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ANNEX

**of the Commission Implementing Decision on the financing of the multiannual Operational Programme
on environment in favour of the Republic of North Macedonia for 2024–2027**

MULTIANNUAL OPERATIONAL PROGRAMME

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

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List of Abbreviations

AA	Audit Authority
AD	Action Document
AE	Administration for Environment
AP	Action Programme
BWD	Bathing Water Directive
CBA	Cost Benefit Analysis
CDPRs	Centres for Development of Planning Regions
CFCD	Central Financing and Contracting Department
CHP	Combined Heat and Power
CSOs	Civil Society Organisations
DAC	Development Assistance Committee of the OECD
DSIPs	Directive Specific Implementation Plans
DWD	Drinking Water Directive
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIP	Economic Investment Plan
EPPA	EU Environment Partnership Programme for Accession
EPR	Extended Producer Responsibility
ERC	Regulatory Commission for Energy and Water Services
ERI	Economic Resilience Initiative
ESF	European Social Fund
EU	European Union
EUR	Euro currency
FOLU	Forestry and other Land Use
FS	Feasibility Study
FWD	Framework Water Directive
GDP	Gross Domestic Product
GHG	Green House Gas
HRBA	Human Rights-Based Approach
IB	Intermediate Body
IFIs	International Financial Institutions
IMF	International Monetary Fund
IMWMBs	Inter-Municipal Waste Management Boards
IPA	Instrument for Pre-accession Assistance
LD	Landfill Directive
LEI	Law on Environmental Inspection
LoE	Law on Environment
LSGUs	Local Self Government Units

LSPWS	Law on Setting the Prices on Water Services
LW	Law on Waters
LWM	Law on Waste Management
LTSCA	Long-Term Strategy on Climate Action
MA	Managing Authority
MBT	Mechanical Biological Treatment plants
MH	Ministry of Health
MLSG	Ministry of Local Self-Government
MoEPP	Ministry of Environment and Physical Planning
MTC	Ministry of Transport and Communication
MTEF	Medium-Term Expenditure Framework
NAO	National Authorising Officer
NbS	Natural-based solutions
ND	Directive on the Protection of Waters from Nitrate Pollution
NGOs	Non-Governmental Organisations
NIPAC	National IPA Coordinator
NPAA	National Programme for Adoption of the <i>Acquis</i>
NSPP	National Single Project Pipeline
NWMP	National Waste Management Plan
NWPP	National Waste Prevention Plan
OJ	Official Journal
OP	Operational Programme
OS	Operational Structure
OPECA	Sector Operational Programme for Environment and Climate Action 2014-2020
OPRD	Operational Programme for Regional Development 2007-2013
OPSYS	EU Operational System
PAF	Performance Assessment Framework
PCEs	Public Communal Enterprises
P.E.	population equivalents
PIU	Project Implementation Unit
NWPP	National Waste Prevention Plan
PV	Photo Voltaic
PUC	Public Utility Company
“PSW region”	Pelagonia and Southwest regions
RBMCs	River Basin Management Councils
RBMPs	River Basin Management Plans
RWMPs	Regional Waste Management Plans
SAA	Stabilisation and Association Agreement
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment

SECO	Swiss State Secretariat for Economic Affairs
SEI	State Environmental Inspectorate
SIDA	Swedish International Development Cooperation Agency
SSD	Sewage Sludge Directive
SWD	Staff Working Document
SWGs	Sector Working Groups
SWGECA	Sector Working Group for Environment and Climate Action
SWGECC	Sector Working Group of Environment and Climate Change
TS	Transfer Stations
UWWT	Urban Wastewater Treatment
UWWTD	Urban Wastewater Treatment Directive
“VSE region”	Vardar and the Southeast regions
Waste FD	Waste Framework Directive
WBIF	Western Balkans Investment Framework
WEEE	Waste from Electrical and Electronic Equipment
WFD	Water Framework Directive
WSR	Waste Shipment Regulation
WWTP	Waste Water Treatment Plant

1. Programme synopsis

1.1 Programme Summary Table

Title	Multiannual Operational Programme on environment in favour of the Republic of North Macedonia for 2024–2027			
OPSYS	ACT-62459			
ABAC	ABAC Commitment level 1 number: JAD.1391961			
Basic Act	Financed under the Instrument for Pre-accession Assistance (IPA III)			
Team Europe	No			
IPA III beneficiaries	North Macedonia			
Programming document	IPA III Programming Framework			
PRIORITY AREAS AND SECTOR(S) INFORMATION				
Window and thematic priority	Window 3: Green Agenda and Sustainable Connectivity Thematic Priority 1: Environment and climate change			
Sustainable Development Goals (SDGs)	Main SDG 06 – Clean Water and Sanitation. Other significant SDGs: -SDG 03 – Good Health and Wellbeing -SDG 11 – Sustainable Cities and Economies -SDG 12 – Responsible Consumption and Production			
DAC code(s)	140 Water Supply and Sanitation (90,82 %) 14010 Water sector policy and administrative management (9,52 %) 14022 Sanitation-large systems (40,87 %) 14050 Waste management/disposal (40,43 %) 151 Government & Civil Society-general (9,18 %) 15110 Public sector policy and administrative management (9,18 %)			
Main Delivery Channel	12000 Recipient Government			
Targets	<input checked="" type="checkbox"/> Climate <input type="checkbox"/> Gender <input type="checkbox"/> Biodiversity			
Markers (from DAC form)	General policy objective	Not targeted	Significant objective	Principal objective
	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"/>
	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"/>
	RIO Convention markers	Not targeted	Significant objective	Principal objective
	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"/>
Internal markers and Tags	Policy objectives	Not targeted	Significant objective	Principal objective
	Digitalisation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Tags	YES	NO	
	digital connectivity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	digital governance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	digital entrepreneurship	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	digital skills/literacy	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	digital services	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Connectivity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Tags	YES	NO	
digital connectivity	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
energy	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
health	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
education and research	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Migration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Reduction of Inequalities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COVID-19	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BUDGET INFORMATION				
Amounts concerned	<p>Budget line: 15.020201</p> <p>Total estimated cost for 2024 – 2027: EUR 89 300 000</p> <p>Total amount of EU budget contribution for 2024 – 2027: EUR 70 000 000</p> <p>The contribution from the general budget of the European Union is split per year as follows:</p> <ul style="list-style-type: none"> - For 2024 – EUR 7 300 000 - For 2025 – EUR 11 593 978 - For 2026 – EUR 17 530 400 - For 2027 – EUR 33 575 622 			

	The contribution from the general budget of the European Union for the subsequent years is subject to the availability of appropriations for the respective financial years following the adoption of the relevant annual budget, or as provided for in the system of provisional twelfths.
MANAGEMENT AND IMPLEMENTATION	
Implementation modalities (management mode and delivery methods)	Indirect management with North Macedonia
Relevant priorities and flagships from Economic and Investment Plan for the Western Balkans [only for the Western Balkans]	Priority: Green Agenda Flagship: VII Waste and Wastewater
Final Date for conclusion of Financing Agreement	At the latest by 31 December 2025
Decommitment deadline for each budgetary commitment	Budgetary commitment 2024: by 31/12/2029 Budgetary commitment 2025: by 31/12/ 2030 Budgetary commitment 2026: by 31/12/ 2031 Budgetary commitment 2027: by 31/12/ 2032
Indicative eligibility period¹	31/12/2033
Final date for implementing the Financing Agreement	12 years following the conclusion of the Financing Agreement

1.2 Summary of the programme

The Multiannual Operational Programme (OP) on environment aims to intensify and accelerate the implementation of the Green Agenda² in North Macedonia. This will be achieved through further investments in the wastewater and waste management infrastructure and the strengthening of institutional capacities for environmental investment programming and management. The programme focuses on wastewater and waste as the most urgent priorities, considering other investments related to the Green Agenda in the country. Thus, the proposed activities align with the Economic Investment Plan (EIP) priorities for the Western Balkans³ and with the WBIF's Flagship VII Waste and Wastewater Management.

¹ The eligibility period is the period in which all operational activities of the Programme are completed. Contracts and addenda signed, expenditure incurred, payments made by national authorities as well as any other costs related to the activities of the Programme, shall be eligible for EU financing only if they have been incurred during the eligibility period.

² SWD (2020) 223 final of 6.10.2020

³ COM (2020) 641 final of 6.10.2020

In the **wastewater subsector**, the programme will focus primarily on improving wastewater management in the Municipality of Veles by enhancing wastewater collection and treatment. This will be achieved by expanding the sewerage network and constructing a new wastewater treatment plant (WWTP). The new WWTP shall comply with the new rules on carbon neutrality included in the proposal for a revision of the EU Urban Wastewater Treatment Directive (UWWTD). Secondly, the OP will support public communal enterprises (PCEs) in several municipalities by providing them with the appropriate equipment, which should help improve the operation and maintenance of the already constructed WWTPs (funded mainly by the EU through IPA I and IPA II) and their sewerage networks. Also, support in the approximation process in the water sector and further improvement of the water tariff system shall be provided both to national and local authorities and the respective PCEs. Such interventions shall ensure better efficiency and sustainability of the already constructed WWTPs, higher protection for water resources and the environment, and improved service performance. Lastly, depending on the availability of funds, e.g. by considering increasing national co-financing and other donors' financial support or blending with International Financial Institutions (IFIs) loans, support under the OP may also be foreseen for the municipalities of Kavadarci and Tetovo. In the Municipality of Kavadarci, interventions shall cover expanding the sewerage network and the construction of a new WWTP. In contrast, in the Municipality of Tetovo, interventions shall cover the upgrading of the existing WWTP, including but not necessarily limited to the extension of the sewerage network. All the above-discussed interventions are fully aligned with the water sector reforms in North Macedonia that started in 2016 with the development of the National Water Study⁴ and the introduction of a water tariff regulatory body that, among other issues, highlighted the need of increasing the wastewater and treatment infrastructure and improving the PCEs with maintenance equipment and increasing the PCEs' performance.

In the **waste subsector**, the programme will support establishing and improving integrated waste management systems in the East and Northeast regions of the country. The activities of the regional integrated waste management schemes will include closing non-compliant landfills, providing waste collection equipment, and equipping both regions' central waste facilities and transfer stations. Implementing these measures shall ensure that all the necessary conditions for self-financing and sustainable management of the regional waste management systems are in place and that their operation is secured. The intervention shall be complemented with activities related to improving approximation in the waste sector and assessing the cost related to meeting the EU's waste *acquis* requirements and further support in implementation of the waste tariffs.

The implementation of the OP requires skills, especially in managing works contracts, which need reinforcement especially at the public administration level, and at central and at local/regional level. Additionally, the operation of investments is challenged by high staff turnover, which calls for implementing retention policy measures to ensure a stable and committed public administration. Therefore, a set of capacity-building measures will be developed to support the IPA structure of the Ministry of Environment and Physical Planning (MoEPP), other national authorities (NIPAC and CFCD) and targeted municipalities, enabling the sound implementation of the OP and its infrastructure projects while facilitating the transfer of knowledge, skills and information. Overall, this will contribute to the capacity development of the relevant human resources in the country for programming and managing infrastructure projects in the environmental sector and ensuring the sustainability of built investments. In addition, the MoEPP and relevant national authorities shall be supported in regard to the EU accession negotiations process for Chapter 27.

The successful implementation of the OP will address the alignment of North Macedonia with the EU norms on environment and climate change (Chapter 27). This will ensure compliance with the current and evolving relevant EU's environmental *acquis* and at the same time tackle the environmental deterioration caused by improper water and waste management in the country.

In addition, since 2023, North Macedonia has been participating as an observer in a pilot for enlargement countries under the Technical Support Instrument.⁵ The aim of the pilot is to accelerate enlargement countries' EU accession by establishing connections between enlargement countries and EU Member States, and introducing enlargement countries to the types of reforms and projects done by EU Member States post-accession. North Macedonia observes a multi-country project implemented for Lithuania and the Netherlands on accelerating permitting for the renewable energy. The aim of this project is to identify the obstacles and required changes in the renewable energy

⁴ IPA Project: Development of National Water Study, EuropeAid/136505/IH/SER/MK

⁵https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/technical-support-instrument/technical-support-instrument-tsi_en

permitting processes so as to comply with EU climate and energy objectives, while also enhancing the capacity of involved authorities and their coordination mechanism, reducing this way unnecessary administrative burden.

2 Sector(s) analysis

2.1 National sectoral policies and context

The environmental sector in the country presents significant demands, encompassing a range of challenges such as air and water pollution, deforestation, waste management, soil erosion, and biodiversity loss. Over the years, the sector has experienced gradual development, primarily supported by the EU, other donors, and as a result of the growing public awareness regarding the environment and climate change. However, environmental protection continues to be a challenge for North Macedonia, particularly concerning fulfilling the requirements related to EU integration. In response to these critical needs, the country has formulated an environmental policy that addresses the key environmental challenges and has made considerable efforts to strengthen the regulatory and institutional framework.

