

Status and plans preparing for Chapter 27 negotiations

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REPUBLIC OF SERBIA
Ministry of
Environmental Protection

ПРЕГОВАРАЧКА
ГРУПА 27

Status of Negotiation Position for Chapter 27

- 2nd draft NP was provided to the Commission end of December 2018
- Comments received February 2019, and March Sub-committee meeting provided recommendation for submitting the NP officially
- During last 6 months the Ministry and the Negotiating Group 27 was mainly compiling results of activities from last several years
- The result – about 200 pages of Negotiating Position with about 1300 pages of supporting materials. About 1500 pages in English, 1650 pages in Serbian language and this is still not all what will be provided. Some documents – DSIPs are still under development

- Negotiating Position Chapter 27 consists of 13 annexes - 10 DSIPs, MIFP, APACD and supporting information for geographical adaptations
- Approved by the Negotiating Group 27 on July 4, 2019
- Submitted to the coordination procedure July 5, to 27 institutions
- Ministry of Interior and Ministry of Trade, Tourism and Telecommunication did not provide comments yet
- We do expect to finalise coordination of draft NP and send to the Government during November for adoption.

Transitional periods

- High implementation costs are the main reason for most of transitional periods request
- Multi-annual Investment and Financing Plan (MIFP) indicates that investment in water and waste sectors can reach to about 7,5 billion euro
- Such investments are foreseen to be financed from EU funds (64%), state (18%) and local (4%) budgets and funds, loans (14%)
- Private sector is also planned to contribute to the financing of projects, in particular, in waste management sector

Urban Wastewater Treatment

- Approximately 55% of the total population of Serbia are currently connected to wastewater collection systems
- Only about 7.3% of waste water is biologically treated
- The average age of networks is 35-40 years
- 359 wastewater treatment facilities have to be constructed
- Around 10,400 km of additional collection network have to be constructed
- Total implementation costs estimated approximately 4.3 billion EUR

Municipal waste management

- Most of municipal waste is still being landfilled
- About 30% of generated municipal solid waste is being landfilled into 10 sanitary landfills (8 regional, 2 municipal)
- But there are more than 3500 non-compliant landfills and dumpsites of very different sizes and risk factors
- The recycling rate for municipal waste, based on officially reported data, was approx. 3% in 2016. When current EU requirements ask for 50% by 2020, revised directive - 65 % by 2035
- Situation is better with packaging waste, but targets for electronic equipment waste and batteries are not achieved
- Identified need for investment is more than €1 billion

Industrial pollution

- Industrial Emissions Directive contains high costs requirements mainly for private sector
- Out of total 227 Annex I IED installations currently present in Serbia, extended implementation period is required for 67 installations
- Negotiating Position is presenting company by company requests with specific time periods
- Investments costs for IED is about 1.3 billion Euro
- High costs for private sector are also basis for the request of transitional periods for VOC Petrol stage I and VOC Petrol stage II directives, partly also for waste management directives implementation of which is based on producers' responsibility principle (Packaging, WEEE, Batteries directives)

Main challenges

- Moving target: revision of 5 waste sector DSIPs considering circular economy package - to be ready by mid 2020 the latest; new directives and regulations
- Delivering, what has been promised:
 - Still more than 100 legal acts to be approved in order to complete transposition by 2021
 - Remaining gaps in monitoring and data management
 - Institutional development, including additional staff in MEP as planned

Thank you for attention

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Latest developments for investment planning in the water and waste sector

Mr Slobodan Perovic

Assistant Minister for Strategic planning and projects

Ministry for Environmental Protection

ANCE, October 23rd, 2019

Update regarding the strategic framework

- Negotiation position for Chapter 27 Environment and Climate Change is sent on July 5th in the procedure, to be adopted by GoS by the end of 2019 with following Annexes:
 - **APACD – including administrative capacities for environmental project management**
 - **MIFP – including WW priority project pipeline**
 - **DSIP for UWWTD - including timeline and technical measures**
 - DSIP for DWD
 - DSIP on Waste sector Directives

