario WAM B.....	20
Table 4 – Measures included in scenario WAM C	22



List of Figures

Figure 1 – Number of exceedances of daily PM10 concentrations: 50 $\mu\text{g.m}^{-3}$ (limit value: 35 days in a year)	5
Figure 2 -Annual mean PM10 concentrations (LV=40 $\mu\text{g.m}^{-3}$)	6
Figure 3 - number of premature deaths per year associated with air pollution.....	8
Figure 4: Net Benefits (benefits minus additional costs) relative to WEM in 2030 in each scenario	9



List of Abbreviations

Acronyms	Meaning
EU	European Union
LV	Limit value
MCA	Multi-criteria analysis
NGO	Non-Governmental Organization
NO₂	Nitrogen dioxide
PM	Particulate Matter
Ref	Reference
SO₂	Sulfur dioxide
VSL	Value of Statistic Life
WAM A	With Additional Measures - A
WAM B	With Additional Measures - B
WAM C	With Additional Measures - C
WEM	With Existing Measures

1 Introduction

We thank you for your interest in participating in the stakeholder-led multicriteria analysis of the three additional measures scenarios (WAM A, WAM B and WAM C) produced for the Programme of Air Protection of the Republic of Serbia with Action Plan. Your opinion is very important to the Ministry of Environmental Protection. The results of this exercise will inform and support the decision-making process, but there will be no obligation to follow them.

The stakeholder engagement at this stage of the technical process, follows international best practice for public participation. It does not replace additional public consultation procedures to be implemented in accordance with Serbian law.

2 The procedure

This brochure is aimed at supporting the participation of stakeholders in the multicriteria analysis of the three additional measures scenarios (WAM A, WAM B and WAM C) produced for the Programme of Air Protection of the Republic of Serbia with Action Plan.

The technical information included here is intended to be understood by a wide range of stakeholders, with very different backgrounds, interests and experiences. As such, it represents only a very small fraction of the technical information produced by the project and is described in the simplest terms possible.

Once you have read this brochure, you are invited to access a website and answer an online questionnaire. Reading this information and answering the questionnaire should take less than 30 minutes. Your answer to the questionnaire is welcome until September, 27th 2021.

You are invited to include your email address in the mailing list, so that you can receive information about the project, including about the results of the multi-criteria analysis. Please use the following link for that <https://forms.gle/WAS1pE2sKVaufrPt9> (your e-mail address will not be linked to your answer to the questionnaire. As such, your participation remains fully anonymous).

3 Stakeholders Engaged

The following is a list of stakeholder categories that were invited to participate in this multicriteria analysis.

- Working Group members and respective institutions
- Environmental NGOs
- Local development NGOs
- Academia (Belgrade and Novi Sad (environmental and energy) engineering faculties and medicine faculties)

- Trade Union Federation
- Farmers associations
- Serbian Chamber of Commerce and Industry and other relevant business/industry associations
- Standing Conference of Towns and Municipalities
- Local Self Governments of Cities with stations included in scenarios
- General Public

The following sections present technical information about the Programme of Air Protection of the Republic of Serbia with Action Plan and the three scenarios under consideration. Where relevant and to the extent possible, we invite you to use this information to support your answers to the online questionnaire.

4 Objectives of the Programme of Air Protection of the Republic of Serbia with Action Plan

The objectives of the Programme of air Protection of the Republic of Serbia with Action Plan are to be defined along the lines of:

1. Improving health of the Serbian people by reducing exposure to air pollution
2. Reducing the negative impacts of air pollution in ecosystems, including in fauna and flora
3. Aligning Serbia with the European Union's regulatory limits to air pollution

5 The three possible scenarios to be adopted under the Ambient Air Protection Strategy and Action Plan

In the scope of the technical project for the elaboration of the Programme of Air Protection of the Republic of Serbia with Action Plan, three scenarios have been developed and the corresponding emissions of air pollutants have been estimated.