As a candidate country for EU membership, North Macedonia must timely and effectively implement the entire body of EU *acquis*, which encompasses EU laws, policies, and regulations. The process commenced in 2002 and is ongoing. Despite the existing regulatory reforms, significant efforts are still required to implement the policy, which includes making the necessary investments and improving the administrative capacity for full alignment with the EU *acquis* in this sector. During the accession process, long-term strategic planning is essential. The Government has adopted several important policy strategic documents in various environmental areas, demonstrating its commitment to the necessary reforms within the environmental sector.

The **National Programme for Adoption of the *Acquis* (NPAA)** is a roadmap for North Macedonia's gradual adoption and implementation of the *acquis*. This comprehensive long-term document defines the dynamic process of harmonisation, strategic guidelines, policies, reforms, and measures for implementing the legislation, structures, resources, and deadlines to be realised by North Macedonia to fulfil the requirements for EU accession. The first NPAA was prepared and adopted by the Government in 2005/2006. Almost every year since then, annual/biannual revisions have been carried out based on the European Commission's Reports for the country⁶. The last revision was conducted in June 2021. Chapter 27, dealing with environmental and climate actions, represents a crucial part of the NPAA, drawing the short-term and mid-term priorities towards required reforms within the sector. The National Working Group within the NPAA for Chapter 27 is considered the largest, with members from all relevant national institutions, business communities and Civil Society Organisations' representatives.

Water Management

The national strategic and key planning documents in the **water management sub-sector** include the National Water Strategy, the draft River Basin Management Plans, the Urban Wastewater Treatment Directive Specific Implementation Plans and the National Programme for Water Supply and Wastewater Collection and Treatment.

The **National Water Strategy 2012-2042** is a long-term water management strategy which aims to address water-related challenges and ensure sustainable use of water resources for 30 years. In collaboration with other government agencies and stakeholders, the MoEPP developed this strategic document to ensure overall sustainable water management in the country, improve access to safe and reliable water supply and sanitation services, enhance wastewater management, including collection and treatment, as well as to protect and preserve the country's natural water ecosystems. The strategy sets out a range of specific objectives and actions in the following areas:

- Water governance and institutional capacity building
- Water resources management and protection
- Water supply and sanitation services
- Water infrastructure development
- Water quality monitoring and management
- Climate change adaptation and mitigation
- Public awareness and stakeholder engagement

The strategy recognises that achieving its goals relies heavily on collaboration and coordination among various stakeholders, including government agencies, local communities, NGOs and the private sector. Additionally, it

⁶ https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/strategy-and-reports_en

emphasises the need for robust legal and regulatory frameworks, including financial resources for infrastructure development, to support sustainable water management practices. The National Water Strategy highlights that the main problem remains the outdated water infrastructure, particularly the wastewater collection and shortage of treatment infrastructure. As water service providers, local authorities and their public communal enterprises (PCEs) are responsible for establishing infrastructure for water supply, wastewater collection and treatment but need more capacity to manage the water resources in North Macedonia properly.

The MoEPP, with the EU's and other donors' support, is working on developing **River Basin Management Plans (RBMPs)** for each river basin, except for Juzna Morava, in North Macedonia (Vardar, Crn Drim and Strumica⁷) following the Water Framework Directive and the Water Law requirements. However, none of the draft RBMPs has been formally adopted (as of November 2023), though they are followed when activities and measures are planned for implementation in the river basins. River Basin Management Councils (RBMCs) with a new composition for each river basin (except for Juzna Morava) were established in 2021. The Vardar RBMC is the largest one having 44 members, while the Crn Drim and Strumica councils have 25 and 20 members respectively. The RBMCs comprise representatives from national and local administration, chambers of commerce, NGOs, water users' associations and the Consumer protection organisation. The RBMCs have had one inauguration meeting where the leading roles and methods of work were presented concerning preparation, public participation, and adoption of the RBMP. In 2022, the MoEPP distributed a questionnaire to the RBMC members to obtain information about their capacity and training needs. In 2022, another meeting was held where the public consultation procedure for the RBMP preparation and adoption was presented.

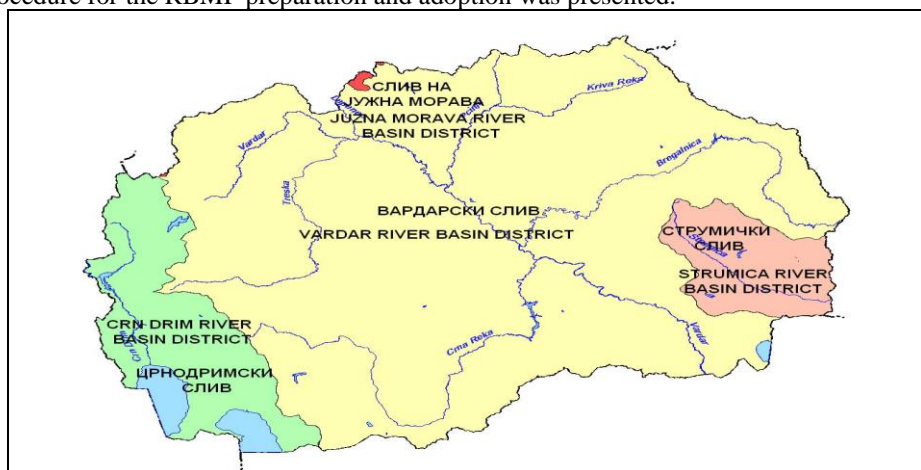


Figure 1: River Basins in North Macedonia

In 2017, as part of an EU-funded project⁸, Urban Wastewater Treatment Directive Specific Implementation Plans (DSIPs) were developed, which provided an estimation of the costs, financial plans and time needed for the full implementation of this directive in North Macedonia. Based on the DSIPs, the **National Programme for Water Supply and Wastewater Collection and Treatment** was developed, outlining the investments in the water subsector and prioritising agglomerations with the highest pollution. The selected projects were included in the National Single Project Pipeline (NSPP) for Environment that, after consultation with the Sector Working Group on Environment and Climate Change, was approved by the Government for the first time in 2017 and lastly was revised in 2022⁹. The DSIPs and consequently the NSPP should be revised in the future in order to reflect the current proposal for recasting the UWWT Directive¹⁰.

Waste Management

The national strategic and key planning documents relevant to the **waste management sub-sector** include the National Waste Management Plan (NWMP), the National Waste Prevention Plan (NWPP), and the Regional Waste Management Plans (RWMPs).

⁷ Vardar RB 80.35%; Strumica RB 6.41%, Crn Drim 13.6 % and Juzna Morava 0.17 % of the country's territory

⁸ IPA Project: Development of National Water Study, EuropeAid/136505/IH/SER/MK

⁹<https://www.sep.gov.mk/data/file/WBIF/SPP%202022-revised.pdf>

¹⁰ [EUR-Lex – 52022PC0541 – EN – EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/lexuri/cs/cs/2022/2022PC0541.html)

The **National Waste Management Plan (NWMP) (2021-2031)** sets out several objectives, including the development of waste infrastructure, the promotion of separate collection of waste streams, the improvement of waste treatment and disposal practices, the reduction of hazardous waste, and the development of a monitoring and reporting system. Overall, the NWMP is a comprehensive framework serving as a roadmap for the country's waste management system. It focuses on many key enablers for sustainable waste management, including clear and effective legislation, strong institutional capacity and infrastructure delivery, high-quality waste data and ambitious extended producer responsibility schemes. The NWMP also addresses specific issues relevant to the national level, such as hazardous waste management, waste import and export, and the remediation of historical hotspots. It also sets national waste recycling targets for reducing biodegradable waste in landfills. Chapter 20 of the NWMP elaborates on a separate programme for education and public awareness of waste management for individuals, educational institutions, and the private sector in waste management. With the implementation of the NWMP, it is expected to achieve a sustainable and circular economy, to improve citizens' quality of life, and to protect the environment. The lack of local and regional waste infrastructure and management systems is the main obstacle to self-sustainable waste management in the country. The waste management system is mainly traditionally based on waste collection and disposal. The plan recognises that the PCEs providing waste services in the municipalities are not properly equipped and do not have separate waste collection infrastructure, which results in almost 99% of the collected communal waste being disposed of on non-compliant landfills.

The recent adoption of the **National Waste Prevention Plan (2022-2028)** in North Macedonia followed the requirements of the new Law on Waste Management (adopted in 2021). The PPWG foresees a range of regulatory, political, and practical activities that aim to minimise waste generation, promote recycling and reuse, and ensure proper waste disposal in line with the EU Waste Framework Directive (2008/98/EC). The plan includes measures for involving the private sector and improving waste management at the local level, for separate waste collection and raising public awareness and involvement of local citizens.

The **Regional Waste Management Plans (RWMPs)** in North Macedonia are strategic documents that outline waste management practices and objectives at the regional level. The country is organised into eight waste management regions (as shown in Figure 2), each with a RWMP developed that directly contributes to meeting national waste management objectives. The development and implementation of RWMPs involve collaboration between regional authorities, municipalities, and relevant stakeholders. The plans consider population size, waste generation rates, cost-efficiency, available infrastructure, and environmental considerations. They also consider the requirements and guidelines set by the national waste management legislation, particularly the Law on Waste Management. The main objectives of the RWMPs are to establish waste management targets at the regional level and to estimate the financial resources needed for contributing to the implementation of the national waste targets, as well as to outline the administrative set-up for waste management at the regional level. The specific details of the RWMPs vary across different regions, as they are tailored to each area's unique circumstances and needs. These plans typically include strategies for waste prevention, recycling, and recovery, the establishment of appropriate waste treatment and disposal facilities, as well as for the coordination of waste management activities and optimisation of financial resources. The plans also address issues related to hazardous waste, landfill management, construction, demolition, and biodegradable waste by proposing measures to reduce waste generation, increase recycling and recovery rates, and to ensure safe disposal.



Figure 2: Waste management regions in North Macedonia

Municipalities are obliged by law to develop Biannual Waste Management Programmes that should contain actions and measures to improve waste management at the local level, mainly related to the separation and collection of municipal waste and prevention of waste generation. However, only a few municipalities (about 30 of the country's 80 municipalities) have developed and adopted waste management programmes. In addition, following Article 27

of the Law on Waste Management, private companies that generate more than 200 kg of hazardous waste and more than 100 tons of non-hazardous waste should develop a 3-year programme for waste management.

The waste management planning structure is presented in Figure 3 as follows:



Figure 3: Waste management planning structure in North Macedonia

Considering the urgency and importance of addressing climate change, North Macedonia has been actively working on formulating and implementing a long-term strategy for climate action. This is particularly important to the environment sector and waste and wastewater. The **Long-Term Strategy on Climate Action (LTSCA)** was adopted in 2021. The LTSCA defines the country's contribution to the global effort through a range of measures towards green, low-carbon and climate-resilient development based on the best available information and in the context of the country's accession to the EU. The global objective of the LTSCA is to reduce national net GHG emissions (*including Forestry and other Land Use and excluding MEMO items¹¹*) by 72% by 2050 compared to 1990 levels (or GHG emission reduction of 42% by 2050 compared to 1990, excluding FOLU and MEMO items) and increase resilience of North Macedonia's society, economy, and ecosystems to the impacts of climate change. The long-term vision of the LTSCA is that North Macedonia will be a prosperous, low-carbon economy by 2050, following sustainable and climate-resilient development measures that enhance competitiveness and promote social cohesion action to combat climate change and its impacts. In practice, reduction of GHG emissions in the waste sector will take place through the implementation of the measures contained in the current waste policy framework which is already to some extent aligned with the EU *acquis*. Increased separate collection and recycling of waste shall have a direct impact on GHG emissions by reducing the waste landfilling. Nonetheless, based on the assessment of the current situation, the implementation of the current existing measures is lagging behind and requires an important effort up to 2030 and beyond. While the measures to achieve emissions reduction such as green procurements will take place in the waste sector, introduction of more advanced technologies and implementation will take place in the wastewater sector.

North Macedonia has adopted the country's IPA III Strategic Response 2021-2027 document. Under Window 3 – Sustainable Connectivity and Green Agenda, Thematic Priority 1: Environment and climate change, it addresses the following objective and areas of intervention that are relevant to this OP:

Objective 1.1: To optimise the water cycle and reduce the impact of solid waste on the environment, with the areas of intervention as follows:

- Investments in wastewater collection and treatments using the best available technologies do not entail high costs to reduce GHG emissions.
- Investments in integrated waste management systems at the local and regional levels align with the most modern technologies to avoid increasing emissions of GHG.
- Building the capacity of the authorities of North Macedonia to design investment projects addressing climate risk assessment and proofing.

¹¹ MEMO items include emissions from aviation and electricity import.

