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**THIS ACTION IS FUNDED BY THE EUROPEAN UNION**

**ANNEX IV**

of the Commission Implementing Decision on the Annual action plan in favour of the Republic of North Macedonia for 2022

**Action Document EU for Modern Wastewater Systems**

**ANNUAL ACTION PLAN**

This document constitutes the annual work programme in the sense of Article 110(2) of the Financial Regulation, and annual and multiannual action plans and measures in the sense of Article 9 of IPA III Regulation and Article 23 of NDICI - Global Europe Regulation.

**1. SYNOPSIS**

**1.1. Action Summary Table**

<b>Title</b>	EU for Modern Wastewater Systems Annual action plan in favour of North Macedonia for 2022
<b>OPSYS</b>	ACT-60969
<b>Basic Act</b>	Financed under the Instrument for Pre-accession Assistance (IPA III)
<b>Team Europe Initiative</b>	No
<b>Zone benefiting from the action</b>	The action shall be carried out in North Macedonia
<b>Programming document</b>	IPA III Programming Framework
<b>PRIORITY AREAS AND SECTOR INFORMATION</b>	
<b>Window and thematic priority</b>	Window 3: Green agenda and sustainable connectivity Thematic Priority 1: Environment and climate change
<b>Sustainable Development Goals (SDGs)</b>	Main SDG 6: Ensure available and sustainable management of water and sanitation for all Other significant SDGs 3: Ensure healthy lives and promote well-being for all at all ages
<b>DAC code(s)</b>	14022-Sanitation-Large systems (94%) 23210-Energy generation, renewable resources-multiple technologies (6%)
<b>Main Delivery Channel</b>	12000-Recipient Government

<b>Markers (from DAC form)</b>	<b>General policy objective</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Participation development/good governance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Aid to environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Gender equality and women's and girl's empowerment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Trade development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Reproductive, maternal, new-born and child health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Disaster Risk Reduction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Inclusion of persons with Disabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Nutrition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>RIO Convention markers</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Biological diversity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Combat desertification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Climate change adaptation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Internal markers</b>	<b>Policy objectives</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Connectivity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Digitalisation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Migration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	COVID-19	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>BUDGET INFORMATION</b>				
<b>Amounts concerned</b>	Budget line: 15.020201 Total estimated cost: EUR 63 000 000 Total amount of EU budget contribution EUR 26 500 000, of which EUR 26 500 000 for indirect management with IPA III beneficiary			
<b>MANAGEMENT AND IMPLEMENTATION</b>				
<b>Implementation modalities (type of financing and management mode)</b>	Project Modality <b>Indirect management with</b> North Macedonia			
<b>Relevant priorities and flagships from</b>	Priorities: "Green Agenda"			

<b>Economic and Investment Plan for the Western Balkans</b>	Flagships: “VII Waste and Waste Water”
<b>Final Date for conclusion of Financing Agreement</b>	At the latest by 31 December 2023
<b>Final date for concluding contribution / delegation agreements, procurement and grant contracts</b>	3 years following the date of conclusion of the Financing Agreement, with the exception of cases listed under Article 114(2) of the Financial Regulation
<b>Indicative operational implementation period</b>	72 months following the conclusion of the Financing Agreement
<b>Final date for implementing the Financing Agreement</b>	12 years following the conclusion of the Financing Agreement

## 1.2 Summary of the Action

The Action aims at decreasing water pollution along the Vardar river basin district, in North Macedonia, while supporting the transition to a green economy and addressing climate change. It will directly contribute and create synergies with the priorities of the Economic and Investment Plan and the Green Agenda for the Western Balkans. The EU financial assistance will be invested in measures for collecting and treating urban wastewaters in the municipalities of Shtip, Veles and Vinica, including the connection of about 3 500 households to the sewerage systems, the rehabilitation and extension of over 100 km of sewers, the construction of a dozen of pumping stations and of two municipal wastewater treatment plants (WWTPs), one in Shtip and one in Veles, for a capacity of about 92 000 population equivalents (PE). Wastewater from Vinica and surrounding villages (around 15 000 PE) will be conveyed to the recently built Kochani WWTP, which was planned to accommodate that extra load.

Best available techniques not entailing excessive costs will be used to obtain a near-zero carbon footprint of the WWTPs. The Action will support investment at the level of both energy demand and supply. Energy demand will be reduced by appropriate process design (e.g. stabilising excess sewage sludge via anaerobic digestion rather than aerobic digestion) as well as equipment specifications. Energy demand will be partly met with captive power supplied through a gas motor converting the anaerobically digested sludge into electricity and the installation of solar photovoltaic panels onsite.