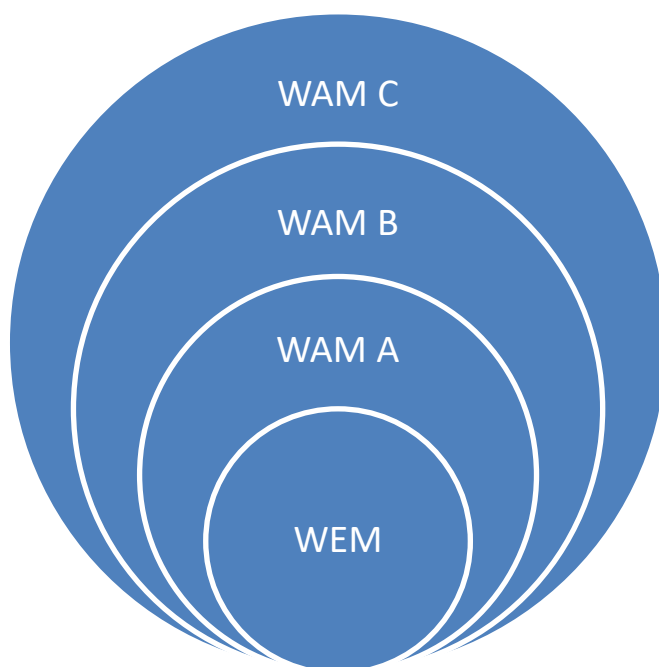
- **WAM A: with additional measures A.** Full implementation of all relevant EU directives and Regulations not yet fully transposed and implemented
- **WAM B: with additional measures B.** More intensive control scenario than WAM A. In addition to WAM A, introduction in some sectors, of stricter ELVs and introduction of national financial and fiscal policies and measures in key emission source categories (such as scraping and promotion schemes for passenger cars and household wood/coal appliances)
- **WAM C: With additional measures C.** Full control scenario. In addition to WAM B, new measures including local specific measures (such as incentives, restrictions and bans) aiming to ensure compliance with air quality limit values in specific cities (Directive 2008/50/EC, especially for particle matters PM₁₀ and PM_{2.5})

As can be seen, each scenario represents an additional effort (with additional measures) compared to the previous one: the WAM B includes all measures included in WAM A, plus additional measures and WAM C includes all measures in scenarios WAM A and WAM B, plus additional measures.

A list of all policies and measures included in each scenario is included in the Annex to this document.

In addition to the four scenarios above, the project also estimated the air quality associated with measures already adopted and already under implementation (this scenario is for reference only – it is not included in the multi criteria analysis as the strategy will necessarily have to adopt one of the three additional measures scenarios described above):

- **WEM: with existing measures.** Scenario including policies and measures adopted and implemented by 1.1.2019



6 Criteria and Indicators

As mentioned above, the selection of criteria and indicators for this stakeholder led multi-criteria analysis (MCA) is simplified so as to allow for the respective understanding by a wide range of stakeholders.

6.1 Environmental Criteria

For the environmental criteria, and in order to simplify the MCA, the indicators chosen are the Annual Limit Value on daily Particulate Matter (PM10) concentrations, which in accordance with EU standards and regulations is 35. This means that it is considered acceptable in terms of public health that the daily limit value of PM10 concentrations ($50 \mu\text{g.m}^{-3}$) in the air is exceeded 35 days in a year. Anything above that starts creating a hazard for public health. The greater the number of days where the limit value is exceeded, the greater the risk for public health.



In addition to the exceedances of daily limits, a second indicator for PM₁₀ is also presented: the annual mean concentrations, which in accordance with the EU standards and regulations is set at 40 µg.m⁻³. This means that annual mean concentrations above this value represent risks to public health.

The two indicators combined for each city, provide a good basis for a decision by stakeholders on which scenario provides the optimum environmental results (reduction of daily exceedances and of annual mean concentrations).

A third complementary, non-quantified indicator is proposed for its simplicity and for being easy to understand: exceedances of Limit Values of all pollutants per city in each scenario.