- Building the capacity of the national authorities to implement the legislation and ensure the protection of the environment effectively.
- Building the capabilities of the public utility companies in the water and waste sectors.

2.2 Legal framework

The **Constitution** is the fundamental legal document in the hierarchy of North Macedonia's legal system. The Constitution contains provisions dedicated to environmental protection (*Articles 8 and 43*). Namely, Article 43 provides the basis for the country's other legal frameworks for environmental protection. Furthermore, the constitutional provisions are supplemented by primary (*laws*) and secondary legislation (*rulebooks, ordinances, decrees and decisions*) that govern the environmental protection sector in the country.

The **Law on Environment (LoE)** (*Official Gazette No. 53/2005, 81/2005, 24/2007, 159/2008, 83/2009, 48/10, 124/10, 52/11, 51/11, 93/13, 187/13, 42/14, 44/15, 129/15, 192/15, 39/16, 99/18 and "Official" no. 89/22 and 171/22*) represents the critical law within the sector. Adopted in 2005, the LoE lays down the basic principles of environmental protection to establish and manage all environment sub-sectors and climate change.

Moreover, the LoE regulates the issues of access to environmental information, public participation in environmental decision-making, plans for industrial accident control, and control mechanisms available to environmental inspectors. The LoE emphasises integrated environmental permits and regulates the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) procedures. In addition, it establishes the basic principles and legal base for implementing obligations related to global environmental protection issues, including the country's legal obligation to Climate Action.

The provisions in the LoE, to a large extent, are harmonised with those in the EU *Acquis*, such as:

- **Horizontal legislation** (*Directive 2011/92/EU EIA, Directive 2001/42/EC SEA, Directive 2003/4/EC Access to information, Directive 2003/35/EC Public Participation, Directive 2004/35/EC Environmental Liability, Directive 2007/2/EC INSPIRE, Directive 2008/99/EC Environmental Crime*), and
- **Industrial pollution control** (*Directive 2012/182/EU Seveso III, 2010/75/EU IED*).

Nevertheless, specific provisions related to integrated environmental permits and climate change actions will no longer be covered by the LoE. These provisions will be subject to and regulated by the Law on Climate Action and the Law on Industrial Emissions. The drafts of these two laws are currently being finalised and expected to be adopted in the short term. They are expected to be in force and applicable during the implementation of this OP.

Since the signing of the **Stabilisation and Association Agreement (SAA)**¹² in 2002, the country has started harmonising its legislation with the EU *Acquis Communautaire*, including in the area of environmental protection. Since 2005, North Macedonia is a candidate country for EU membership. The country established the National Programme for Adoption of *Acquis* (NPAA) to guide and supervise the entire alignment process with the *acquis*. Thus, a separate part of the NPAA is fully dedicated to this process. For *Chapter 27: Environment and Climate Action*, the MoEPP regularly monitors the level of alignment of the national legislation with the relevant *acquis* and, proposes the adoption of necessary measures. Based on the last progress monitoring exercise conducted within the EU Environment Partnership Programme for Accession (EPPA) for 2020, North Macedonia has a medium average level of alignment of the EU Chapter 27 Environment and Climate *Acquis*.

Water management

The management, protection, and use of water as a natural resource within North Macedonia are regulated by the **Law on Waters (LW)** (*Official Gazette No. 87/08, 6/09, 161/09, 83/10, 51/11, 44/12, 23/13, 163/13, 180/14, 146/15 and 52/16 and Official Gazette No. 151/21*). The LW provides a comprehensive regulatory framework for water management based on EU policies and legislation, which covers all aspects of water management, water use, water protection, the quality of water, and the protection of harmful effects of water.

The Law on Waters regulates issues about surface and groundwater; land and coastal wetlands; water management facilities and services; organisational structure and financing of water management, as well as the provisions for the protection and conservation of water resources, including measures to prevent pollution, regulate wastewater discharge, and manage potential risks to water ecosystems, including monitoring and reporting obligations, as well as provisions related to international cooperation, mainly transboundary water resources and cooperation that

¹²Article 68 from Stabilization and Association Agreement

North Macedonia shares with neighbouring countries to manage shared water bodies and address water-related challenges collectively. In addition, the Law on Waters regulates the planning structure in water management and the adoption of planning and strategic documents, such as the Water Management Strategy, the River Basin Management Plans and the Programmes for water infrastructure development.

Adopted in 2008 and entering into force on January 1st, 2011, the **Law on Waters** introduced a new water management regulatory framework with a focus on aligning with the EU principles and legislation and the aim to address the shortcomings of the previous water management systems, by focusing not only dominantly on water use but also broader water resource management, protection, and sustainability. Thus, the LW directly aligns with the requirements of the following EU directives in the field of water resources management:

- Water Framework Directive (WFD),
- Drinking Water Directive (DWD),
- Bathing Water Directive (BWD),
- Sewage Sludge Directive (SSD),
- Urban Wastewater Directive (UWWTD), and
- Directive on the Protection of Waters from Nitrate Pollution (ND).

The Law on Waters and several secondary legislation documents have been aligned with the WFD (2000/60/EC), the UWWTD (91/271/EEC) and the Sewage Sludge Directive (86/278/EEC), which are crucial for the OP. In addition, all national legislation is in place for safe sludge usage. Apart from the Bathing Water Directive, which has a low level of alignment, all the other directives have high alignment levels in the Law on Waters and complementary secondary legislation. However, the Law on Waters is not aligned with the latest amendments to the Drinking Water Directive. Moreover, considering that the EU is recasting the UWWTD¹³ Directive, further efforts will be needed to ensure alignment with EU *acquis*.

Furthermore, the legal framework for water management in North Macedonia is complemented by two additional laws, the **Law on Setting the Prices on Water Services (LSPWS)** (*Official Gazette No. 7/2016*) and the **Law on Drinking Water Supply and Urban Wastewater Drainage** (*Official Gazette No. 68/04, 28/06, 103/08, 17/11, 54/11, 163/13, 10/15, 147/15 and 31/16*).

The LSPWS adopted in 2016 as part of the water sector reform supported by three IPA I funded projects, is a key to the overall water management sector. As per the law, the regulatory authority for determining water service prices was established within the Regulatory Commission for Energy and Water Service of North Macedonia. The three water services included under the regulatory price approval are related to i) water supply, ii) water collection and discharge, and iii) wastewater treatment. As per the provision of the LSPWS, a PCE can only apply a price for water service if it has a prior approved price range by the Regulatory Commission and then a precise price is approved by the Municipality Council of the respective municipality.

Waste Management

The new **Law on Waste Management (LWM)** (*“Official” No. 216/2021*) was adopted in 2021. As a successor of the old law from 2004, it represents the country’s efforts to further align the national legal framework with the EU *Waste Framework Directive 2008/98/EC*. The Law on Waste Management provides rules for adequately managing all types of waste and provides a solid ground for secondary legislation to ensure further alignment with EU *acquis* provisions. Apart from the rules for proper waste management, the Law on Waste Management provides the legal basis for the country’s comprehensive policy and planning framework for waste management. Consequently, the Law on Waste Management regulates the preparation and adoption of the Waste Management Strategy, the Waste Management Plan, the Regional Waste Management Plans, the Waste Prevention Plan and the National Strategy on Sludge Management.

As a novelty, the new LWM introduced a new tariff-setting system for waste services, which is to be established in the upcoming period. The new tariff-setting system is designed to enable cost recovery, which is expected to lead to a self-sustainable regional waste management system in the country. The Regulatory Commission for Energy and Water Services is designated as a regulatory body to set prices for waste management services based on a separate methodology for establishing waste management services.

¹³ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022PC0541&from=EN> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022PC0541&from=EN>

The LWM directly aligns with the requirements of the following EU directives in the field of waste management:

- Waste Framework Directive (Waste FD)
- Landfill Directive (LD)
- Waste Shipment Regulation (WSR)

The LWM and accompanied secondary legislation is with high level aligned with the above mentioned directives. National targets concerning biodegradable waste to be disposed on landfills are established. The system of waste shipment is well regulated, and good cooperation is in place with neighbouring countries regarding the control of waste shipment forms. Also, the Basel Convention requirements are applied to the transboundary movement of hazardous waste.

Apart from the LWM, in 2021, several new laws were adopted for the management of special waste streams, such as:

- Law on Packaging and Packaging Waste Management (*Official Gazette No. 215/2021*)
- Law on Batteries and Accumulators and Waste from Batteries and Accumulators (*Official Gazette No. 176/2021*)
- Law on Electrical and Electronic Equipment and Waste from Electrical and Electronic Equipment (*Official Gazette No. 176/2021*)
- Law on Additional Waste Streams (*Official Gazette No. 216/2021*)
- Law on Extended Producer Responsibility for Managing Various Waste Streams (*Official Gazette No. 215/2021*).

The management of special waste streams in the country is set based on the *extended producer responsibility* principle and fully aligned with relevant EU *acquis* (*Directive 94/62/EC – Packaging Waste, Directive 2006/66/EC – Batteries, Directive 2012/19/EU – WEEE, and Directive 2000/53/EC – End-of-Life Vehicles*). The primary obligation of achieving the targets for proper management of special waste streams is with the producers, whose products contribute to waste stream generation.

Lastly, in April 2022, for the first time in North Macedonia, the **Law on Environmental Inspection (LEI)** (*Official Gazette No. 99/2022*) was adopted. The main objective of this law is to establish an effective system of inspection, including powers and responsibilities for conducting environmental inspections within North Macedonia. The law foresees provisions for establishing coordinated inspections at the central and local levels, assessing the impacts that legal entities' subjects of supervision have on the environment, detecting the source and extent of environmental pollution and taking measures to prevent, reduce or eliminate pollution. The law is aligned with the provisions related to inspection from the *EU Seveso III Directive*, the *Industrial Emission Directive*, and the *Regulation (EU) N° 910/2014* on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation).

2.3 Institutional setting, leadership, and capacity

The institutional setup relating to the water and waste management subsectors in North Macedonia is fragmented into different institutions at the central and local levels. The structure and competencies are as follows:

The **Ministry of Environment and Physical Planning (MoEPP)** is the leading institution for developing and implementing North Macedonia's national environmental and climate change policy, including the country's water and waste management policies. It is responsible for developing environmental and climate change legislation in compliance with the EU, the sustainable use of natural resources, soil protection, nature and biodiversity, and environmental monitoring and reporting. The MoEPP is responsible for Chapter 27 – Environment and Climate Change, with the devoted task to mobilise all resources necessary to achieve compliance with the requirements of EU membership.

The MoEPP is organised into nine departments, two units, and two constituent bodies within the MoEPP, i.e., the **Administration for Environment (AE)** and the **Office for Spatial Information System**. These bodies operate as subordinate entities, within and under the supervision of the MoEPP, and their scope of work is regulated through legal acts governing issues in the environmental area. In addition, the **State Environmental Inspectorate (SEI)** is part of the MoEPP structure as a separate legal entity that reports to the MoEPP but acts independently.

The AE is organised into five (5) departments and is responsible for implementing national environmental policy and legislation and for monitoring the implementation of main environmental issues, including air protection, water protection and management, waste management, soil protection and nature protection. It is responsible for the application of the main instruments of environmental protection, such as environmental impact assessment, integrated permits, elaborates for environmental protection, etc. The AE is responsible for issuing water and waste-related permits. Competencies for water management are under the Water Department, while the waste is under

the Waste Department within the AE. These departments will be the main end-beneficiaries of the OP on Environment.

The **State Environmental Inspectorate (SEI)** is a separate legal entity under the MoEPP that is in charge of inspection and supervision of the implementation of the entire range of national environmental legislation. In addition, the SEI is also responsible for approving the inspection plans prepared by the local authorised environmental inspectors.

Limited human resources capacities, in terms of number and knowledge, to cover all the environmental sector responsibilities in the MoEPP and its subordinate authorities are noted in several assessments (mainly completed as part of EU-supported projects). The main issue remains the frequent staff turnover, affecting institutional memory loss. There is a persistent need to strengthen and improve the knowledge and capabilities of the existing human resources, as well as to plan for their further increase in number to cope with the sector's requirements.

The **Ministry of Transport and Communication (MTC)**, even though primarily responsible for transportation and communication sectors, is involved in the supervision of municipal infrastructure at the local level, mostly water supply and sewerage networks. Consequently, the MTC primarily works in constructing water supply and sewerage networks, thus supporting mainly the municipalities in rural or less developed areas. Support for water supply and sewerage network projects is provided by granting state subsidies to municipalities applying for such assistance. The Ministry of Transport and Communication is also responsible for managing water infrastructure programmes supported by international donors. The MTC will mainly ensure appropriate construction permits for the infrastructure works financed by this OP. In addition, the MTC through its Communal Inspectorate, is responsible for inspecting the Public Communal Enterprises (PCEs), which provide water supply and waste collection services at the local level. The Communal Inspectorate ensures that the PCEs' services follow legislative requirements, including public hygienic standards. Nevertheless, like other institutions the Communal Inspectorate has limited capacity to perform its duties; therefore, it must be included in some of the OP capacity-building activities.