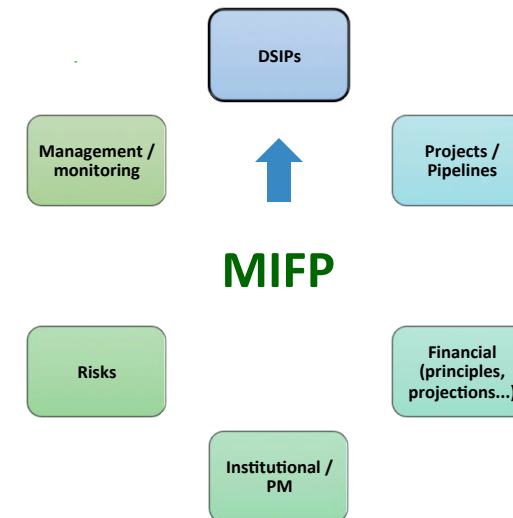
DIRECTIVE SPECIFIC IMPLEMENTATION PLANS

DSIPs developed:

1. Waste Framework Directive
2. Landfill Directive / Investment Planning Tool
3. Packaging and Packaging Waste Directive
4. WEEE Directive Batteries and Accumulators Directive
5. Water Framework Directive
6. Urban Wastewater Directive
7. Drinking Water Directive
8. Nitrates Directive
9. Industrial Emissions Directive

For each DSIP:

- EU requirements
- Key compliance issues
- Technical measures
- Costs and financing
- Target deadlines



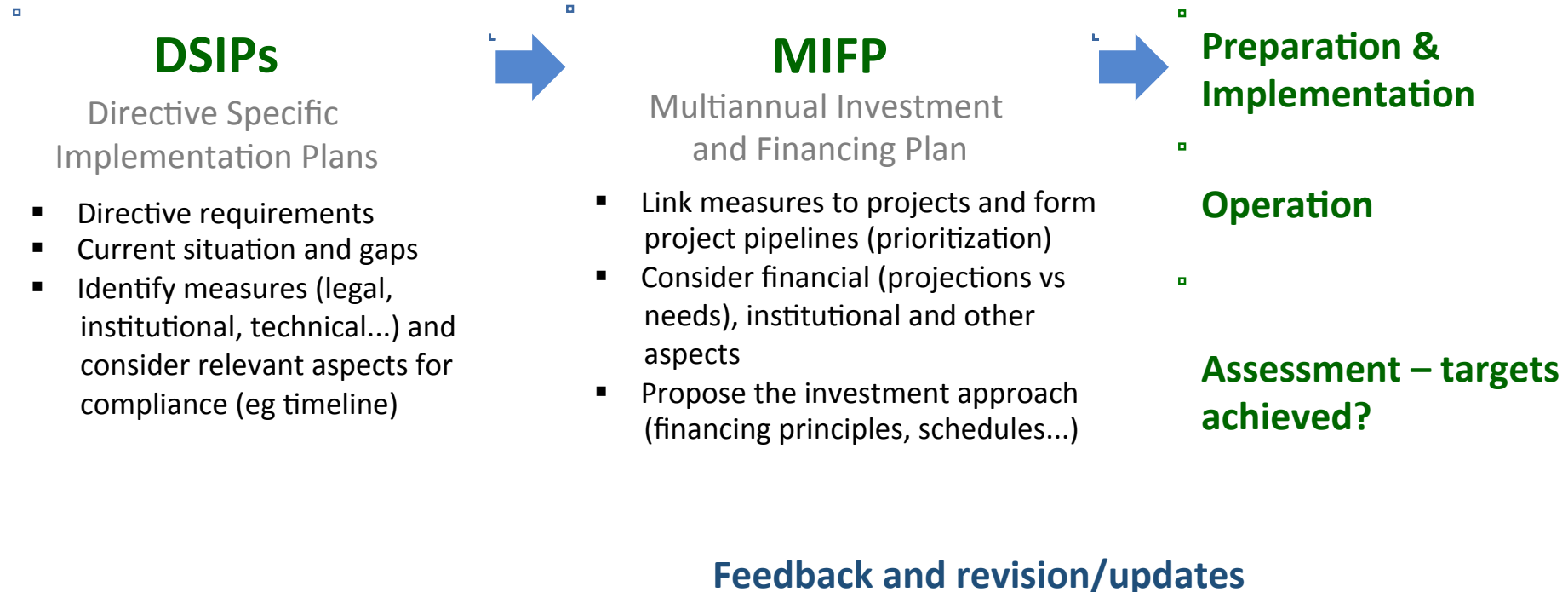
From DSIPs to MIFP

- Review the technical measures included in the DSIPs
- Combine the technical measures from DSIPs into projects
- Apply the prioritization criteria and schedules from the related DSIP
- Define and apply a standardized set of percentages for calculating preparation, supervision and contingency costs (up to 5% on average for each)
- Apply standardized sets of time periods needed for each project/phase
- Collect information on projects' maturity and agreed funding arrangements
- Review and discuss the pipeline with stakeholders
- Adjust the pipeline schedule considering all the above