6.1.1 Environmental Indicator 1: – Number of exceedances of daily PM10 concentrations

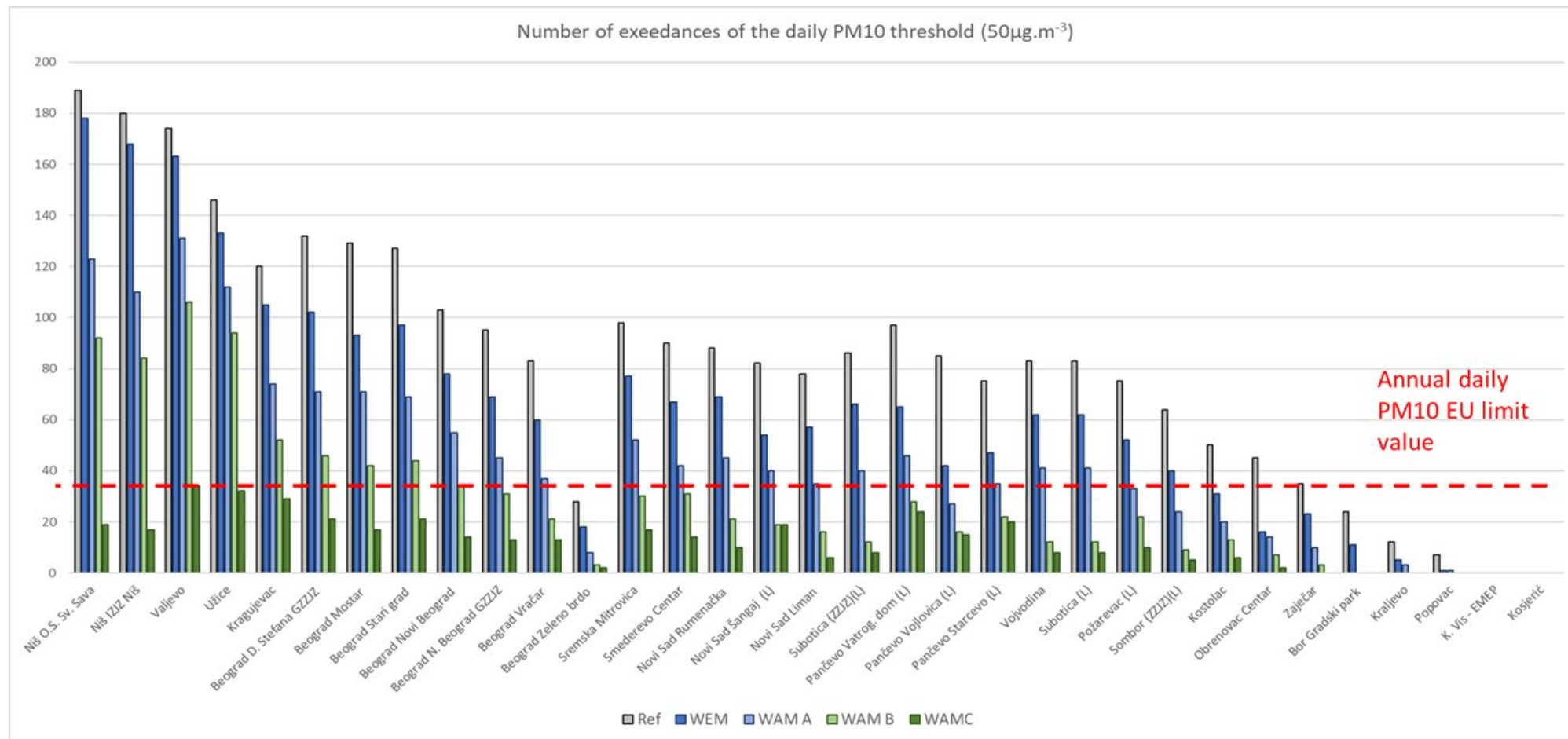


Figure 1 – Number of exceedances of daily PM10 concentrations: $50\mu\text{g}\cdot\text{m}^{-3}$ (limit value: 35 days in a year)