In North Macedonia, the **Ministry of Health (MH)** ensures the control and monitoring of drinking water quality. The Institute for Public Health, which operates under the auspices of the MH, is responsible for overseeing and implementing programmes related to public health, including the control of drinking water quality and safety.

Following the decentralisation process, the Local Self Government Units (LSGUs) – i.e, the **municipalities**, are critical in implementing the environmental policy and legislation in the water and waste management sub-sectors. Their basic tasks relate mainly to the following:

- Development of local programmes for environmental protection.
- Construction, maintenance and operation of water supply systems, sewerage systems, WWTPs, and communal waste collection and disposal.
- Providing public information regarding the state of the environment at the local level.

The ownership and management of the water and waste infrastructure are primarily the responsibility of the municipalities. The municipalities establish Public Communal Enterprises (PCEs) to oversee and manage these essential services. The PCEs perform water supply, wastewater collection and treatment and waste management. Almost all of the PCEs encounter human resources issues and have capacity issues. Often, they are understaffed not only in human resources numbers but also in terms of employees with the necessary skills and expertise. In addition, they need updated or proper equipment to enable them to provide high-quality and efficient services to the citizens. As a result of the establishment of the public regulatory body for water price services, the improvement in PCEs performance is noticed, particularly in managing the assets and cost efficiency for water services. However, more efforts are needed to decrease water losses, improve wastewater collection and treatment facilities, and improve overall performance. Concerning waste management, the PCEs mainly collect and dispose of waste at non-compliant landfills designated as official sites for disposal until new landfills are constructed per EU legislative requirements.

The **Regulatory Commission for Energy and Water Services (ERC)** was appointed as the water service price regulator in 2017 by the Law on Setting Prices for Water Service. The ERC is tasked with establishing tariffs (price) on water services for water supply to the population, collection and discharge of urban wastewater, and wastewater treatment. To achieve a cost-recovery system and to ensure a self-sustainable regional waste management system in North Macedonia, in line with the provisions in the new Law on Waste Management, the ERC is also designated as a regulatory body to set waste management tariffs in the country. However, the waste tariff assessment methodology still needs to be prepared.

To ensure the implementation of regional waste management and RWMPs documents, **Inter-Municipal Waste Management Boards (IMWMBs)** are formally established in each waste management region (*in total, eight*

waste management IMWMBs). Members of the IMWMBs are the mayors of the municipalities and the mayor of the city of Skopje, depending on the region they belong to, or other persons authorised by the municipalities and the city of Skopje. The IMWMBs oversee regional waste management in the corresponding region and, among others, are responsible for formally endorsing the draft RWMPs, supervising the activities for the RWMPs' implementation, approving proposed interventions for the RWMPs' implementation, approving contracts for public-private-partnerships, etc. Though the IMWMBs are established formally, they meet rarely and mainly upon the MoEPP's requests, primarily for project-related activities. The IWMBs for the East and Northeast regions have performed better, mainly due to the EU's long-term support in these two regions.

In North Macedonia, regional development planning and coordination is under the responsibility of the **Centres for Development of Planning Regions (CDPRs)**, which operate under the Ministry of Local Self-Government (MLSG) (*in total 8 Centres, one for each planning region*). Established in 2009, the CDPRs aim to promote balanced regional development and enhance collaboration between different levels of government and stakeholders from the public and private sectors. Each Centre has established an Organisational Unit for Regional Waste Management (from now on Organisational Unit). The Organisational Units are operational bodies that support the RWMP implementation and oversee the overall functioning of the waste management systems. Such units have been selected for the East and Northeast regions; the salaries of the staff working under these Organisational Units are covered by the Municipalities' budget, whereas their activities largely depend on the financial support provided by projects implemented through the CDPR. Such constraints have impacted the Organisational Units' work and responsibilities. To ensure sound regional waste management, under the Law on Waste Management, mayors in a respective region are obliged to sign an agreement to establish a joint regional waste management system where mutual obligations and rights are stipulated concerning waste collection, transfer, and disposal. Also, the agreement envisages the establishment of a joint inter-municipal public utility company; the company will manage the operation of the transfer stations, the central waste facility – landfill, and management rights concerning the company.

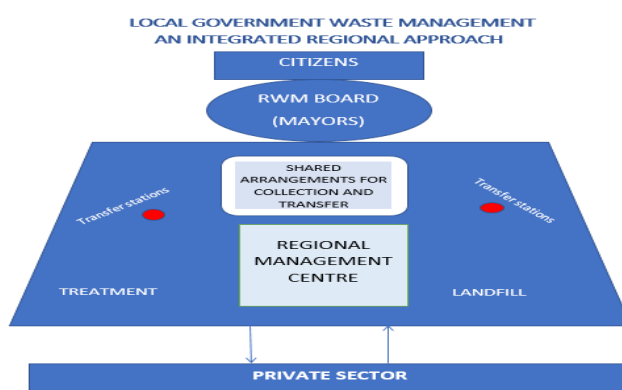


Figure 4: Administrative structure for waste management at the regional level

2.4 Sector(s) and donor coordination

As the leading environmental sector institution for EU accession negotiations, sector coordination duties are assigned within the MoEPP. These responsibilities include developing and implementing the environmental policy and coordinating different institutions and activities under the NPAA for Chapter 27 – Environment and Climate Change (Chapter 27 Working Group). The MoEPP is responsible for Chapter 27 coordination and acts as the Secretariat for Chapter 27 Working Group. The Working Group is the main structure for EU accession negotiations for Chapter 27 and is organised to cover all main subsectors within Chapter 27 and ensures overall horizontal coordination of the sector within the Stabilisation and Association Agreement (SAA); it comprises more than 100 members, representing not only the national public entities with competencies in the environmental sector but also the private sector interests through Chambers of Commerce representatives, as well as civil society interests with CSOs representatives active in environmental issues.

Within the MoEPP, donors' coordination is managed mainly by the **Department for Implementing the Instrument for Pre-accession Assistance (IPA)** and the **Department for Sustainable Development and Investment**. The Department for Implementing the Instrument for Pre-accession Assistance (IPA) coordinates IPA funds. It is organised into three units i) Unit for Programming and Monitoring the Implementation of IPA, ii) Unit for Technical Implementation of the IPA, and iii) Unit for Internal Control and Coordination in IPA Implementation. The IPA department is directly involved in the environmental sector's coordination process in planning, implementing, and monitoring environmental projects financed through the EU's IPA funds. The Department for Sustainable Development and Investment is responsible for coordinating investments in the

environment sector from the national budget, bilateral donors, and investments from IFIs' (EIB, EBRD, World Bank, etc.) support through development loans.

In the area of donor coordination, the environment sector also benefits from a well-established policy dialogue channelled through the **Sector Working Group for Environment and Climate Action (SWGCECA)**, chaired by the Minister of Environment and Physical Planning. The main aim of the SWGCECA is to ensure efficient coordination of activities related to programming and monitoring of EU funds and other bilateral and multilateral assistance and proposing measures and activities in the environment and climate sectors to support different reforms in the country relevant for the EU integration. The SWGCECA includes representatives from the main national institutions and leading donors in the sector, such as the EU Delegation, IFIs, other international organisations, bilateral donors and representatives from CSOs.

2.5 Mid-term budgetary perspectives

In North Macedonia, the medium-term budget comprises the Fiscal Strategy and the detailed budget. The Fiscal Strategy includes a medium-term fiscal plan covering three years, including aggregate revenue, expenditures, and borrowing. The detailed budget is prepared based on the Fiscal Strategy. The detailed budget covers one year for operating expenditures (the Special Budget) and three years for capital expenditures (the Development Budget). The medium-term expenditure framework (MTEF) as a budgetary planning and management tool has yet to be that robust in North Macedonia. The annual budget presents an expenditure estimate for the budget year and the two following fiscal years allocated by administrative and economic classification, but not programme (or functional) classification.¹⁴

Within the regular annual planning and execution of the national budget, the MoEPP and other central-level bodies foresee activities and financial resources for areas that various programmes will cover. Namely, in the national budget, the year 2023 main allocations for water and waste are within the MoEPP and the Ministry of Transport and Communication. In that respect, the overall financial allocations defined in the national budget (including EIB/EBRD loans) are as follows:

- For the sub-sector water management, approximately EUR 25 877 245 for 2023, EUR 27 000 000 for 2024 and EUR 13 270 000 for 2025 are projected.
- For sub-sector waste management, approximately EUR 3 058 536 for 2023, EUR 26 100 for 2024 and EUR 22 560 for 2025 are projected.

Nevertheless, the annual estimation of total funds allocated for water and waste management in the country remains difficult because the municipalities and the PCEs also undertake investments in these sectors through their budgets, which implement similar interventions at the local level as competent institutions for water and waste management in the country. Most of the interventions are related to rehabilitation and investment for extending the sewerage and water supply network coverage at the respective municipalities. Limited municipality funds are devoted to waste management.

2.6 Performance assessment framework

North Macedonia, since 2020, has put in place a **Performance Assessment Framework (PAF)**¹⁵, streamlining the policy objectives; based on a set of impact and outcome indicators, targets, and baseline data. Considering environmental protection, the Performance Assessment Framework is measured under clearly defined indicators in five (5) sub-sectors/pillars: Air Pollution, Climate Change, Waste, Water and Natural Resources.

Indicators for measuring the achievement of the sub-sector results for water and waste management in the country will be monitored following indicators and targets presented as follows:

Table 1: Performance Assessment Framework – Water

Indicator	Elaboration	Baseline	Target
Water exploitation index	Annual total abstraction of freshwater divided by the mean annual total renewable freshwater resource at the country level, expressed in percentage terms.	/	Target for 2027 ≤ 7 %

¹⁴IMF Country Report No. 22/219 “North Macedonia Technical Assistance Report – Public Expenditure and Financial Accountability Performance Assessment”, July 2022

¹⁵<https://pafnorthmacedonia.mk/PAF/>

Quantity freshwater resources used	Exploitation of freshwater resources according to their use in individual sectors, such as: public water supply, irrigation, and electricity production (cooling), losses of water in water supply systems of legal persons registered for water abstraction for manufacturing or distribution of water in millions of m ³ .	/	Target for 2027 ≤ 600 million m ³
Concentration of nitrates in freshwater	Concentrations of nitrate in rivers and groundwater bodies. The indicator can be used to illustrate geographical variations in current nutrient concentrations and temporal trends.	1.14 mg NO ₃ /l – 2015	Target for 2027 ≤ 0.60 mg NO ₃ /l
Concentration of orthophosphate in freshwater	Concentrations of orthophosphate in rivers and groundwater bodies. The indicator can be used to illustrate geographical variations in current nutrient concentrations and temporal trends.	0.26 mg P/l – 2015	Target for 2027 ≤ 0.20 mg P/l
Drinking water quality	This indicator shows the exceedance of limit values of pollutants according to the legislation. EU and North Macedonia.	94,40 % of safe samples – 2017	Target for 2027 ≥ 98 % of safe samples

Table 2: Performance Assessment Framework – Waste

Indicator	Elaboration	Baseline	Target
Municipal waste generation	Tons of municipal waste, i.e. non-hazardous waste generated by natural persons in households and commercial waste	768,000 t - 2017	Target for 2027 ≤ 940,000 t
Final municipal waste generation	Final management of the overall amount of municipal waste through the processes of: Incineration (with and without energy recovery) Landfilling (controlled or uncontrolled landfills) Composting Reuse or recycling other manner of management.	635,870 t - 2017	Target for 2027 ≤ 846,000
Quantity of generated medical waste	This indicator shows the final management of the overall amount of municipal waste through the processes of: Incineration (with and without energy recovery) Landfilling (controlled or uncontrolled landfills) Composting Reuse or recycling other manner of management.	704,61 t - 2015	/
Collected municipal waste generation	Amount of the collected municipal waste	635,870 t – 2017	Target for 2027 ≥ 893,000 t
Tons of recycled paper, glass and plastic waste	The amount of paper, glass and plastic waste, which is recycled.	0 t – 2017	Target for 2027 ≥ 10,000 t

2.7 Socio-economic analysis (including SWOT analysis)

North Macedonia is a landlocked country on the Balkan Peninsula with an area of 25,713 km² and a population of 2,097,319 inhabitants, out of which 1,836,713 resident population.¹⁶ The Local Self-Government Units (LSGU) perform the executive authority at the local level. North Macedonia is administratively divided into 80 municipalities, plus the City of Skopje, as a separate entity composed of ten (10) municipalities. As of 2003, the LSGU's role and competencies have expanded since the decentralisation process.