The Action will encourage stewardship of reclamation and reuse of the remaining solid waste stream, as opposed to the current policy (practice) of disposing it into sanitary landfills (dumpsites). Stakeholders including farmers will be sensitised in reducing abstraction of groundwater and the use of chemical fertilisers by opportunities offered by reclaimed water and biosolids.

## 2. RATIONAL

### 2.1. Context

North Macedonia is a landlocked country that is clearly defined geographically by a central valley formed by the Vardar River and framed along its borders by mountain ranges. There are about 35 rivers, 53 natural and artificial lakes and 1 100 larger sources of water, within 4 river basin districts. The rivers flow into three transboundary basins: the Aegean, the Adriatic and the Black Sea basins. **The major environmental pressure to the country's water resources is the suboptimal wastewater collection and treatment.**

The Government of North Macedonia's water policy is highly influenced by its strategic orientation to integrate the country into the European Union. The country has aligned with key EU Water *acquis*, including the Urban Waste Water Treatment Directive 91/271/EEC (UWWTD), more than a decade ago. Nevertheless, **the implementation and enforcement of the UWWTD-aligned national regulation is lagging behind.** In the last 10 years the wastewater treatment capacity has doubled; however almost three fourth of the wastewater is still discharged into the water bodies untreated. Furthermore, periodic and routine maintenance and repairs have been neglected for years, resulting in sewerage networks with numerous breakdowns, infiltrations and leakages. The high operational costs and the limited revenues combined with the absence of penalties in relation to discharge of untreated wastewater has even led in some cases to the interruption of the operation of wastewater treatment plants.

The Green Agenda for the Western Balkans<sup>1</sup>, reflecting the European Green Deal<sup>2</sup> in the region, acknowledges that **the implementation of water related legislation is the main task ahead for fighting polluting of water**, which requires among others more resources for investments in water infrastructure. The action plan for the Sofia Declaration on the Green Agenda for the Western Balkans, a tool to guide its implementation, indicates that the Western Balkans intend building the necessary infrastructure for wastewater treatment by 2030.

At the same time, the Green Agenda pushes for integrating the water and waste sectors into different policy areas through effective measures aimed at filling current gaps and overcoming critical issues such as **prioritising energy efficiency, the development of a circular economy addressing in particular waste, recycling, sustainable production and efficient use of resources as well as sustainable agriculture and the reduction of synthetic chemical products used in food production.**

The Strategic Response outlining how North Macedonia plans to utilise the EU financial assistance under the Instrument for Pre-Accession Assistance (IPA) III in line with the IPA III Programming Framework<sup>3</sup>, recognises that considerable investments are still needed in wastewater collection and treatment to meet UWWTD targets upon accession. It requires at the same time **to counteract the negative effects related to the increase of Green House Gas (GHG) emissions due to operation of wastewater treatment plants.**

Coordination in the sector is carried out through the Sector Working Group (SWG) on Environment. The EU is by far the largest donor and other cooperating partners and IFIs active in the sector include the Swiss Cooperation, the EBRD and the EIB.

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<sup>1</sup> SWD(2020) 223 final of 6.10.2020

<sup>2</sup> COM(2019) 640 final of 11.12.2019

<sup>3</sup> C(2021) 8914 of 10.12.2021

## 2.2. Problem Analysis

The municipalities of Shtip (44 866 inhabitants), Veles (48 463 inhabitants), and Vinica (14 475 inhabitants) are situated in the Vardar River Basin district, in the central and eastern part of North Macedonia. Shtip and Vinica are situated in the sub-basin of the Bregalnica River while Veles is situated directly on the banks of the Vardar River, south of Skopje (middle Vardar). Their sewerage networks cover over 80% of the population, however more than 50% of the networks is older than 30 years and periodic and routine maintenance and repairs have been neglected for years, resulting in sewerage networks with numerous breakdowns, infiltrations and leakages. Furthermore, collected wastewater is discharged directly into the recipient water bodies, either the Bregalnica River or the Vardar River, without any treatment.

The available River (Sub-)Basin Management Plans (draft) indicate that **investing in wastewater treatment is the top priority measure for achieving the environmental objectives** stipulated in the Water Law, which is aligned with the Water Framework Directive. More specifically, the programme of measures of the management plan of the Bregalnica River sub-basin, issued in 2016, scheduled the delivery of wastewater treatment in Vinica by 2021 and in Shtip by 2027. The draft River Vardar basin management plan of 2018 scheduled the delivery of wastewater treatment in Veles in 2023 and in Shtip in 2024; the plan foresees also major refurbishment of existing wastewater collection systems.

The COVID-19 pandemic has brought about immediate economic and social damage to the country, which decreased further the already limited fiscal recipes for capital investments in green infrastructure. As a result, **without the support from the EU, the Government would need to postpone the above mentioned, large capital investment to the long term.**

The EU supported the project preparation of the investment in the municipalities of Veles and Shtip under IPA I while preparatory studies for the Vinica investment were prepared with support from the Swiss Cooperation in 2019-2021. In 2021, the EU mobilised further technical assistance to update the preparatory studies and align them with the latest policy developments, including the Green Agenda for the Western Balkans. Full technical documentation is expected to be available by end-2022.