6.1.2 Environmental Indicator 2: – Annual mean PM10 concentrations

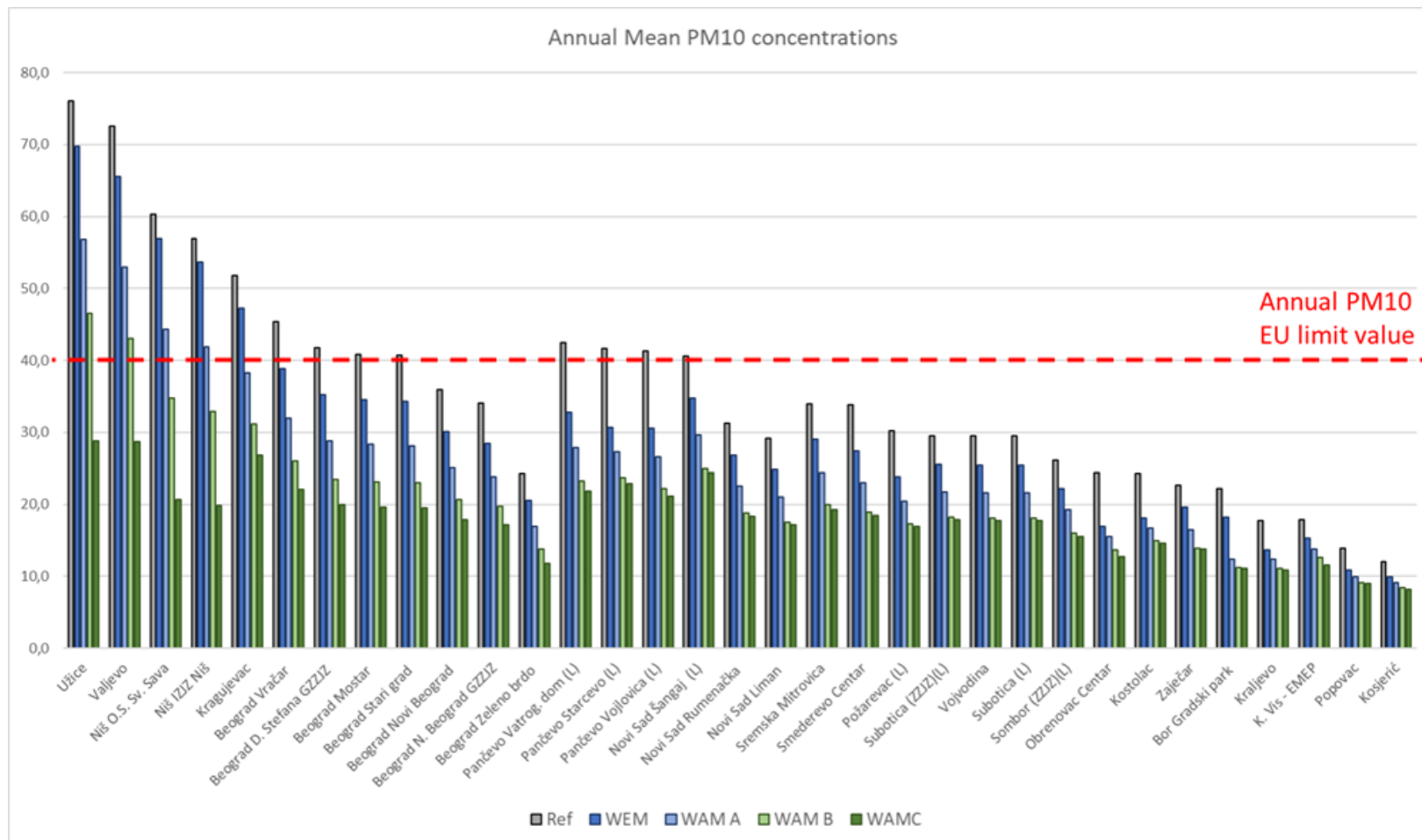


Figure 2 -Annual mean PM10 concentrations (LV=40 µg.m-3)

6.1.3 Environmental Indicator 3: exceedances of limit values of any pollutants per city in each scenario

Table 1 - Exceedances of limit values of any pollutants per city in each scenario (red means exceedances are observed for the pollutants mentioned, green means no exceedances are observed)

	2015 Ref	2030 - WEM	2030 - WAM A	2030 - WAM B	2030 - WAM C
Užice	PM10 & PM2.5	PM10 & PM2.5	PM10 & PM2.5	PM10 & PM2.5	
Valjevo	PM10 & PM2.5	PM10 & PM2.5	PM10 & PM2.5	PM10 & PM2.5	
Niš	PM10 & PM2.5	PM10 & PM2.5	PM10 & PM2.5	PM10 & PM2.5	
Kragujevac	PM10 & PM2.5	PM10 & PM2.5	PM10 & PM2.5	PM10	
Beograd	PM10 & PM2.5 & NO2	PM10 & PM2.5	PM10 & PM2.5	PM10	
Pančevo	PM10 & PM2.5	PM10 & PM2.5	PM10		
Novi Sad	PM10 & PM2.5	PM10	PM10		
Sremska Mitrovica	PM10 & PM2.5	PM10 & PM2.5	PM10		
Smederevo	PM10 & PM2.5	PM10	PM10		
Vojvodina	PM10 & PM2.5	PM10	PM10		
Subotica	PM10 & PM2.5	PM10	PM10		
Požarevac	PM10 & PM2.5	PM10 & PM2.5			
Sombor	PM10 & PM2.5	PM10 & PM2.5			
Obrenovac	PM10				
Kostolac	PM10				
Zaječar	PM10				
Vranje	SO2				
Bor	SO2	SO2	SO2	SO2	
Cacak	NO2				

6.2 Health Criteria

For the health benefits from the reduction in pollutants concentrations and exceedances achieved in each scenario, a single indicator has been chosen, once again, for sake of simplicity: number of premature deaths per year associated with air pollution.