North Macedonia is a lower-middle-income country with a gross domestic product (GDP), according to the European Commission¹⁷, of EUR 12 billion in 2021. Its economy is highly dependent on the service sector, which accounts for more than 60% of its GDP. The agriculture and manufacturing sectors are also significant contributors

¹⁶ Census 2021

¹⁷ https://webgate.ec.europa.eu/isdb_results/factsheets/country/overview_north-macedonia_en.pdf

to the economy, with agriculture accounting for approximately 10% of the GDP and manufacturing accounting for around 20%. The IMF¹⁸ forecast that the country's GDP will grow by 3.6% in 2024, driven primarily by a rebound in domestic demand and an uptick in exports.

The country faces a range of socio-economic challenges that impact the well-being of its citizens and the development of its economy. Some of the main challenges include i) high poverty levels and inequality, with a poverty rate of 21.5% and one of the highest levels of income inequality in Europe; ii) high level of unemployment, which reached 17,6% in 2020, significantly higher than the EU average; iii) brain drain phenomenon, which has significantly increased in recent years, with many educated and skilled citizens leaving the country searching for better opportunities elsewhere; iv) corruption is a persistent problem in North Macedonia, which can hinder economic growth and discourage foreign investments. The country has implemented reforms to address the latter, but more work is needed to strengthen transparency and accountability.

The strategic orientation of North Macedonia is the accession to the European Union. It holds a candidate country status for EU membership and started the EU accession negotiations after approval by the Council on 18 July 2022 of the Negotiating Framework for the negotiations with North Macedonia, in accordance with the revised enlargement methodology and the Council's conclusions.

Water Management

Drinking water

Based on the hydrographical conditions of the country, there are four river basin areas¹⁹ and three major natural lakes²⁰. While river basin management plans (RBMPs) for Lake Prespa and the Bregalnica River have been prepared, the RBMPs for the Strumica and Vardar River Basins are under preparation. However, none of the RBMPs prepared so far have been officially adopted. No RBMP shall be made for the Juzna Morava due to its small size, occupying only 0.17 % of the country's territory.

The Local Self Government Units (LSGUs) are responsible for undertaking infrastructure investments for water service providers such as water supply, wastewater collection, and wastewater treatment in their respective territories, except for municipalities within the City of Skopje, where this responsibility falls to the city.

The LSGUs have generally established Public Communal Enterprises (PCEs) to provide water services. In rare cases, inter-municipal cooperation has been utilised to provide water services. LSGUs may delegate the responsibility to another organisation to ensure adequate water services. There are three modalities for water service provisions in North Macedonia: i) PCEs established by the municipalities, ii) PCEs established by the Government, and iii) private operators.

Currently, 81 water service providers are operating, and population coverage varies in size from over 500,000 in the case of the City of Skopje to less than 10,000 inhabitants in several rural municipalities. With EU support²¹, a Directive Specific Implementation Plan (DSIP) was developed for the Drinking Water Directive delineating **706 water supply zones**.

Around 1.71 million inhabitants (82% of the country's total population), have access to a centralised drinking water supply managed and operated by public water utility enterprises (PCEs). Another 0.25 million inhabitants (12%) receive their water supply through local, rural water supply schemes managed by their respective communities. The remaining 0.12 million inhabitants (6%) obtain their water supply independently. There are noticeable regional differences in the current coverage of drinking water. The Skopje Region has the highest coverage of regularly managed and monitored centralised supply, around 96%, while the Polog, Northeast and Southwest Regions have the lowest coverage, ranging from 60 to 78%.

Groundwater is the dominant source of drinking water supply for the population and other users (>85%). However, there are significant concerns regarding the water supply, including the loss of water in drinking water supply network systems, leakage from degraded irrigation systems, the need for awareness of technical devices for saving water resources and the lack of sanitary protection at the sources. In North Macedonia, solely monitoring the aspects of the quality and quantity of surface water and groundwater resources is not sufficient in order to provide a holistic picture of the overall state of water resources.

Wastewater collection and treatment

¹⁸ <https://www.imf.org/external/datamapper/profile/MKD>

¹⁹ Rivers Vardar, Crn Drim, Strumica and Juzna Morava

²⁰ Ohrid Lake, Prespa Lake and Dojran Lake

²¹ IPA Project: Development of National Water Study, EuropeAid/136505/IH/SER/MK

Although the Law on Waters and the related secondary legislation as of 2011 is aligned with the UWWT Directive (91/271/EEC), still significant delays are encountered in its practical implementation. The country is facing water pollution issues, with the primary cause of this pollution coming from untreated wastewater. Only 25 municipalities are serviced by a wastewater treatment plant, covering 24.5% of the population. Consequently, most receiving water bodies – lakes and rivers - are polluted, and it will be challenging for these water bodies to meet the EU Water Framework Directive (WFD) criteria for “good” status soon. Many large cities do not have separate storm and sewage collection systems, while rural areas predominantly have combined sewage and storm wastewater collection systems.

The responsibility for collecting and treating wastewater in North Macedonia is shared between the Government and the Local Self-Government Units (LSGUs). The LSGUs have exclusive responsibility for wastewater management, except in the perimeter of the City of Skopje, where the City of Skopje Administration is responsible. The PCEs are responsible for operating and maintaining the wastewater systems and are owned and controlled by the LSGUs. As of 2017, the PCEs must adopt annual development programmes and prepare business and tariff adjustment plans in compliance with the provisions of the Law on Setting the Prices for Water Services as a precondition for obtaining approval by the Regulatory Commission for Energy and Water Services of their water services price.

To meet EU requirements for wastewater, vast investments are needed. The country must be able to absorb and efficiently implement capital-intensive infrastructure projects with EU assistance. To have good planning and efficient use of resources, in 2017, within an EU-funded project under IPA I, the National Water Study was developed, containing several documents relevant to the overall water sector management in the country. Relevant to the wastewater are the following generated documents:

- Institutional Development Plan for Water Management.
- Water Supply and Wastewater Collection and Treatment Policy.
- Report on Identified Agglomerations and Sensitive Areas.
- Directive Specific Implementation Plan (DSIP) for Urban Wastewater Treatment Directive (UWWTD).
- Strategic Framework for Sludge Management.
- Programme for Water Supply and Wastewater Collection and Treatment.

The DSIP for the UWWTD has identified 123 agglomerations throughout the territory of North Macedonia, out of which 120 are agglomerations above 2000 p.e. and are considered Category I agglomerations.

Table 3: Distribution of Agglomerations between regions

Region	No of Agglomerations	2030 Population	2030 % Total Population	2030 Population Equivalent
Southwest	20	164,585	77%	198,215
Skopje	19	627,563	95%	860,485
East	10	126,510	77%	154,157
Pelagonia	12	171,510	80%	214,216
Southeast	15	115,099	67%	138,966
Polog	25	285,003	85%	352,446
Vardar	10	119,332	81%	145,579
Northeast	12	154,609	87%	193,101
North Macedonia Total	123	1,764,463	84%	2,257,165

Also, the levels of coverage with wastewater collection systems within all agglomerations have been determined based on the data from 2016. The following information focuses only on the Category 1 agglomerations, i.e. those with an estimated p.e. of more than 1,900.

Overall, in the DSIP for the UWWTD prepared in 2016 it was calculated that about 1.33 million people²² were connected to sewer systems which represent approximately 77.3% of the population in Category 1 agglomerations (Category 1 agglomerations with more than 2,000 population), that is about 64% of the total population in the country).

Table 4: Connection to Wastewater Collection; Regional Summary

Region	Population Connected	Population in Connectivity	Category 1 Agglomerations
Skopje	495,840	589,639	84.1%
East	114,573	130,854	87.6%
Pelagonia	165,145	178,023	92.8%
Southeast	84,528	111,411	75.9%
Polog	145,157	270,076	53.7%
Southwest	112,037	167,006	67.1%
Vardar	111,702	121,690	91.8%
Northeast	98,481	149,803	65.7%
North Macedonia Total	1,327,463	1,718,504	77.3%

Additional sewerage connection needs to be provided to approximately 400,000 people, representing 23% of the population in Category 1 agglomeration and about 19% of the national population.

There is a substantial variation in the connection rate found in the different regions, with the lowest level of connection being in Polog (53.7% of the region's population) and the highest being in Pelagonia (92.8% of the region's population).

However, the Statistical Office of North Macedonia for 2022 reported that the total number of households connected to the wastewater collection system is 528,835, 88% of the existing households based on the 2021 population Census.

Currently, 25 wastewater treatment plants operate with a total capacity of 590,000 p.e., as summarised in Table 5.

Table 5: Wastewater Treatment Plants (Functional)

No	WWTP Name	Municipality	Design p.e.	Treatment	Built
1	Nov Dojran	Dojran	12,000	No Data	1988
2	Miravtsi, Gevgelija	Gevgelija	3,000	Secondary	2000
3	Bogroditsa, Gevgelija	Gevgelija	2,500	Secondary	2005
4	Lozovo	Lozovo	2,200	Primary	2006
5	Argulitsa, Karbintsi	Karbintsi		Tertiary	2016
6	Tarintsi, Karbintsi	Karbintsi	600	Tertiary	2005
7	Kukurechani	Bitola		Primary	2008
8	Krivogashtani	Krivogashtani	3,200	Primary	2007
9	Berovo	Berovo	14,000	Secondary	2010
10	Kumanovo	Kumanovo	91,000	Secondary	2006
11	Chucher Sandevo	Chucher – Sandevo	3,000	Secondary	2007
12	Ilinden	Ilinden	1,250	Secondary	2016

²² Data are calculated on the number of populations from 2002 census that has estimated about 2.1 million population

No	WWTP Name	Municipality	Design p.e.	Treatment	Built
13	Marino,Ilinden	Ilinden	1,250	Secondary	2011
14	Kadino,Ilinden	Ilinden	1,250	Secondary	2015
15	Makedonski Brod	Makedonski Brod	5,000	Secondary	2000
16	Volkovo	Gjorche Petrov	19,500	Secondary	2016
17	Ezerani,Resen	Resen	12,000	Secondary	2004
18	Vranishta,Struga	Struga	120,000	Secondary	1988
19	Belchishta,Debartsa	Debartsa	500	Secondary	2006
20	Gevgelija	Gevgelija	30,000	Secondary	2018
21	Kichevo	Kichevo	48,000	Tertiary	2018
22	Prilep	Prilep	95,000	Secondary	2018
23	Radovish	Radovish	25,000	Secondary	2018
24	Strumica	Strumitsa	53,491	Secondary	2018
25	Kochani	Kochani	65,000	Secondary	2019
	Total		590,000		

The current capacity of the wastewater treatment plants in North Macedonia is approximately 590,000 population equivalents (p.e.), which represents about 24.5% of the required capacity of 2.1 million p.e. However, it should be noted that the construction works for building the central wastewater treatment plant (WWTP) for the capital city of Skopje, with a capacity of 625,000 p.e., will soon begin. The investment works have been supported through an EU grant, EIB (leading lender), and EBRD loan. Upon completion of this project, North Macedonia's wastewater treatment capacity will increase to around 1.15 million p.e., about 55% of the required treatment capacity for the entire country.

Moreover, it is worth mentioning that the EU-funded Sector Operational Programme for Environment and Climate Action (2014-2020) – IPA II proposes the construction of at least two more WWTPs. These include the WWTP in Bitola with a capacity of 112,474 p.e. and the WWTP in Tetovo with a capacity of 95,000 p.e. Upon completion of these projects, wastewater treatment capacity in the country will be raised by an additional 207,000 p.e., bringing the total capacity to 1.43 million p.e. This would represent approximately 67% of the required secondary treatment capacity in North Macedonia.

The DSIP for the UWWT Directive has indicated that 87 WWTPs are needed, of which 17 WWTPs should be with tertiary treatment. The total needed investment to meet the requirements of the UWWT Directive is estimated at EUR 1.2 billion in 2017; with the current investment rate, full compliance is foreseen in the year 2041.

Currently, coverage of wastewater collection and treatment investments remains a substantial challenge for national and local authorities. Therefore, the available national, EU and other donors' funds must be planned strategically. Also, the continuing burden of operating and maintaining the wastewater collection and treatment systems cannot be subject to external support, meaning that the PCEs will need to be able to generate revenues to cover these costs. In that direction, the Government, supported by the EU, undertook some actions to set up an appropriate water pricing system by adopting the new Law on Setting the Prices for Water Services and gradually introducing the "polluters pay" principle. The Regulatory Commission for Energy and Water Services (ERC) was appointed to set water service prices.

In its 2022 Annual Report²³, the ERC lists 87 water service providers in North Macedonia, of which 81 are PCEs that provide water supply and wastewater collection and treatment services locally. The other six are in charge of water accumulation drainage systems. Introducing a water price regulatory body in the country has positively contributed to gradually improving water usage efficiency. Though there is still significant water loss (non-revenue) at about 62.42%, it is recorded that water loss decreased by 13.11% and water efficiency in 2022 increased by 9.58% compared to 2021.