Concerning the level of wastewater treatment, the Ministry of Environment and Physical Planning decided to meet the UWWTD requirements in phases. In the first phase, the intention **is to meet the requirements for non-sensitive zones**, however to remove also phosphorus from the wastewater. On the one hand, North Macedonia has still to decide about the delineation of the country in sensitive zones under the UWWTD; on the other hand, phosphorus removal is considered a no-regret measure as the chemical status for phosphorus of the recipient bodies downstream of Vinica, Veles and Shtip is poor and the additional treatment costs are relatively small.

**The absence of (full) nutrient removal from wastewater may represent an opportunity for its reuse as fertiliser.** While the Government is planning to develop a national sludge management strategy, which will provide the frame for further development of sewage sludge management, the country does not have actual experience with the use of reclaimed water or reclaimed sludge, in agriculture. Furthermore, its stewardship would require the adoption of new procedures and strengthening capacities across different authorities including the Ministry of Environment and Physical Planning, the Ministry of Agriculture as well as the local self-government units and the farmers.

Finally, while the new wastewater treatment plants will contribute to the protection of surface and groundwater as well as of the overall ecosystem of the Vardar River basin, their operation could also increase GHG emissions. To counteract the negative effects related to the increase of GHG emissions, the Government agreed to consider **investing in best available techniques not entailing excessive costs to obtain a near-zero carbon footprint of the WWTPs.** Some of those technologies may in turn offer a window of opportunity for reclaiming and reusing excess sludge as soil amendment.

The Main stakeholders include:

- The **Ministry of Environment and Physical Planning (MoEPP)** is the principal central government body responsible for mobilising the resources necessary for achieving compliance with the environmental requirements of future EU membership, including compliance of the national legislation with the EU water *acquis*, and for ensuring its implementation. MoEPP is in charge of developing national policies, river basins management plans, permitting systems as well as overseeing the monitoring of water quality and the implementation of water related laws.
- Under the responsibility of the **Ministry of Transport and Communication (MoTC)**, the Municipalities of Shtip, Veles, Vinica and Kochani are in charge of providing utility services such as water supply, drainage of storm water, sewage collection and treatment, disposal of sewage sludge in the project areas. The first three municipalities will benefit from the proposed investment, and the fourth one will make possible the treatment of the wastewater generated in Vinica.
- Established, controlled and owned by the above mentioned municipalities, the **public utility companies (PUCs) – Derven in Veles, Isar in Shtip, Solidarnost in Vinica and Vodovod in Kochani** – are responsible for the operation and maintenance (O&M) of the sewerage networks and of the WWTPs. Except for Vodovod, which has already benefitted from extensive capacity building by the Swiss Cooperation, the other public utilities have limited administrative and professional capacities for working on such major projects. Efforts to identify, train, develop, and in particular to retain highly qualified staff for project implementation are needed.
- **ADKOM** is a non-governmental and non-profit organisation that brings together public utility companies in North Macedonia and may *inter alia* share best practice.
- The **Energy Regulatory Commission (ERC)** is an independent, non-profit regulatory body that regulates *inter alia* the prices of water services and sets up tariffs for bulk water supply and drinking water supply, collection and disposal of urban wastewater and purification of wastewaters.

### 3. DESCRIPTION OF THE ACTION

#### 3.1. Intervention Logic

The **Overall Objective (Impact)** of this Action is:

*To decrease water pollution while supporting the transition to a green economy and fight climate change.*

The **Specific Objective (Outcome)** of this Action is:

*Improved wastewater collection and treatment infrastructure in the Municipalities of Shtip, Veles and Vinica in compliance with the Directive 91/271/EEC and the Green Agenda for the Western Balkans.*

The Outcome will be achieved through the following four **Outputs**:

Output 1: Sewerage systems in the municipalities of Shtip, Veles and Vinica rehabilitated/extended

Output 2: Wastewater treatment plants (WWTPs) in Shtip and Veles built and operational<sup>4</sup>.

Output 3: Increase of GHG emissions due to the operation of the WWTPs partly offset.

Output 4: Stewardship of reclaimed streams of wastewater treatment for productive uses provided.

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<sup>4</sup> The wastewater from Vinica will be conveyed to the recently built WWTP in the municipality of Kochani.

### 3.2. Indicative Activities

The Action will be implemented through the following main activities:

#### **Output 1** Sewerage systems in the municipalities of Shtip, Veles and Vinica rehabilitated/extended

##### **Activity 1:** *Rehabilitation and extension of the sewerage system in the municipality of Veles*

- Rehabilitation/replacement/reconstruction of approximately 49 km of network;
- Construction of 8 energy efficient pumping stations;
- Connection of approximately 1 000 additional households.