6.2.1 Health Indicator 1: number of premature deaths per year associated with air pollution.

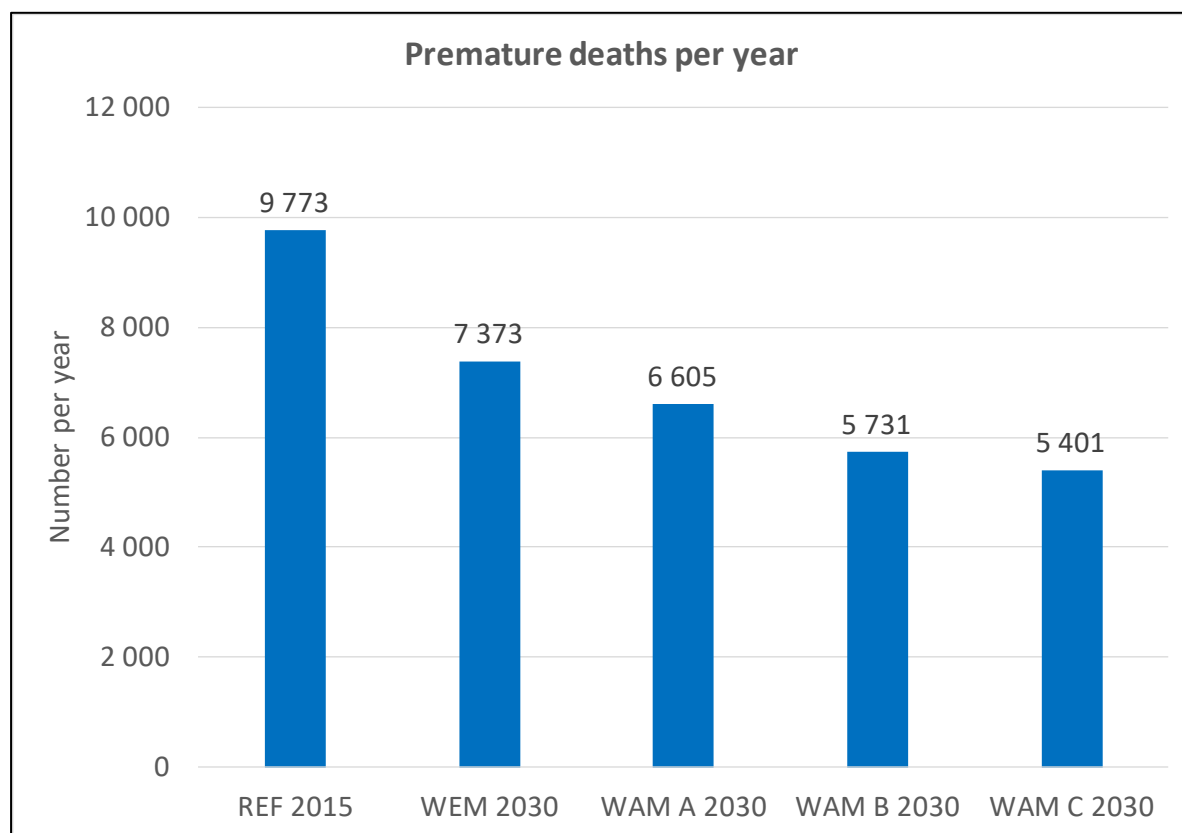


Figure 3 - number of premature deaths per year associated with air pollution

6.3 Economic Criteria

For the economic criteria, two indicators are presented: the additional costs and the net benefits (health benefits minus the additional costs).

The additional costs associated with each scenario are those required to implement the measures included in each of them, in comparison with the costs associated with the implementation of the reference scenario.

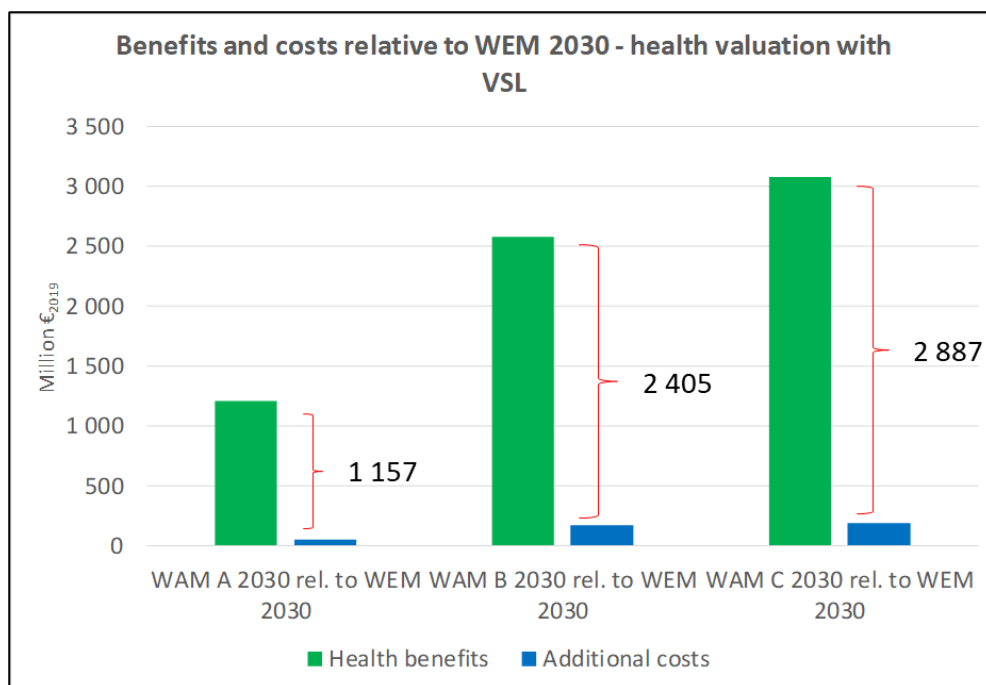
The economic benefits are those that result from the estimation of a monetary value associated with the reduction of mortality and morbidity. Based on international standards, per each premature death and each case of other health impacts (hospital admissions for respiratory and cardiovascular reasons, bronchitis, restricted activity days, work loss days...) avoided there is an economic benefit for the whole society. The net benefits presented in this criterion equal the annual avoided health costs (health benefits) minus the annual additional investment & operating and maintenance costs (to implement the measures) of mitigation scenarios relative to WEM, in 2030.