²³ https://www.erc.org.mk/odluki/2023.04.26_RKE%20GI%202022-FINAL.pdf

To ensure proper improvements in the wastewater sector management, there are several issues related to sewage collection and wastewater treatment which need to be addressed, which include the following:

- Extending wastewater treatment capacities.
- Extending and rehabilitating sewerage networks and separating stormwater systems from the sewerage system.
- Improving the economic setup of the PCEs to ensure cost recovery and sustainability of operations through better tariff-setting practices and increased revenue collection rates.
- Improving human resource capabilities to incorporate relevant sector knowledge.
- Increasing the efficiency of the PCEs' operations.
- Establishing and performing regular monitoring of urban wastewater quantities and quality and improving the information system on wastewater collection, treatment, and discharge.
- Raising public awareness about wastewater as a source of pollution and environmental degradation.

The OP will address the problems mentioned above for the WWTPs of the Municipalities of Veles (as primary intervention), Tetovo and Kavadarci (as reserve interventions). It will provide equipment for the PCE in eight municipalities.

Waste Management

The legal and policy framework governing the waste sub-sector in the country aligns with the European Union. However, the implementation of this framework has been delayed due to insufficient investments in waste management.

The waste management system in North Macedonia relies on the Public Communal Enterprises (PCEs) for waste collection, transportation, and disposal. However, these entities need more funds to invest in waste separation and treatment infrastructure, resulting in mainly mixed communal waste collected and disposed of in non-compliant landfills. Municipalities lack the administrative capacity to oversee and adequately support the PCEs. The Regional Waste Management Centres, as per the provisions of the new Law on Waste Management, were established within the Centres for Development of Planning Regions (*in total, 8 Centres, one for each planning region*). Even though such an organisation was done to increase their financial sustainability, the centres still have limited personnel and financial resources that impede them from becoming fully operational and performing their duties.

Mixed communal (municipal) waste is the most significant type, accounting for 522,914 tonnes or 82.7% of the total collected. The total generated waste in North Macedonia in 2021 was 896,066 tonnes. The annual amount of generated municipal waste per person in 2021 was 452 kg per person, the same as in 2020. Most of the collected communal waste (99.8%) is disposed of in landfills.

In 2021, 82% of the total population in North Macedonia had access to waste collection services according to the State Statistical Office.

In North Macedonia, only the Skopje landfill "Drisla" meets the minimum criteria set by the EU Directive on landfills. Thus, most municipalities use their own non-compliant landfills for waste disposal, or jointly share one landfill with other municipalities, resulting in 54 municipal non-compliant landfills, where 14 of the non-compliant landfills occupy an area of 0-5000 m² each. In 2020, 630,086 tonnes of waste were deposited in all landfills. In 2021, 632,087 tonnes of municipal waste were collected, representing a 0.3% increase from 2020, according to the State Statistical Office. The Skopje Region registered the highest amount of collected municipal waste at 176,917 tonnes, accounting for 28% of the total accumulated amount in the country. Of the municipal waste collected, 84% or 528,261 tonnes, came from households, while the remaining 16% originated from legal and natural persons, including commercial waste.

Closure of non-compliant landfills remains challenging for North Macedonia as substantial financial resources are needed. There are 54 identified "official" non-compliant landfills, classified based on their risk, as 16 with "high risk" (7 being in East and Northeast regions), 16 with "medium risk", and 22 with "low risk".

Extended Producer Responsibility (EPR) schemes have been implemented for packaging, waste from electrical and electronic equipment (WEEE), and batteries resulting in significantly higher recycling rates. For example, out of the products placed on the market that are part of the EPR packaging scheme, 68% of paper and cardboard, 39% of plastics, and 23% of glass have been recycled, which shows the country's potential for recycling, provided that appropriate infrastructure is in place.

Efforts to introduce regional self-sustainable waste management systems have been intensified, with EU IPA funds financing the preparation of necessary projects' technical documentation (FS, Regional plans, EIA, SEA, and Tender Documentation) which shall ensure the financial works of waste infrastructure in six regions. The Swiss Government is supporting similar types of activities in the Polog region.

The EU's infrastructure investment focuses on two regions, namely the East and Northeast. The first two projects in these regions developed planning and technical documentation to address non-compliant landfills and dumpsites. They financed their partial closure and supplied essential waste management equipment for both regions, including trucks and waste street containers. A significant project under IPA II related to establishing self-sustainable waste management infrastructure is also in the project pipeline for both regions. The project associated with the supply of trucks and waste street containers was completed. One project for the closure of some of the non-compliant landfills in the East region is under implementation. The project related to the establishment of one central waste management facility - landfill and related MBT plants – and six transfer stations experienced delays in implementation. This was due to the challenges in preparation of urban planning documentation that led to the necessity to change some of the previously agreed locations for the transfer stations. Additionally, the EIA consent for the project expired, leading to a repetition of the EIA procedure. These factors contributed to the postponement of the procurement procedure, which is now expected to commence at the second half of 2024. Also, several other technical assistance projects are planned to facilitate the process in both regions.

To enhance the waste management system and achieve its strategic objectives, the Government of North Macedonia has requested financial assistance from the European Bank for Reconstruction and Development (EBRD) to establish and develop waste management systems in five administrative regions in the country (the Polog region, the Vardar and the Southeast regions (“VSE region”) and the Pelagonia and Southwest regions (“PSW region”)). At the beginning of 2023, the loan has been complemented with an investment grant from the Western Balkan Investment Framework (WBIF) in the amount of EUR 22.5 million.

As part of this initiative, the EBRD has approved the financing of the following components:

- In the PSW region, the construction of a sanitary landfill in Novaci and five transfer stations (TS), and the procurement of waste collection trucks and bins/containers for mixed waste and recyclables.
- In the Polog region, the upgrading of the disposal site Rusino, including associated equipment, the construction of two new composting plants and two TS with the required equipment, and the procurement of waste collection trucks and bins/containers for mixed waste and recyclables.
- In the VSE region, the construction of a sanitary landfill in Dobrosinci and four TS, and the procurement of waste collection trucks and bins/containers for mixed waste and recyclables.

The borrower for this project is the Ministry of Finance, while the MoEPP will be responsible for implementing the project. The loan will be disbursed in two tranches. Tranche 1 will cover investments in the Polog Region and will also be co-financed (grant) by the Swiss State Secretariat for Economic Affairs (SECO) and will include: i) all above-listed activities, ii) waste collection and transport equipment for the Vardar and Southeast (VSE) and Polog and Southwest PSW regions; and iii) landfill and TS for the PSW region. With the Swiss support, technical assistance shall be provided to the PCEs and will support the development of the Waste Tariff Methodology for the set waste management services. Tranche 2 will finance the landfill and TS in the VSE region and the waste collection and transport equipment for PSW and VSE regions.

In summary, to improve the situation, several measures need to be implemented:

1. Source and secondary separation infrastructure must be extended to comply with the Waste Framework Directive targets.
2. Waste collection service coverage has to be extended, and collection efficiency improved.
3. Waste composting facilities and a system for diverting biodegradable waste from the general waste stream have to be established.
4. Collection system of waste from electric and electronic equipment, batteries and other unique waste streams has to be extended.
5. Landfills compliant with the Landfills Directive requirements have to be constructed.
6. A system for hazardous waste separation and treatment has to be established.
7. The efficiency of PCEs responsible for waste collection has to be improved, and institutional capacities strengthened.
8. Human resource capability has to be improved with relevant sector knowledge.
9. A newly set tariff system guaranteeing the sustainability of waste management operations has to be implemented.
10. Information on all streams of waste has to be improved.
11. Public awareness must be raised, particularly for separation at source and recycling.

Except for measures 4 and 6, this OP will support all the other measures mentioned above in the East and Northeast regions.

SWOT analysis

A SWOT analysis is performed for the water and waste management sub-sectors to justify selecting the specific interventions intended to be financed in this OP. The results of the SWOT analysis were extensively discussed and consulted to a particular meeting held on May 11, 2023, with representatives from departments within the MoEPP that are the main beneficiaries of this OP (i.e., the Department for Water, the Department for Waste, and the IPA Implementation Department that will have the role of a Managing Authority for the OP).

Strengths

The EU support has been essential in enhancing waste and water management in the Western Balkans region. One of the fundamental strengths is that the key national policy documents for waste and water management (see Section 2.1 above) have been approved by the relevant national authorities, considering their importance in providing the strategic framework and guidance for the sub-sectors development. The key policy documents provide a clear framework and direction for developing waste and wastewater management systems, enabling consistent and cohesive actions in both sub-sectors.

In addition, the regulatory framework is already established, and the Law on Setting Prices for Water Services provides the ground for improving the performance of the PCEs and enhancing their sustainability over the years by ensuring that water service prices will secure sufficient funds for covering all their operational costs. The legal setup provides and strengthens the financial sustainability of the water management systems, allowing them to be maintained over the long term.

The commitment and engagement of both the national authorities and the relevant municipal authorities in the East and Northeast regions, and the experience and lessons learned that they have gained during the development of the integrated waste management systems in these regions is a significant strength that will be used during the implementation of similar projects in other regions financed under the OP. Sharing lessons learned for promoting the importance of local engagement among municipalities is crucial for the success of the waste management initiatives, especially for ensuring the participation of the communities in the decision-making process, promoting a partnership approach and having a stake in the outcomes.

Furthermore, the feasibility studies, detailed designs, and other related project documents for the investment projects being in the preparation stage indicate that the portfolio of projects is maturing. Also, the commitment of the national authorities to developing a solid pipeline of investment projects that will be ready for implementation is another proof of overall progress in both sub-sectors. This shows that there is a focus towards appropriate prioritisation by the Government and planning of the portfolio of investments in waste and wastewater management for fulfilling the EU requirements in the pre-accession period. The strategic approach towards prioritisation and maturing the portfolio of the investments is also evident from the fact that the selected priorities under the OP are consistent with the priorities in the National Single Project Pipeline. Moreover, such an approach provides ground for strengthening the synergy of the use of EU funds and the national and donors' funds in the two sub-sectors, thereby maximising the results of all interventions aimed at modernising and improving the wastewater and waste management systems in the country.

Finally, a major strength is the high awareness of the relevant stakeholders and the general public of the importance of the environment and, thereby, waste and water management issues. The continuous support that the EU has provided in the two sub-sectors for many years, and the proper level of awareness create a receptive and friendly environment among the broader public for implementing waste and water management initiatives, ensuring that these initiatives are considered regional priorities.

Overall, the identified strengths are a positive factor created by the country and the national authorities, providing a solid foundation for successfully implementing the interventions planned under the OP.

Opportunities

The requirements of the EU accession process allow North Macedonia, as a candidate country for EU membership, to further strengthen its efforts to fully align with the EU's environmental *acquis*. The prospective membership offers a framework for development and provides concrete targets to be achieved that further encourage the country's commitment towards implementing the interventions under the OP. The EU strongly emphasises the Green Agenda in the Western Balkan Countries, making it a top priority that captures the attention of national authorities. Therefore, in the context of better implementation of the OP, the intensification of the EU accession process that brought the relations between North Macedonia and the EU to another level is seen as an important opportunity. The continuously intensifying dialogue creates the necessary environment for boosting the commitment on both the EU and national levels to supporting the sustainable waste and water management systems in North Macedonia. This provides a platform for collaboration and knowledge-sharing between the EU and the national authorities, but also wider with representatives from the Western Balkans.

One of the major opportunities is the great potential of both sub-sectors to improve the quality and efficiency of wastewater services and in helping to protect natural resources. Water and waste planning documents allow for the identification of priority areas and the establishment of measures to improve waste and water services for citizens in view of achieving a cleaner environment with reduced pollution. All planned measures will be implemented per the Green Agenda and in a timely fashion.

Furthermore, adequate water and waste management can contribute to economic development by improving the landscape and supporting sustainable development practices. The positive economic effects caused by acceptable wastewater and waste management policies create an opportunity for promoting the interventions, a better life for citizens in those municipalities and a basis for better tourism development and other economic activities.

The climate vulnerability and risk assessment are being conducted in the context of the (re)elaboration of the environmental impact assessment of the Veles major wastewater project. The adaptation measures are planned to consider the climate projection of the country in general and particularly the area where the WWTP will be located. The Hydrology Study will be developed to propose flood risks measures for safe WWTP operation in the periods with high precipitations. The mitigation measures are focus on energy independence of the WWTP and reduction of CO₂ emissions planning the construction and operation of PV plant and utilization of the biogas to produce heat and electrical energy.

By taking advantage of these opportunities, the country can make significant progress in promoting sustainable development and environmental protection while improving citizens' quality of life and ensuring that the region's natural resources are protected for future generations.