Multiannual Investment and Financing Plan - MIFP

- MIFP is a tool used for **accession driven** environmental investment planning
- MIFP is based on **Directive Specific Implementation Plans (DSIPs)**
- MIFP builds on the DSIPs' work and includes:
 - overview of infrastructure needed for compliance
 - cost estimates
 - potential sources of financing and affordability
 - priorities for investment and proposed sequencing of investments, and
 - project preparation activities
- **MIFP project pipeline** contains infrastructure development costs including preparation, construction, supervision, contingencies and institutional support

EU ACCESSION DRIVEN INVESTMENT PLANNING PROCESS



MIFP provides a comprehensive financing strategy defining investment needs, finance sources and timing of individual projects

Waste sector

- The pipeline includes 123 projects, total costs 1,344 MEUR
- First phase priority pipeline includes 98 projects with total implementation cost of 997.6 MEUR
- Including preparation costs (63.5 MEUR) total investment cost 1,061 MEUR
- Four types of projects:
 - Supporting regional waste management systems establishment 61 project
 - 23 C&D waste projects (C&D waste storage in each municipality, regional mobile equipment for treatment, regional storage for C&D waste)
 - 13 hazardous waste projects (regional hazardous waste storage facilities, physical-chemical treatment facilities, incineration plants for organic industrial and medical waste, landfill for inorganic industrial hazardous waste) with total value of 38.6 MEUR.
 - Other.

Drinking water

- Total value of investments needed for compliance with the DWD amounts to approximately 1,293 MEUR
- 1,551 MEUR including preparation, supervision, and contingencies
- Drinking water pipeline includes 139 projects, out of which 107 is first phase priority
- Projects are mainly dealing with:
 - Water quality parameters, in two levels:
 - Health impairment issues (eg presence of arsenic, nitrate and nitrite, etc.)
 - Acceptability concerns (eg cloudiness, color, etc.)
 - Water shortage issues
- Total value of first phase priority projects is 1,185 MEUR

Waste water sector

- Total net costs for UWWT Directive implementation in Serbia amount to approximately 3,800 MEUR:
 - Waste water collection measures - 2,552 MEUR
 - Waste water collection measures - 2,552 MEUR
 - Waste water treatment measures - 1,266 MEUR
- Including preparation, supervision, and contingencies - 4,280 MEUR
- Technical measures and projects are based on 398 agglomerations
- Projects include around 10,369 km of additional collection network to be constructed, replacement/rehabilitation of 1,052 km of the existing network, construct 359 wastewater treatment facilities
- First phase priority pipeline includes 42 priority projects, with total value of around 1,668 MEUR

Short characteristic of the WW sector

- Approximately 3.9 million residents are currently connected to wastewater collection systems (55% of the total population)
 - 52.4% of total generated wastewater is collected
 - 7.3% receives biological treatment
 - 1.3% undergoes more stringent treatment.
- In total 398 agglomerations are delineated
- Several projects for medium-sized WWTPs, mostly ranging from 80,000 to 100,000 PE are currently at different levels of project preparation or under construction in terms of water treatment or sludge treatment facilities
- Total estimated number of wastewater treatment plants is 359 (DSIP)
- Approximately 10,400 km of new wastewater collection networks have to be constructed (DSIP)

Agglomerations

- Technical measures and projects are based on **agglomerations**, and grouped into **5 categories**, from major (above 150,000 pe) to very small (below 2,000 pe)
- **UWWTD DSIP deadline for implementation of measures in 1 and 2 category agglomerations (> than 50,000 PE) is 2032**