6.3.1 Economic Indicator 1: Additional Costs

Table 2: Additional costs for the implementation of each scenario compared to the WEM scenario

M€/year	WAM A 2030 rel. to WEM 2030	WAM B 2030 rel. to WEM 2030	WAM C 2030 rel. to WEM 2030
Additional costs	51	174	193

6.3.2 Economic Indicator 2: Net Benefits (health benefits minus additional costs)



M€/year (VSL)	WAM A 2030 rel. to WEM 2030	WAM B 2030 rel. to WEM 2030	WAM C 2030 rel. to WEM 2030
Health benefits	1 208	2 579	3 080
Additional costs	51	174	193
Net benefit	1 157	2 405	2 887

Figure 4: Net Benefits (benefits minus additional costs) relative to WEM in 2030 in each scenario

6.4 Weighing the criteria

While all criteria used in this exercise are relevant, each person attributes a specific relative importance to each criterion compared to others. Some stakeholders may attach greatest importance to health benefits, others may be more concerned with the costs associated with the health benefits and others may simply consider the environmental aspects the most important ones. So that this stakeholder-led multi-criteria analysis can consider the relative importance attributed by each stakeholder to each criterion (environment, health and economic - costs and benefits), after assessing each scenario based on

mentioned criteria, you will be asked to weigh the relative importance of each such criterion. The scale used ranges from zero to five, where zero is no importance attributed to the criteria and five is high importance attributed to the criterion.

7 Questions for the online questionnaire

To answer the questionnaire, please follow this link: <https://forms.gle/WJmS7oKfTMM9hWdP8>. Only answers provided through this link will be considered.

7.1 Questions based on the project technical information

7.1.1 Questions regarding environmental criteria

How satisfied are you with the PM10 emissions reductions achieved with scenario WAM A?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the PM10 emissions reductions achieved with scenario WAM B

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the PM10 emissions reductions achieved with scenario WAM C?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

—

How satisfied are you with the number of exceedances of PM10 estimated in WAM A?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the number of exceedances of PM10 estimated in WAM B?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the number of exceedances of PM10 estimated in WAM C?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

—

How satisfied are you with the number of exceedances of any air pollutants in your city (or the one closest to you) estimated in WAM A?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the number of exceedances of any air pollutants in your city (or the one closest to you) estimated in WAM B?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the number of exceedances of any air pollutants in your city (or the one closest to you) estimated in WAM C?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

7.1.2 Questions regarding health criteria

How satisfied are you with the number of premature deaths associated with air pollution estimated in WAM A?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the number of premature deaths associated with air pollution estimated in WAM B?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the number of premature deaths associated with air pollution estimated in WAM C?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

7.1.3 Questions related to economic criteria

How satisfied are you with the additional costs estimated for the implementation of WAM A?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the additional costs estimated for the implementation of WAM B?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the additional costs estimated for the implementation of WAM C?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the net benefits (benefits-costs) estimated in WAM A?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the net benefits (benefits-costs) estimated in WAM B?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

How satisfied are you with the net benefits (benefits-costs) estimated in WAM C?

1 (not satisfied at all); 5 (somewhat satisfied); 10 (extremely satisfied)

Please choose the statement below which applies more closely to your case:

- a) The evaluation I provided above was mostly influenced by the emissions and exceedances in the city where I live or work (or the closest one)
- b) The evaluation I provided above was mostly influenced by the overall results of the scenarios, regardless of the results in the city I live or work in (or the closest one).

7.2 Questions based on stakeholder perception

Which scenario do you think best contributes to the fight against climate change?

- WAM A
- WAM B
- WAM C
- Don't know
- None
- All the same

Which scenario do you think best contributes to the protection of biodiversity?

- WAM A
- WAM B
- WAM C
- Don't know
- None

- All the same

Which scenario do you think best contributes to poverty eradication?

- WAM A
- WAM B
- WAM C
- Don't know
- None
- All the same

Which scenario do you think best contributes to gender equality?