##### **Activity 2:** *Rehabilitation and extension of the sewerage system in the municipality of Shtip*

- Rehabilitation/replacement/ reconstruction of approximately 36 km of network;
- Construction of 3 energy efficient pumping stations;
- Connection of approximately 2 500 additional households;
- Procurement of sewer water cleaning equipment.

##### **Activity 3:** *Connection of the town of Vinica and surrounding villages to WWTP Kochani, rehabilitation of the secondary sewerage network and extension of the stormwater network in Vinica*

- Construction of collectors (18 km) and an energy efficient pumping station to connect the secondary sewerage networks of Vinica and of surrounding villages (around 15 000 PE in total) to the WWTP in Kochani;
- Partial rehabilitation of the secondary sewerage network (approximately 3 700 m) and extension of the stormwater network (approximately 3 600 m) in the town of Vinica;
- Construction of a new outlet at WWTP Kochani to discharge directly into the Bregalnica River.

#### **Output 2** Wastewater treatment plants in Shtip and Veles built and operational

##### **Activity 4:** *Building 2 WWTPs, serving respectively the municipality of Shtip and of Veles*

- Capacity of Shtip WWTP: 46 300 PE;
- Capacity Veles WWTP: 46 000 PE;
- Secondary treatment and phosphorus removal.

##### **Activity 5:** *Capacity building for the operation and maintenance of the new WWTPs*

- The works contractor will operate the WWTPs for the first 3 months after commissioning using staff seconded from the public utility companies (PUCs) and will provide supervision services of public utilities' personnel during the entire defects notification period of the works, upon taking over of the works by the PUCs.

#### **Output 3** Increase of GHG emissions due to the operation of the WWTPs partly offset

##### **Activity 6:** *Equipping the above WWTPs with anaerobic excess sludge digesters along with Combined Heat-Power (CHP) units*

The produced biogas is expected to satisfy around 15-30% of the electricity demand of the WWTPs.

**Activity 7:** *Installing solar Photovoltaic (PV) panels to power the above WWTPs*

- Capacity: to produce at least 50% of the electricity demand of the WWTPs, on a yearly average basis.

**Activity 8:** *Piloting of net metering*

Any surplus power generated by the solar PV system during the summer months will be evacuated into the national electricity network and will (partly) offset the power imports from the national grid. In spite of its potential and of a net metering policy in place, net metering is still new to the country and this project may serve as pilot to encourage municipalities to play an active role in distributed, variable renewable energy production. The piloting exercise has great potential for replicability.

**Output 4** Stewardship of reclaimed streams of wastewater treatment for productive uses provided

**Activity 9:** *Stewardship of reclaimed biosolids.*

- Promotion of the use of anaerobically stabilised and dewatered sewage sludge as soil amendment or fertiliser.

**Activity 10:** *conducting a water reuse study.*

### 3.3. Mainstreaming

#### **Environmental Protection, Climate Change and Biodiversity**

The Action contributes significantly to the implementation of the Green Agenda for the Western Balkans. Focus will be on reducing water pollution. Moreover, best available techniques not entailing excessive costs will be used to obtain a near-zero carbon footprint of wastewater treatment, with a high potential for replicability. The project promotes circular economy and sustainable agriculture through the stewardship of reclaimed wastewater treatment's by-products, which may lead to partial replacement of chemical fertilisers in the surroundings of the wastewater treatment plants.

#### **Gender equality and empowerment of women and girls**

The Government is committed to take up the principles and approach stipulated in the European Union Gender Strategy 2020-2025 and apply those in all sector reforms and support measures. The Action will indirectly support the gender equality agenda by investing in waste water treatment facilities, which benefit women and girls through reducing health and sanitation risks for them, as they are usually more exposed to contamination due to water pollution.

#### **Human Rights**

This Action takes into consideration the country's commitment to advance the human rights agenda in practice. The Action addresses the right of people to live in a clean and healthy environment and the obligation of the public administration to ensure a clean environment. All proposed project activities are focused on this objective, and they have the potential to prevent further pollution of the water, which is a life resource.



## Disability

The Action will ensure cleaner and healthier environment for all citizens in the selected municipalities. However, people with disabilities, minorities and vulnerable groups (e.g. poorer households) being more exposed to risks of contamination due to water and soil pollution, will benefit significantly from the Action.

## Civil Society

This Action has been developed in an inclusive process involving civil society as a part of the established sector policy dialogue. This approach will also apply in the next stage, as civil society organisations are part of the Sector Working Groups (SWG), channelling the policy dialogue on sector priorities, IPA programming and reporting.