Weakness

One of the main challenges is the limited capacity of the PCEs, which may hinder the successful management of the planned interventions. The lack of adequate administrative capacities is coupled with poor management at the level of local authorities and the lack of proper control mechanisms of the municipalities over the PCE's performance, which can result in ineffective project implementation, delays and other deficiencies.

In addition, limited human resources and skilled personnel in both sub-sectors, also including the sector of designing and construction of infrastructure in the two sub-sectors, can further exacerbate these issues. The need for more funds for investments in water and waste management is another critical issue that needs to be addressed, along with the lack of funds for implementing waste and waste management plans.

Another area of concern is the low capacity to enforce environmental legislation due to the limited administrative capacity and need for more expertise in the relevant institutions in charge of implementing the legislation.

Furthermore, low institutional capacities for establishing and implementing monitoring and reporting processes pose a significant challenge, as do weak databases and information systems and poor equipment to perform these tasks. These challenges must be addressed to improve the country's overall water and waste management effectiveness. The EU can support the government in addressing these weaknesses through technical assistance and financial support, working closely with national and local authorities to develop and implement effective strategies and policies for the sector.

Threats

Several significant threats to wastewater and waste management sub-sectors must be considered to avoid their potential impact on the OP implementation. The first threat is the expected increasing prices for water and waste services. This could lead to decreased collection rate due to the unwillingness of the citizens to pay increased tariff for the wastewater and waste services. Such circumstances may impact the financial resources that the PCEs need for proper operation and maintenance of the infrastructure. It is crucial to strike a balance between the level of the tariffs and securing sustainable financing for wastewater and waste infrastructure.

The weather conditions frequently changing due to climate change are seriously threatening and negatively affecting the wastewater and waste management sector. Changing weather patterns could cause droughts, flooding, and severe weather events, making it challenging to manage and maintain the wastewater and waste infrastructure mainly due to increased running costs or the need to implement additional protective measures such as flood protection. Therefore, when planning and designing infrastructure in the wastewater and waste management sector, for the relevant authorities it is essential to consider climate change adaptation and mitigation measures to neutralise those threats and improve the feasibility of the planned interventions. As landscapes have changed, technologies for water pollution control have become more finessed to treat higher loads of wastewater. This led to the increase in conventional wastewater treatment plants, which tend to be carried out as an 'end of the pipe' solution, using a combination of physical, chemical and biological processes and operations to remove solids, organic matter and, when needed, nutrients (tertiary treatment) from wastewater to protect against contamination

of downstream water bodies. Natural-based solutions (NbS) can be integrated into the water sector taking into account local conditions (climate, precipitation patterns, etc.). These benefits from using NbS include improvement of water quality, as well as benefits beyond this for people and nature, such as: increasing biodiversity; providing social co-benefits, such as recreational areas and wellbeing through green spaces; improving urban microclimates; flood and storm peak mitigation; biomass production; and enabling water reuse. Nature-based Solutions should be applied to actions designed to work with and enhance natural habitats to take advantage of the ability of healthy natural and managed ecosystems to sequester carbon and support biodiversity recovery. Dumping waste in landfills without considering NbS solutions can create threats, to biodiversity, environment etc. and for this reason it is necessary to consider introducing actions designed to work with and enhance natural habitats to take advantage of the ability of healthy natural and managed ecosystems to sequester carbon and support biodiversity recovery.

Another significant threat is the emigration trends of the population living in the areas where the interventions will take place. This could lead to a loss of knowledge and expertise in the sector and hamper the sustainability of the implemented interventions. Conversely, the expected decreasing trends in population may also impact the planned interventions regarding their over-dimensioning. Those trends could only sometimes be precisely anticipated when planning the interventions.

Although on the margins, a threat which may further hamper progress in the waste management sector is the potential resistance that might occur among the staff of the PCEs and the wider public in changing traditional water and waste management practices, particularly in waste selection and separate waste collection.

One of the threats is related to delays in finalisation/preparation of the technical documents for infrastructure projects thus affecting the maturity of the envisaged projects within this OP on Environment. This may impact the duration of projects' implementation and the disbursements of the planned budget allocations. Commitment both from the MoEPP and the respective municipalities is needed for completion of the needed technical documents. The MoEPP will be supported with implementation of the OP on Environment under output 3 that will contribute positively in avoiding substantial delay and foster the communication with municipalities.

Addressing these threats and mitigating their impacts is critical to ensure sustainable and resilient water and waste management systems. The EU and its Member States can provide support and expertise to the partner countries to develop and implement strategies and actions to address these challenges.

Strengths	Weakness
<ul style="list-style-type: none"> • National policy documents for waste and water management are approved and provide guidance for the sectors' development. • Law on Setting the Prices of Water Services supports improvements in the PCE performance and their financial sustainability over the years to secure sufficient funds that will cover all operational costs. • The experience gained by the municipalities in the East and Northeast regions and their long engagement records in developing integrated waste management systems could be used as lessons learned by other municipalities. • Adequate matureness of project documents i.e., feasibility studies and designs for the planned investment projects are in the final stage of preparation. • Sufficient level of awareness among relevant stakeholders and the wider public for sustainable development and waste and wastewater management issues. 	<ul style="list-style-type: none"> • Limited capacity of the PCEs to manage infrastructure projects, including construction works project design. • Poor management and control mechanisms that the municipalities have over the PCEs' performance. • Lack of skilled and knowledgeable personnel. Lack of funds for investments in water and waste management. • Outdated infrastructure for water and waste in the PCEs. • Lack of funds for the implementation of water and waste management plans • Low capabilities to enforce the environmental legislation. • Resistance among the staff of the PCEs and the wider public to change traditional practices, especially in waste management. • Low capacities for the establishment and implementation of monitoring and reporting processes. • Weak database and information system.
Opportunities	Threats
<ul style="list-style-type: none"> • EU Accession process and commitment to the EU Green Agenda at the national level create an environment for implementing interventions in wastewater and waste sub-sectors. 	<ul style="list-style-type: none"> • Decreased collection rates resulting in lower financial sources for operation and maintenance for the PCEs due to increasing the prices for wastewater and waste services.

<ul style="list-style-type: none"> • Great potential that the two sub-sectors create for improving the quality and efficiency of waste and wastewater services. • Assessment of climate vulnerability and risk carried out for wastewater projects. • The positive economic developments provoked by adequate wastewater and waste management policies increase the attractiveness of those policies in the context of the overall economic development at the national level. • Provided assistance to the MoEPP for implementation of this OP creates supportive conditions for timely preparation of projects' documents. 	<ul style="list-style-type: none"> • Adverse weather conditions, such as flooding or droughts, resulting from climate change which are affecting the planned infrastructure interventions. • The decrease of population living in the areas where the interventions will take place due to migration trends, which might result in over-dimensioning of the planned infrastructure interventions. • Delays in finalisation/preparation of the technical documents for the infrastructure projects might affect the maturity and timeline for projects' implementation. • Benefits of NbS not used as part of waste and wastewater systems
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3. Overall Objective and Specific Objectives of the Operational Programme

The **Overall Objective (Impact)** is to enhance the implementation of the Green Agenda in North Macedonia.

The **Specific Objective 1 (Outcome 1)** is to reduce the amount of untreated wastewater discharged into recipients and improve wastewater management in compliance with EU requirements, including the reduction of GHG emissions.

The **Specific Objective 2 (Outcome 2)** is to reduce environmental deterioration and increase recycling by improving the regional waste management system and ensuring compliance with EU requirements, including the reduction of GHG emissions.

The **Specific Objective 3 (Outcome 3)** is to increase readiness of North Macedonia for EU accession negotiations under Chapter 22.

3.1 Coherence with the IPA III Programming Framework and with the specific policy instruments of the enlargement process

The Operational Programme (OP) for Environment in North Macedonia is highly relevant to the European Union (EU) accession process. The OP aligns with the EU's strategic priorities and policy instruments for the Western Balkans and North Macedonia's national environmental protection and sustainable development priorities. The OP aims to support the country in meeting the environmental *acquis*.

The OP addresses specific elements of policy instruments of the enlargement process, as it:

- Aligns with the **Economic and Investment Plan (EIP) for the Western Balkans and the Green Agenda**, focusing on sustainable economic development and environmental protection through waste and water management investments based on circular economy principles and climate resilience. The OP supports the EIP's aim to address waste and wastewater management challenges by developing modern waste management systems, improving wastewater treatment infrastructure, implementing EU standards, climate resilient action, promoting circular economy principles, and providing financial support. This represents a significant commitment of the EU to support environmentally friendly development in the region.
- Considers the **recommendations of the Commission Reports**, which assesses candidate countries' progress in meeting the requirements for EU accession. The Programme addresses the identified gaps and challenges in the environmental sector, as highlighted in the Commission Report. It supports the necessary reforms and investments to align with the EU's environmental standards.
- Addresses two out of the three recommendations made in the EU Progress Report for North Macedonia 2023, being "make operational the regional waste management system in the eastern and north-eastern regions" and seeking to "implement concrete measures to reduce air pollution at local and national level and to reduce point and diffuse pollution of freshwater resources".²⁴

²⁴ https://neighbourhood-enlargement.ec.europa.eu/system/files/2023-11/SWD_2023_693%20North%20Macedonia%20report.pdf

- Aligns with the 2023 European **Commission’s Country Report** or Chapter 22 of the EU's negotiating framework. The operational programme aims to improve the institutional, administrative, and technical capacity for the management of EU funds by adopting a staff retention policy, strengthening the capacity-building mechanism, and enhancing the implementation of EU funds. The programme also focuses on environmental governance, waste, and water management measures. It aims to reduce point and diffusing pollution of freshwater resources and establish a regional waste management system. The programme will contribute to implementing the Urban Wastewater Treatment Directive and the Waste Framework Directive. The OP will address the challenges and recommendations mentioned in the aforementioned report, such as improving administrative capacity and implementing waste and water management projects.
- Is consistent with the **Economic Reform Programme 2023-2025**, proposing measures to achieve competitiveness, inclusive growth, and green transition. Measures 7 and 8 of the ERP propose establishing wastewater and waste management systems in line with EU requirements to protect human health and the environment, increase circular economy implementation, and enable financial self-sustainability. The OP aligns with these measures to support establishing wastewater and waste management infrastructure in North Macedonia.
- Considers the conclusions of the meetings organised in the context of the **Stabilisation and Association Agreement (SAA)** between the EU and North Macedonia. The programme aligns with the environmental priorities and commitments under the SAA, including implementing the Economic and Investment Plan and the Green and Digital Agenda for the Western Balkans through improving environmental infrastructure and supporting the region’s green transition.
- Is consistent with the **National Plan for the Adoption of the Acquis**, a strategic document outlining the steps and timeline for aligning national legislation with the EU *acquis*. The Programme supports the implementation of environmental measures and investments identified in the NPAA, intending to achieve compliance with EU environmental standards.
- Aligns with the **EU’s Western Balkans Strategy**, which sets out the EU’s long-term vision for the region and its integration process. The OP supports the priorities and objectives of the Western Balkans Strategy. This OP will contribute to the goals set by the Sofia Declaration on the Green Agenda for the Western Balkans, specifically to Pillar II Circular Economy initiative: i) continue supporting the construction and maintenance of waste management infrastructure and Pillar III **Depollution initiatives**: i) implementation of Water Framework, **Urban Waste Water** and Extractive Waste Directives, ii) investment in urban wastewater collection and treatment including advanced treatment of nutrients and to some extent iii) investment in waste and manure management and wastewater treatment plants for reuse of water in agriculture.

4. Operational features of the programme

4.1 Interaction of the programme with IPA III annual action plans or measures and interventions from other donors/International Financial Institutions

The OP is aligned with the objectives defined in the **country’s IPA III Strategic Response, IPA III 2021-2027** under Window 3, Thematic priority 1, specifically with *Objective 1.1; To optimise the water cycle and reduce the impact of solid waste on the environment and following planned areas of intervention under this objective*:

- Investments in wastewater collection and treatments using the best available technologies not entailing high costs to reduce GHG emissions.
- Investments in integrated waste management systems at local and regional levels align with the most modern technologies to avoid increasing emissions of GHG.
- Building the capacity of the national authorities to design investment projects addressing climate risk assessment and climate proofing.
- Building the capabilities of the public utility companies in the water and waste sectors.