- WAM A
- WAM B
- WAM C
- Don't know
- None
- All the same

Which scenario do you think best contributes to improvement of rural livelihoods?

- WAM A
- WAM B
- WAM C
- Don't know
- None
- All the same

Which scenario do you think best contributes to improvement of urban livelihoods?

- WAM A
- WAM B
- WAM C
- Don't know
- None
- All the same

Which scenario do you think best contributes to job creation?

- WAM A

- WAM B
- WAM C
- Don't know
- None
- All the same

Which scenario do you think best contributes to Serbia's energy security?

- WAM A
- WAM B
- WAM C
- Don't know
- None
- All the same

Which scenario do you think is best for your city?

- WAM A
- WAM B
- WAM C
- Don't know
- None
- All the same

Please use the following space to make any comment you feel appropriate (max 200 characters).

7.3 Weighing the criteria

Please attribute a relative importance to the environmental criterion

0 (not important at all) – 5 (extremely important)

Please attribute a relative importance to the health criterion

0 (not important at all) – 5 (extremely important)

Please attribute a relative importance to the economic criterion

0 (not important at all) – 5 (extremely important)





8 Annex: list of measures per scenario.

Table 3 - Measures included in scenario WAM A

# PaM (WAM A)	Name	Sector concerned	NFR concerned
WAM A-1	Enforcement of the chapter II of the EU Directive Industrial emissions for Large Combustion Plants with consideration of the upper level of BAT Associated Emission Levels	Production of electricity and heat except NERP plants	1A1a
WAM A-2	Enforcement of the EU Directive Medium Combustion plants		
WAM A-3	Enforcement of limit values for smallest combustion plants (lower than 1 MW) of the national regulation on emission limit values of pollutants in the air from combustion plants (OGRS, No 6/16)		
WAM A-1	Enforcement of the chapter II of the EU Directive Industrial emissions for Large Combustion Plants with consideration of the upper level of BAT Associated Emission Levels	Industry (combustion)	1A2c, 1A2d, 1A2e and 1A2gviii
WAM A-2	Enforcement of the EU Directive Medium Combustion plants		
WAM A-2	Enforcement of the EU Directive Medium Combustion plants	Commercial and Institutional, Agriculture	1A4ai, 1A4ci
WAM A-3	Enforcement of limit values for smallest combustion plants (lower than 1 MW) of the national regulation on emission limit values of pollutants in the air from combustion plants (OGRS, No 6/16)		



# PaM (WAM A)	Name	Sector concerned	NFR concerned
WAM A-4	Replacement of existing domestic appliances with new appliances Eco-Design compliant (EU Eco-design Directive and its regulations 2015/1185 and 2015/1189) without any public financial support (EU regulation 2015/1185 and 2015/1189) (integration: 5% in 2025, 30% in 2030 and 55% in 2035)	Residential heating	1A4bi
WAM A-5	Enforcement of the chapter II of the EU Directive Industrial emissions in industrial processes with consideration of the upper level of BAT AELs.	Oil refining	1A1b/1B2aiv
		Iron and steel industry	1A2a, 2C1
		Manufacture of copper	1A2b, 2C7a
		Manufacture of secondary aluminium	1A2b, 2C3
		Manufacture of cement	1A2f, 2A1
		Manufacture of lime	1A2f, 2A2
		Manufacture of magnesium	1A2b, 2C4
		Manufacture of glass	1A2f, 2A3
		Manufacture of ammonia, nitric acid, ammonium nitrate, urea, phosphate fertilizers, sulfuric acid	2B1, 2B2, and 2B10a



# PaM (WAM A)	Name	Sector concerned	NFR concerned
		Manufacture of high- and low-density polymers	2B10a
		Manufacture of paper	2H1
		Manufacture of wood panels	2I
WAM A-6	Enforcement of regulation (EU) 2016/1628 on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulations (EU) No 1024/2012 and (EU) No167/2013, and amending and repealing Directive 97/68/EC	Non-road mobile machineries	1A2gvii, 1A4cii
WAM A-7	Enforcement of the amended fuel quality Directive 2009/30/EC and Directive 2016/802/EC on the reduction of the sulphur content of certain liquid fuels	Sulphur content of liquid fuels	1A2gvii, 1A4cii, 1A3dii
WAM A-8	Enforcement of directives 94/63/EC (stage I) and 2009/126/EC (stage II)	Petrol distribution	1B2av
WAM A-9	Enforcement of the IED Chapter V, Annex VII for VOC or chapter II for plants with a consumption larger than 200 t	Industrial uses of solvents	2D3d, 2D3f, 2D3g, 2D3h, 2D3i