Sensitivity	Agglomeration size classes (PE)				
	2,000-10,000	10,000-15,000	15,000-50,000	50,000-150,000	Above 150,000
Black Sea (Danube River) basin It is proposed that Serbia applies the provisions of Article 5(8), i.e. more stringent treatment for the entire territory and agglomerations larger than 10.000 PE	Wastewater collection, secondary treatment	Wastewater collection, more stringent treatment	Wastewater collection, more stringent treatment	Wastewater collection, more stringent treatment	Wastewater collection, more stringent treatment
	5	4	3	2	1
Number of agglomerations	278	20	52	19	4

Prioritization criteria and technical measures

Main groups of technical measures included in the UWWTD DSIP:

- 1.Rehabilitation/upgrade/replacement of elements of wastewater collection systems
- 2.Extension of wastewater collection systems
- 3.Introduction of urban wastewater treatment

The main **project prioritization criteria** in the wastewater pipeline:

- **Size of agglomeration**, in line with the UWWTD
- **Project maturity**
- **Specific additional criteria** (affecting sources of drinking water, tourism areas, affordability levels, etc)

Waste water infrastructure – example from the planning tool

No	Administrative district (A.D.)	Aggl. No	Project name	Aggl. class	Pollutant loading (PE)	Project description	Project preparation cost estimate (€ million)	Cost estimate; project measures (€ million)	Cost estimate; contingencies, (€ million)	Cost estimate; construction supervision (€ million)	Cost estimate; total project implementation (€ million)	Total Project costs (€ million)	Unit costs (€/PE)	Preparation - start	Preparation - end	Implementation - start	Implementation - end
6	Niš	356	Niš WW Project	1	285,000	- Network rehabilitation, replacement - WW collection system extension (substantial)	2.91	72.66	3.63	2.18	78.47	81.38	286	2017	2019	2020	2025
7	South Banat	83	Pančevo WW Project	2	99,000	- Network rehabilitation, replacement - WW collection system extension - New WWTP	1.30	32.38	1.62	0.97	34.97	36.27	366	2018	2020	2021	2026
8	Mačva	256	Loznica WW Project	3	40,000	- Network rehabilitation, replacement - WW collection system extension - New WWTP	0.79	19.86	0.99	0.60	21.45	22.24	556	2018	2020	2021	2026
9	Moravica	265	Čačak WW Project	2	98,000	- Network rehabilitation, replacement - WW collection system extension (substantial)	1.61	40.18	2.01	1.21	43.39	45.00	459	2018	2020	2021	2026
10	Pomoravlje	276	Jagodina WW Project	2	62,000	- Network rehabilitation, replacement - WW collection system extension - Complete refurbishment and upgrade of	1.13	28.15	1.41	0.84	30.41	31.53	509	2018	2020	2021	2026
11	Podunavlje	372	Smederevo WW Project	2	90,000	- Network rehabilitation, replacement - WW collection system extension - New WWTP	1.22	30.54	1.53	0.92	32.98	34.21	380	2018	2020	2021	2026
12	Braničevo	327	Požarevac WW Project	2	58,000	- Network rehabilitation, replacement - WW collection system extension - New WWTP	1.08	27.11	1.36	0.81	29.28	30.36	523	2018	2020	2021	2026
13	Zaječar	333	Sokobanja WW Project - protection of Bovan impoundment water quality	4	13,000	- Network rehabilitation, replacement - WW collection system extension - New WWTP	0.43	10.79	0.54	0.32	11.66	12.09	930	2019	2021	2022	2027
14	Šumadija	308	Kragujevac WW Project	1	200,000	- Network rehabilitation, replacement - WW collection system extension - Complete refurbishment, upgrade of WWTP	2.23	55.69	2.78	1.67	60.14	62.37	312	2017	2021	2022	2028
15	Belgrade	1	Belgrade Wastewater Project	1 (part)	1,675,000	- Network rehabilitation, replacement - WW collection system extension - New WWTP	12.40	310.05	15.50	9.30	334.86	347.26	207	2017	2021	2022	2029
16	Belgrade	1	Batajnica Wastewater Project	1 (part)	228,000	- Network rehabilitation, replacement - WW collection system extension (substantial) - New WWTP - Batajnica sub-catchment area - Network rehabilitation, replacement	1.69	42.20	2.11	1.27	45.58	47.27	207	2018	2022	2023	2028