### 3.4. Risks and Lessons Learned

Category	Risks	Likelihood (High/Medium/Low)	Impact (High/Medium/Low)	Mitigating measures
People and the organisation	Lack of willingness of the main stakeholders (e.g. municipalities) to implement the national water sector reform, sector policies/ action plan and regulatory obligations.	M	H	To engage in continuous policy dialogue with institutions authorities of North Macedonia through mainly the SWGs, with a strong ownership and leadership by the relevant Ministry.  To involve the targeted municipalities in the IPA II technical assistance for further support in the implementation of the reforms in the water sector.
People and the organisation	Insufficient coordination among the institutions, including municipalities	M	M	Strengthening of the sector working groups channelling the coordination and policy dialogue, and inclusion in the Steering Committee of the project all the relevant stakeholders playing a role at national and at local level.
Planning, process and system	Weak administrative capacity, lack of adequate number and quality staffing in water and sanitation.	M	H	Strengthening of the policy dialogue on Chapter 22; mainstreaming the capacity building for the management of the EU funds through the Public Administration Reform and funding of additional capacity building measures through the EU Integration Facility.
Planning, process and system	Poor cost recovery for environmental services by the PUCs.	H	M	The use of solar PV will reduce the incidence of the running costs in tariff setting.  To involve the targeted municipalities in the IPA II technical assistance for

				further support in the implementation of the reforms in the water sector, including the Financial and operational performance improvement programme.
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The **following pre-conditions** for implementation apply to this Action:

- The municipalities shall resolve all expropriation issues prior to the launch of the related call for tenders and secure all needed permits prior to the signature of the works contracts.
- The contract between Kochani and Vinica municipalities and public utilities on wastewater treatment services of the wastewater from Vinica to be treated at the WWTP Kochani shall be finalised and signed before the launch of the call for tenders of the related call for tenders.

**Failure to comply with the requirements set out above may lead to a cancellation of the relevant activity and re-allocation of the funds.**

### **Lessons Learned**

The environment sector has benefited from considerable EU and international support so far, allowing to draw the following conclusions:

- There is a real need to strengthen sector dialogue. The sector working group dealing with environment and climate change is the appropriate platform to host the sector dialogue however, citizens and businesses must be better represented, communication must be reinforced, and meetings should be more frequent.
- There have been substantial delays in absorbing EU funds in the sector of environment, primarily due to insufficient administrative and professional capacity. Investing in the national capacities to implement EU funds remains an important priority, which will be addressed through the policy dialogue under Chapter 22 and funded through the EU Integration Facility, in parallel to the implementation of the Action. These accompanying measures will focus on reorganisation and strengthening of the institutional set-up and the financial management and control systems and building of an effective human resource management policies.

In addition, under IPA III, the risks of delays in the implementation of the tender procedures are reduced by improved maturity of the projects at programming level. Still, building permits, land ownership and multi-stakeholders agreements can delay the project implementation. These aspects must be followed at an early stage through the policy dialogue mechanisms.

- Sustainability aspects need to be addressed at the earliest implementation phase. The operational costs, especially the ones related to the energy cost, are the first that are cut in times of financial difficulties. The WWTP in Kochani that will treat the wastewater of Vinica uses the biogas production out of sludge treatment and photovoltaic panels, saving at least 60% of the energy costs and reducing CO<sub>2</sub> emissions. The programmed WWTPs in Veles and Shtip include photovoltaic panels and the biogas produced by anaerobic sludge stabilisation to cut the running cost of the electricity. In addition, agreements need to be done in advance to ensure that the beneficiaries regularly carry out preventive maintenance in accordance with the operational manuals.
- The treatment of wastewater reduces the pollution of the rivers; however, it generates a potentially polluting by-product, if managed inappropriately: the sludge. The investment will reclaim the by-

product and make it suitable for further use as soil amendment or organic fertiliser as promoted by the circular economy principles.