# PaM (WAM A)	Name	Sector concerned	NFR concerned
WAM A-10	Road transport: minimum standards for second-hand vehicle imports imposed at Euro 4/IV from 1st January 2024, Euro 5/V from 1st January 2025 and Euro 6/VI from 1st January 2030	Road transport	1A3b
WAM A-11	Introduction of the best practices at spreading for solid manure application by incorporating the manure in the soil faster: - Pig and poultry farms: rapid incorporation within 4 hours and 12 hours - Cattle manure: rapid incorporation within 24 hours, 12 hours or 4 hours	Solid manure applied to soils	3Da2a
WAM A-12	Introduction of best practices at spreading for slurry application by trailing hose and incorporation within 4 hours and 12 hours (pig and cattle manure)	Liquid manure applied to soils	3Da2a
WAM A-13	Incorporation of urea into soil	Inorganic N-fertilizers (includes also urea application)	3Da1



Table 4 - Measures included in scenario WAM B

# PaM (WAM B)	Name	Sector concerned	NFR concerned
WAM B-1	Enforcement of the chapter II of the EU Directive Industrial emissions for Large Combustion Plants with consideration of the mean of upper and lower levels of BAT AELs	Production of electricity and heat (Except NERP plants)	1A1a
		Industry (combustion)	1A2c, 1A2d, 1A2e and 1A2gviii
WAM B-2	Financial incentives from more replacement of existing domestic appliances with new appliances Eco-Design compliant (EU Eco-design Directive and its regulations 2015/1185 and 2015/1189) from 2025 to 2030 (integration: 5% in 2025, 55% in 2030 and 80% in 2035)	Residential heating	1A4bi
WAM B-3	Enforcement of the chapter II of the EU Directive Industrial emissions for industrial processes with consideration of the mean of upper and lower levels of BAT AELs	Oil refining	1A1b/1B2aiv
		Iron and steel industry	1A2a, 2C1
		Manufacture of copper	1A2b, 2C7a
		Manufacture of secondary aluminium	1A2b, 2C3
		Manufacture of cement	1A2f, 2A1



		Manufacture of lime	1A2f, 2A2
		Manufacture of magnesium	1A2b, 2C4
		Manufacture of glass	1A2f, 2A3
		Manufacture of ammonia, nitric acid, ammonium nitrate, urea, phosphate fertilizers, sulfuric acid	2B1, 2B2, and 2B10a
		Manufacture of high- and low-density polymers	2B10a
		Manufacture of paper	2H1
		Manufacture of wood panels	2I
WAM B-4	Road transport: minimum standards for second-hand vehicle imports imposed at Euro 5/V from 1st January 2024 and Euro 6/VI from 1st January 2025	Road transport	1A3b
WAM B-5	Road transport: financial incentives for scrapping oldest Euro 1, 2 and 3 diesel passenger cars and light duty vehicles and for EURO I, II and III diesel busses.	Road transport	1A3b
WAM B-6	Additional measures for activities using solvents	Use of solvents in industry	2D3d, 2D3f, 2D3g, 2D3h, 2D3i
WAM B-7	Introduction of best practices at spreading for pig and cattle slurry : strong development of injection and residual application by trailing hose followed by an incorporation within 4 hours or 12 hours	Liquid manure applied to soils	3Da2a



WAM B-8	Substitution of urea with ammonium nitrate fertilizer	Use of inorganic fertilizers	3Da1	
WAM B-9	Introduction of best practices for slurry storage: - covering storage in pigs IPCC farms - development of a natural surface crust in cattle farms (dairy cows only)	Pig manure storage	3B	
		Dairy cow manure storage	3B	
WAM B-10	Limitation of the burning of agricultural residues (0% in 2035)	Burning of agricultural residues	3F	

Table 5 – Measures included in scenario WAM C

# PaM (WAM B)	Name	Sector concerned	NFR concerned
WAM C-1	Increase of the financial incentives for faster replacement of existing domestic appliances with new appliances Eco-Design compliant or heat pumps in cities of Kragujevac, Beograd, Nis, Valjevo and Uzice (EU Eco-design Directive and its regulations 2015/1185 and 2015/1189) from 2024 to 2030	Residential heating	1A4bi



WAM C-2	Enforcement of the chapter II of the EU Directive Industrial emissions for industrial processes with consideration of the mean of upper and lower levels of BAT AELs and the lower levels for the plants of copper production and sulphuric acid production in Bor (replaces B3)	Industry	
WAM C-3	Limitation of the burning of agricultural residues (0% in 2030)	Burning of agricultural residues	3F



Republic of Serbia
Ministry of Environmental Protection
Ministry of Finance
Department for Contracting and Financing
of EU Funded Programmes

This project is funded by
the European Union



Project implemented by the Consortium