Pipeline #1 – IPA

Tentative & programmed IPA project list		IPA Year	Preparation resources identified for next stage	IPA status	Implementation - start MIFP	TOTAL PROJECT COSTS including National cofinancing (€ preparation and PIU (€ million) million)	
1	Nis WW	IPA 18	Yes	FA	2020	59,36	30
2	Loznica WW	IPA 19/20	Yes	AD	2021	17,1	8,55
3	Cacak WW	IPA 19/20	Yes	AD	2021	21,44	9,9
4	Kragujevac WW	IPA 21	Yes		2022	52,85	25,60
6	Soko Banja WW	IPA 19/20	Yes	AD	2022	11,35	5,25
7	Batajnica WW	IPA 21	Yes		2023	47,69	
9	Sombor WW	IPA 21	Screened PID completed		2024	40,97	20
10	Novi Sad WW	IPA 21	Yes		2023	126,67	
12	Veliki Backi Kanal WW	IPA 22	No		2026	29,83	
13	Zlatibor WW - Uzice/ Pozega	IPA 22	No		2025	51,02	
14	Ruma WW		Screened PID completed		2030	11,82	5,50
15	Novi Pazar WW		Screened PID completed		2025	62,27	30
17	Lazarevac WW		In-Screening		2024	27,64	X
18	Sremska Mitrovica WW		Screened PID completed		2026	25,36	12
19	Valjevo WW		Screened PID completed		2023	25,07	12
20	Obrenovac WW		Pre-Screening		2027	32,24	
21	Zrenjanin WW		In-Screening		2028	72,73	X
22	Regional WW - Stara Pazova / Indjija		In-Screening		2028	93,84	
23	Mladenovac WW		Pre-Screening		2029	37,31	
24	Pomoravlje WW - Paracin/Cuprija		Pre-Screening		2029	20,68	
25	Vrnjacka Banja WW		Pre-Screening		2030	34,56	
26	Arandelovac WW		Pre-Screening		2030	19,41	
27	Bor WW		Pre-Screening		2030	29,21	
28	Prokuplje WW		Pre-Screening		2030	15,73	
Total							158,80

Pipeline #2

Project documentation financed by the Ministry of Environmental Protection
(Concept design, Detailed Design for CP – ZPI)

Project documentation financed by the UNDP through bilateral assistance
(Concept design, Detailed Design for CP – ZPI)

Babušnica

Bela Palanka

Bačka Palanka

Boljevac

Priboj

Pećinci

Apatin

Lapovo

Veliko Gradište – Srebrno jezero

Dimitrovgrad

Surdulica – Vlasinsko jezero

Vlasotince

Majdanpek

Ražanj

Bač

Assumptions on financing sources

- The calculation of available EU grants before EU accession (2025) is based on Croatian experience. It is further assumed that these funds will be increased around five times after the accession date
- Share of EU grants in total investment costs of projects is assumed to be:
 - 68% for water and waste water sector
 - 45% for waste sector, in line with new policies on the circular economy package;
- National funds are assumed to be sufficient to co-financing EU grants (including national budget and other funds and loans)
- Certain other financial resources are assumed to be available like loans, private investments etc.

FINANCING NEEDS 2019-2044 (MEUR)

Investment Needs	%	Total
Water	21%	1,551
WasteWater	57%	4,273
Waste	16%	1,202
Sludge	7%	500
Total	100%	7,527

Available financial sources	%	Mil. EUR (2019-2044)
EU grants	64%	4,140
National	18%	1,163
Loan	14%	875
Local	4%	257
Total EU financed projects	100%	6,436
Private capital		337
Other loans		0
Total		6,773

	Total
Pessimistic Scenario	-754

Project preparation

- Project preparation costs were calculated as a certain percentage of the value of works for individual projects within each of the three sectors - approx. 6% on average
- Total cost of preparing projects for priority phase is estimated to be above 190 MEUR
- This amount includes all project preparation activities to be started by 2029

€

Sector	Estimated project preparation costs (up to M EUR)
Waste	66.43
Waste water	64.11
Drinking water	64.62
TOTAL	195.16

- **How to accumulate required financing and speed up projects preparation process?**

Thank you for your attention!