### 3.5. Indicative Logical Framework Matrix

Results	Results chain	Indicators	Baselines	Targets	Sources of data	Assumptions
<b>Impact</b>	To decrease water pollution	% of population equivalent served with wastewater treatment plants (secondary treatment)	27.5%* (2020)	74.0%** (2027)	Baseline: National Water Study <sup>5</sup> Target: National Water Study	<i>Not applicable</i>
		Population equivalent served with wastewater treatment plants (secondary treatment)	590,000 (2020)	1, 588,800** (2027)		
		BOD 5 in mg/l in the river Bregalnica	2.2 (2016)	< 2(2027)	MK – NI 019   MOEPP	
		BOD 5 in mg/l in the river Vardar	3.9 (2016)	< 2(2027)	MK – NI 019   MOEPP	
		Proportion of bodies of water with “good status”	70% (2017-2020)	80% (2027)	<a href="https://www.sdg6data.org/indicator/6.3.2">https://www.sdg6data.org/indicator/6.3.2</a>	
<b>Outcome 1</b>	Improved wastewater collection and treatment infrastructure in the Municipalities of Shtip, Veles and Vinica in compliance with the Directive 91/271/EEC	Level of BOD <sub>5</sub> , COD, TSS and Phosphorus at present and at the outlet from the waste water treatment facilities <sup>6</sup> after the investment	BOD <sub>5</sub> : 285 mg/l (2020) COD <sup>7</sup> : 569 mg/l (2020) TSS <sup>8</sup> : 332 mg/l (2020) P: 5 to 20 mg/l (2020)	≤ 25 mg/l (2027) ≤ 125 mg/l (2027) ≤ 35 mg/l (2027) P: ≤ 2 mg/l (2020)	Baseline: Average of the feasibility studies of Shtip and Veles Target: Data from Public Utility <sup>9</sup> companies of Shtip and Veles (average)	- Continued political support for harmonisation with the EU environmental <i>acquis</i> and for implementation of environmental legislation at all levels. - Societal support for the implementation of the environment legislation in practice

<sup>5</sup> Task 6 – estimation total national PE 2.328.316

\*\* This includes WWTPs in Skopje, Bitola, Tetovo, Veles and Shtip

<sup>6</sup> The calculation is to be done as simple average of the values of the indicators in Shtip and Veles.

<sup>7</sup> Chemical oxygen demand

<sup>8</sup> Total suspended solids

<sup>9</sup> Simple average of the parameters for Shtip and Veles

Results	Results chain	Indicators	Baselines	Targets	Sources of data	Assumptions
<b>Output 1 related to outcome 1</b>	Sewerage systems in the municipalities of Shtip, Veles and Vinica rehabilitated/extended	km of sewerage rehabilitated, constructed, replaced, reconstructed in the municipalities of Shtip, Veles and Vinica <sup>10</sup>	0 (2020)	≥ 103 km (2027)	Data from Public Utility Company	PUCs will have appropriate levels of human and financial resources to operate wastewater infrastructure in an orderly way
		Number of pumping stations constructed <sup>11</sup>	0 (2020)	≥ 12 (2027)		
		Number of additional households connected	0 (2020)	≥ 3,500 (2027)		
<b>Output 2 related to outcome 1</b>	Wastewater treatment plants in Shtip and Veles built and operational	Level of loading of the WWTPs as percentage of their capacity	0 (2020)	≥ 67% (2027)		
		Non-compliances of (WWTP effluent) discharges with the UWWTD standards for non-sensitive zones as percentage of the total number of samples taken	100%	≤5% (2027)		
<b>Output 3 related to outcome 1</b>	Increase of GHG emissions due to the operation of the WWTPs partly offset	Annual WWTPs' electricity demand covered by the gas motor of the CHP units	0 (2020)	≥15% (2027)	Data from Public Utility Company	
		Annual WWTPs' electricity demand covered by onsite solar PV farms	0 (2020)	≥50% (2027)	Data from Public Utility Company	
<b>Output 4 related to outcome 1</b>	Stewardship of reclaimed streams of wastewater treatment for productive uses provided	Percentage of reuse of sewage sludge from WWTP Veles and WWTP Shtip	0 (2020)	≥33% (2027)	Data from Public Utility Company	

<sup>10</sup> The target is the result of the implementation of the following activities:

Veles: Rehabilitation and construction of 48.8 km of network (replacement/reconstruction – 11.2 km; secondary networks extension – 16.5 km; trunk sewers extensions – 21.1 km);

Shtip: Rehabilitation/replacement/ reconstruction of 36.2 km of network (replacement/reconstruction – 28 km; secondary networks extension – 7.2 km; trunk sewers extensions – 1.0 km);

Vinica: Construction of an 18 km collector system

<sup>11</sup> The target is the result of the implementation of the following activities:

Construction of punping stations in Veles (8), Shtip (3) and Vinica (1)

## **4. IMPLEMENTATION ARRANGEMENTS**

### **4.1. Financing Agreement**

In order to implement this action, it is envisaged to conclude a financing agreement with North Macedonia.

### **4.2. Indicative Implementation Period**

The indicative operational implementation period of this action, during which the activities described in section 3 will be carried out and the corresponding contracts and agreements implemented, is 72 months from the date of entry into force of the financing agreement.

Extensions of the implementation period may be agreed by the Commission's responsible authorising officer by amending this Financing Decision and the relevant contracts and agreements.

### **4.3. Methods of implementation**

The Commission will ensure that the EU appropriate rules and procedures for providing financing to third parties are respected, including review procedures, where appropriate, and compliance of the action with EU restrictive measures<sup>12</sup>.

#### **4.3.1. Indirect Management with an IPA III beneficiary**

This action will be implemented under indirect management by North Macedonia.

The managing authority responsible for the execution of the action is the Ministry of Environment. The managing authority shall be responsible for legality and regularity of expenditure, sound financial management, programming, implementation, monitoring, evaluation, information, visibility and reporting of IPA III activities.

Budget implementation tasks such as calls for tenders, calls for proposals, contracting, contract management, payments and revenue operations, shall be entrusted to the following intermediate body for financial management: Central Financing and Contracting Department at the Ministry of Finance. It shall ensure legality and regularity of expenditure.

In case North Macedonia fails in preparation and accreditation of the financial management and control systems for indirect management with the beneficiary country, the activities will be implemented through indirect management with a pillar-assessed international organisation, selected on the grounds of its administrative, financial and technical capacity.

### **4.4. Scope of geographical eligibility for procurement and grants**

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply, subject to the following provisions.

The Commission's authorising officer responsible may extend the geographical eligibility on the basis of urgency or of unavailability of services in the markets of the countries or territories concerned, or in other duly substantiated cases where application of the eligibility rules would make the realisation of this action impossible or exceedingly difficult (Article 28(10) NDICI-Global Europe Regulation).

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<sup>12</sup> [www.sanctionsmap.eu](http://www.sanctionsmap.eu) Please note that the sanctions map is an IT tool for identifying the sanctions regimes. The source of the sanctions stems from legal acts published in the Official Journal (OJ). In case of discrepancy between the published legal acts and the updates on the website it is the OJ version that prevails.

#### 4.5. Indicative Budget

Implementation modalities	EU contribution (EUR)	Indicative third party contribution, (EUR)
<b>Methods of implementation, cf section 4.3</b>		
<b>Outcome 1: Improved wastewater collection and treatment infrastructure in the Municipalities of Shtip, Veles and Vinica in compliance with the Directive 91/271/EEC, composed of</b>	<b>26 500 000</b>	<b>36 500 000</b>
Indirect management with North Macedonia, cf. section 4.3.1	26 500 000	36 500 000
<b>Indirect management with North Macedonia</b>	<b>26 500 000</b>	<b>36 500 000</b>
<b>Evaluation</b> (cf. section 5.2)	will be covered by another decision	N.A
<b>Audit/Expenditure verification</b> (cf. section 5.3)	will be covered by another decision	N.A
<b>Communication and visibility</b> (cf. section 6)	N.A	N.A
<b>Contingencies</b>	0	N.A
<b>TOTAL</b>	<b>26 500 000</b>	<b>36 500 000</b>

#### 4.6. Organisational Set-up and Responsibilities

The responsibility for the implementation of the Action is shared between the managing authority for the Action - the Ministry of Environment and Physical Planning (MoEPP) and the Secretariat for European Affairs (NIPAC Office). The intermediate body for financial management is the Central Financing and Contracting Department (CFCD) at the Ministry of Finance, which will be responsible for all procedural aspects of tendering process, for contracting matters and for financial management of the activities.

In order to secure coordination in regard to the construction of WWTPs and the rehabilitation and extension of the sewerage systems, the managing authority for the Action shall establish a Steering Committee, having advisory functions and composed of the managing authority itself, CFCD, the Ministry of Transport and Communication, the Municipalities of Veles, Shtip, Vinica and Kochani, the EU Delegation and all the implementing partners; other stakeholders may be invited on an *ad-hoc* basis. The Steering Committee shall meet at least twice per year, to analyse and discuss the progress of the Action.

As part of its prerogative of budget implementation and to safeguard the financial interests of the Union, the Commission may participate in the above governance structures set up for governing the implementation of the action.

#### **4.7. Pre-conditions**

Establishment and accreditation of the financial management and control systems for indirect management with North Macedonia in line with the requirements of the IPA III Regulation and implementing rules.

### **5. PERFORMANCE MEASUREMENT**

#### **5.1. Monitoring and Reporting**

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process, and part of the implementing partner's responsibilities. To this aim, the implementing partners shall establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (Outputs and direct Outcomes) as measured by corresponding indicators, using as reference the logframe matrix (for project modality) and the partner's strategy, policy or reform action plan list (for budget support). The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

Roles and responsibilities for data collection, analysis and monitoring:

The overall responsibility for monitoring of the Action is shared between the EU Delegation and the Secretariat for European Affairs (NIPAC office), working in close coordination with the MoEPP (Managing Authority).

At policy level the Action will be subject to monitoring by the relevant Sector Working Groups on Environment and Regional and Local Development as well as by the IPA Monitoring Committee.

The responsibility for monitoring the implementation at action and at contract levels stays with the MoEPP (Managing Authority), which will be supported by the CFCD. An Action Steering Committee will be established to include the main stakeholders in a single forum. The Steering Committee for the practical implementation of the monitoring activities will be assisted by the Supervisor(s) in charge of the works contracts.

The progress in the implementation of the Action will be monitored at sector level through the established 2021 Performance Assessment Framework (PAF), which includes outcome and impact indicators, targets and baseline data. PAF has been established as a web-based application (backed up by a Government decision on responsibilities and deadlines), allowing regular electronic data input, data processing and data analytics. The PAF data will be used in the Sector Working Groups on Environment, which is also the inclusive platform of all stakeholders to monitor the implementation of the sector priorities.

At the output level, data about the implementation of each project and contract will be collected in OPSYS. They will be based on official documents such as reports, acceptance certificates or equivalent documents. The competent actors (e.g. MoEPP) are expected to produce timely and meaningful data to monitor the results and impact of the Action.



## **5.2. Evaluation**

Having regard to the importance of the Action, a final evaluation will be carried out for this Action or its components via independent consultants. It will be carried out for accountability and learning purposes at various levels (including for policy revision).

The Commission shall inform the implementing partner at least 1 month in advance of the dates foreseen for the evaluation missions. The implementing partner shall collaborate efficiently and effectively with the evaluation experts, and inter alia provide them with all necessary information and documentation, as well as access to the project premises and activities.

The evaluation reports shall be shared with the partner country and other key stakeholders. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, in agreement with the partner country, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

## **5.3. Audit and Verifications**

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audit or verification assignments for one or several contracts or agreements.

## **6. COMMUNICATION AND VISIBILITY**

Visibility of EU funding and communication about objectives and impact of Actions are a legal obligation for all Actions funded by the EU, as set out in the EU communication and visibility requirements in force. In particular, the recipients of EU funding shall acknowledge the origin of the EU funding and ensure its proper visibility by:

- providing a statement highlighting the support received from the EU in a visible manner on all documents and communication material relating to the implementation of the funds, including on an official website and social media accounts, where these exist; and
- promoting the actions and their results by providing coherent, effective and proportionate targeted information to multiple audiences, including the media.

Visibility and communication measures shall be implemented, as relevant, by the national administrations (for instance, concerning the reforms linked to EU budget support), entrusted entities, contractors and grant beneficiaries. Appropriate contractual obligations shall be included, respectively, in financing agreements, delegation agreements, and procurement and grant contracts.

The measures shall be based on a specific Communication and Visibility Plan, established and implemented in line with the EU communication and visibility requirements in force. The plan shall include, inter alia, a communication narrative and master messages for the Action, customised for the various target audiences (stakeholders, civil society, general public, etc.)

Visibility and communication measures specific to this Action shall be complementary to the broader communication activities implemented directly by the European Commission services and/or the EU Delegations and Offices. The European Commission and the EU Delegations and Offices should be fully informed of the planning and implementation of the specific visibility and communication activities, notably with respect to the communication narrative and master messages

At the level of the action, the communication policy will be based on few activities with high media potential, and able to create media events allowing the Commission and the EU Delegation to promote the relevant EU values, policy and investments. Cooperation with the NIPAC office and the other beneficiaries will be very important to ensure one-voice communication to citizens.

At contract level, all contractors and grantees shall develop communication and visibility activities in line with the EU communication and visibility requirements in force. The communication and visibility plans of contractors and grantees will be approved by the EU Delegation. Contractors are expected to show a good communication reflex and the ability to exploit unexpected opportunities to promote the activities and the EU support. Focus should be put on "out-of-the-box" communication solution having the potential to attract the attention of media and citizens and allow passing important messages. The opportunities provided by the digital communication and social media shall be used at large. It is the responsibility of the contractors and beneficiaries to keep the EU Delegation and the Commission fully informed of the planning and implementation of the specific visibility and communication activities. The beneficiary shall also report on the visibility and communication actions in the relevant reports. The implementation of the communication activities shall be funded from the budgets of the individual contracts.

## **7. SUSTAINABILITY**

The sustainability potential of the action is high and covers policy, institutional and financial level.

The action envisages investment in infrastructure, which will improve the living conditions and decrease pollution at the level of Vardar river basin, having impact on North Macedonia and neighbouring countries. It will contribute to the environmental protection and to the implementation of the national strategy on environment.

The Action has an important leverage effect. The Government of North Macedonia, committed to developing the wastewater collection and treatment infrastructure, is financing over 50% of the whole investment. The entry into force of the water tariffs legislation create the legislative framework for ensuring the maintenance of the new facilities. In addition, the MoEPP will sign agreements with the municipalities to define the obligations of the beneficiaries as regards the standard maintenance practices and application of the tariffs to recover the investment cost. The investments in renewable energy solutions will decrease the maintenance costs and will increase the sustainability prospects.