The OP is coherent with the ongoing/planned IPA III annual action plans, as follows:

IPA III Annual Action Programme for 2021

The 2021 Annual Action Programme envisages two actions in the environment sector that are coherent and complement the operations planned under the OP:

- **Action Document (AD) for “EU for Environmental Standards and Clean Air” and AD on “EU for Prespa”²⁵** - the actions in the area of the environment will provide the necessary support to the national authorities to align the national environment and climate change legislation with the EU *acquis*, and to ensure its implementation and enforcement in line with the national strategies and the international commitments of the country. The legal harmonisation will be accompanied by measures to strengthen the institutional framework and administrative capacities. All activities foreseen in the OP related to capacity building will be harmonised and shall provide follow-up support to those planned under the Action Documents in this area.
- The activities planned through the OP aim to increase the collection and treatment of wastewater to improve the status of ground and surface water. Implementation of the planned investments through the OP should moreover contribute to maximising the results in the area of wastewater treatment by improving the system of collection and treatment of wastewater in several municipalities in North Macedonia, i.e. Veles (as priority), Tetovo and Kavadarci, thereby fully complementing the interventions to the Prespa Lake planned to be financed under AP 2021. These activities will significantly impact and increase the percentage of treated water at the national level and fulfilling the requirements from the EU Water Directive in the pre-accession period of North Macedonia.

IPA III Annual Action Plan for 2022

The 2022 Annual Action Plan includes two actions in the area of environment that are coherent and complement the operations planned under the OP:

Action Document “EU for Modern Wastewater Systems” (AD) will invest in measures for collecting and treating urban wastewater in Shtip, Vinica and Veles (initially). The Action will support investment at the energy demand and supply level by using techniques that do not entail high costs to obtain a near-zero carbon footprint of the WWTPs. The Action is expected to also 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). Complementarity between the actions within this AD and the intervention foreseen in the OP will be ensured, particularly given that the Veles WWTP was initially planned under the mentioned AD but was later instead included under this OP due to the increase of market prices and their impact on the overall investment budget of the AD. Hence, investments under this AD and under this OP will have synergies and improve the country's wastewater collection and treatment. Moreover, the OP is coherent and fully compliant with the completed operations implemented under the IPA I Regional Development Component and several ongoing and planned actions under the IPA II multiannual programme in Environment, the multi-country programmes and the WBIF, as well as with projects financed and implemented by other IFIs, EU Member States or donors. It will build on their results and the achievements of the entire portfolio of projects in the sector.

In that respect, in addition to the financial support provided through the IPA, the environment sector is supported by other donors that also contribute to fulfilling EU requirements in the areas of water and waste management:

- **“Construction of WTP for the Municipality of Delcevo extension and rehabilitation of water supply system (2018-2023)”** funded by the State Secretariat for Economic Affairs, Swiss Government Agency (SECO); - The overall objective of the project is to improve the water quality of the river Bregalnica and to contribute to the economic development of the region, namely its industry, agriculture and tourism. The proposed project aims at i) building a drinking water treatment plant in the city of Delcevo, ii) connecting two large villages to the main supply system, iii) installing two renewable energy production facilities, and iv) providing corporate development support to the Delcevo PUC. The project will contribute to the fulfilment of the obligations of North Macedonia under the EU directives on drinking water.
- **“Wastewater Treatment Plant in the City of Skopje”** - This investment project concerns the construction of a 650,000 p.e. wastewater treatment plant in Skopje, the capital of and the largest city in North Macedonia. The future WWTP will serve a population of 518,000 and cover nine of the ten municipalities of the City of Skopje. The total project cost is estimated at €126 million. It will be financed by loans from the European Investment Bank (EIB) (leading lender) and the European Bank for Reconstruction and Development (EBRD), and grants from the Economic Resilience Initiative (ERI) implemented by EIB, the Western Balkans Investment Framework (WBIF), and the EBRD. In more detail, the mobilised funding includes:

²⁵ <https://www.sep.gov.mk/page/?id=1120#.ZGeh-6VByM8>

- **“Technical Assistance to the Skopje Wastewater Treatment Plant Project Implementation Unit (PIU)” (2021-2023)** of EUR 500,000 funded through the ERI initiative. The EIB provided technical assistance to the PIU established in the Public Utility “ViK” Skopje that will be responsible for effectively implementing the Skopje Wastewater Treatment Plant Project.
- **“Construction of a wastewater treatment plant (WWTP) in the City of Skopje”**, an **EBRD loan** of around EUR 30 million planned for 2023-2028 to co-finance investment works.
- **“Construction of a wastewater treatment plant (WWTP) in the City of Skopje”** an **EIB loan** of around EUR 30 million planned for 2023-2028 to co-finance investment works.
- **“Construction of a wastewater treatment plant (WWTP) in the City of Skopje”**, a **WBIF Investment Grant** of around EUR 72 million planned to co-finance investment works.
- **“Municipal infrastructure in the water sector”** is a framework EIB loan of EUR 50 million for 2022-2026, which will finance the construction and rehabilitation of water supply, wastewater collection and treatment infrastructure, and emergency flood protection measures for the 80 municipalities of North Macedonia. EIB's contribution is substantial, representing 40% of the planned investments and rehabilitation of municipal water infrastructure. The programme will also improve local capacity in planning and implementing water investment projects, improving quality standards, procurement processes and environmental sustainability.
- **“Establishing a regional waste management system in five regions”** - The Project is a nationwide undertaking in the Solid Waste Management sector in the country and an important step towards a sustainable solution for solid waste management services compliant with the respective EU standards in the sector, covering a population of more than one million residents across five administrative regions in the country. This large and innovative investment project will support establishing three regional integrated waste-management systems per European Union (EU) standards across five regions (Polog, Southwest, Pelagonija, Vardar and Southeast). The project will close local dumpsites and non-compliant landfills and introduce environmentally safe disposal practices in line with EU standards. The project implementation will benefit from blended financing from the EBRD, the Swiss State Secretariat for Economic Affairs (SECO), the Swedish International Development Cooperation Agency (SIDA) and the WBIF. In more detail, the mobilised funding includes:
 - **“Construction of a regional waste management system in five regions”** an **EBRD loan** of around EUR 55 million to co-finance the construction of new and rehabilitate existing sanitary landfills, build new transfer stations, waste infrastructure for collection and transport, and a recycling centre, and to close two non-engineered dumpsites.
 - **SECO’s financial support** of approximately EUR 9 million grant will be distributed between an investment component amounting to around EUR 6 million for finalising the rehabilitation of the Polog landfill and around EUR 3 million for further development of institutional frameworks at the regional and local level in the solid waste sector. In parallel, the SECO-funded assistance will also be extended to the Energy and Water Services Regulatory Commission to expand its competencies in the sector, including preparing a new tariff methodology.
 - **“Construction of a regional waste management system in five regions”** a **WBIF technical assistance Grant** of around EUR 2 million planned to develop associated studies in two regions.
 - **“Construction of a regional waste management system in five regions”** a **WBIF Investment Grant** of around EUR 22.3 million planned to co-finance investment works.
 - **SIDA’s financial support** of approximately EUR 1 million grant for project preparation and implementation.

Consequently, the OP will complement the activities supported not only by the EU (through its different facilities) but also by other donors and IFIs in further strengthening the water and waste management in the country. The programme will build on their results and achievements.

Coherence with the IPA III Programming Framework – Windows 1, 2 and 3

The OP is designed to contribute to achieving the specific objective of the **IPA III Programming Framework**²⁶, thematic priority 1: Environment and climate change, within **Window 3: Green Agenda and Sustainable Connectivity**. More specifically, under thematic priority 1, the Action addresses the specific objective “to support the protection of the environment, improve its quality and contribute to actions and policies against climate change to accelerate the shift towards a low carbon economy” and the effort to bring water, wastewater and solid waste

²⁶ (2021) 8914 final of 10.12.2021 on the Instrument for Pre-Accession Assistance (IPA III) Programming Framework for the period 2021-2027.

management infrastructure in line with EU standards and to ensure the application of cost-recovery and polluter-pays principles.

In addition, the OP on Environment will contribute to meeting the priorities of the IPA III Programming Framework by supporting fundamental reforms in the country based on EU values and standards. It is in line with **Window 1: Rule of Law** and **Window 2: Good governance** priorities related to anticorruption and governance on the sub-national level by supporting the Public Communal Enterprises (PCEs) of the respective municipalities, optimising their operations, improving their capacities and bringing them to be independent institutions for undue political influence. The investments in infrastructure and related equipment, combined with interventions that should provide capacity-building support to the PCEs, should improve the overall operation of the public enterprises to deliver water and waste services with enhanced quality financed through a sound and sustainable system of revenues. In such a manner, the PCE will be less dependent on the municipalities' administration and the local policy structure. The sustainability on the financing side shall be secured by the Regulatory Commission for Energy and Water Service (ERC), which will be responsible for approving only evidence-based price setting reflecting only the costs for service delivery and service improvement, requesting at the same time transparency and accountability of the PCEs' administration and sound financial management. In addition, the MoEPP, under the Law on Waste Management, has envisaged the ERC to be the regulatory body also for waste services by developing the waste tariff methodology. Consequently, by implementing interventions supporting the PCEs' performance and improving their capacity and structure, the OP will improve the anti-corruption efforts.

The OP is also closely linked with the priorities under Window 2 (Good Governance) related to Economic governance by providing direct investment in water and waste management, thus supporting the improvement of employment in the targeted municipalities. Also, the support provided to the IPA structure in the MoEPP which undertakes the role of the Managing Authority, is expected to enhance the national institutional capacity for economic planning and improve the ownership of the IPA III implementation. The planned interventions should also contribute to increasing the administrative capacity at the national and local level and the EU *acquis* alignment in the fields of waste and water, all aimed at enhancing and promoting good governance practices in the country.

Coordination mechanisms for implementation of the OP on Environment

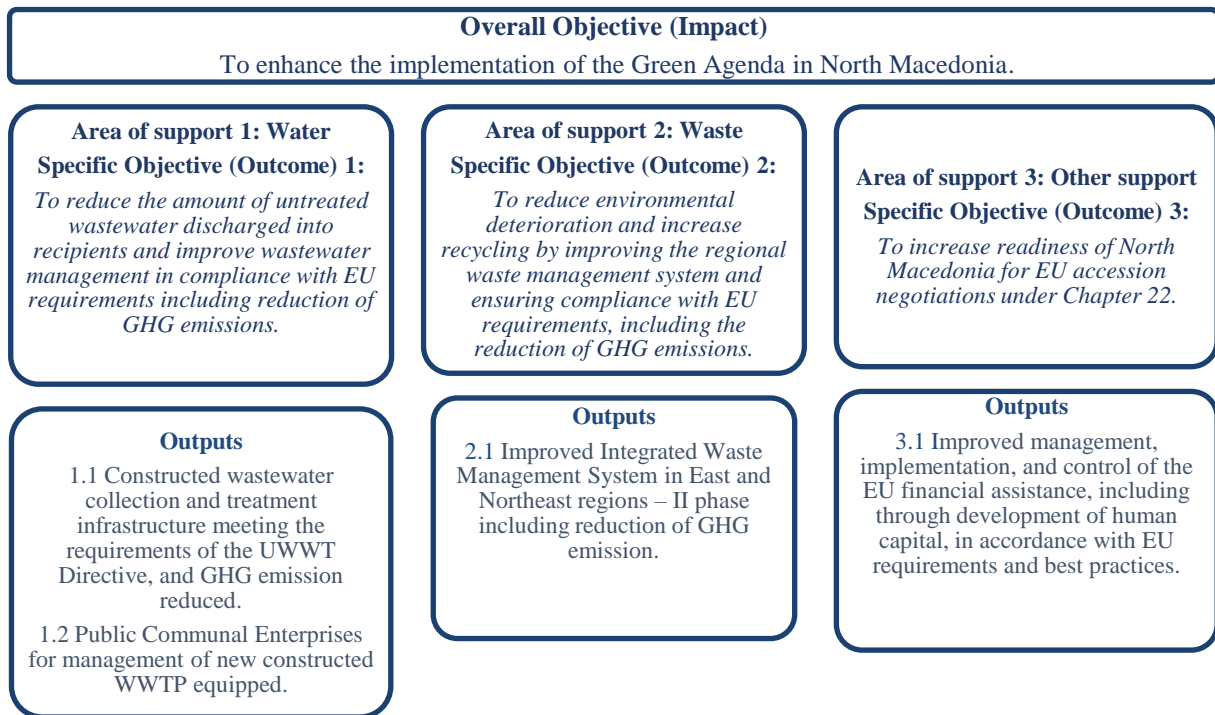
Chapter 27, during the accession process, is one of the most complex chapters to complete and hence requires strong efforts for coordination, investments and great capacities and responsibilities of administrations at central and local levels to implement and enforce reforms. The MoEPP managed two sector operational programmes under IPA I and IPA II in the last years and cooperated extensively with relevant municipalities that were targeted within the programmes. The MoEPP established project implementation units (PIU) with each municipality, comprising representatives from the local PCE, the municipal administration and one representative from the MoEPP – IPA operational structure. Consequently, all coordination was conducted through the PIU, which ensured good communication and information sharing at the local level. To ensure sustainability and ownership, at the beginning of each infrastructure project, an agreement was concluded with the PCE and the respective municipality, stipulating all obligations during and after the project's construction phase. Also, through regular IPA monitoring committee meetings, regular information was shared about project implementation. In addition, the Government was regularly informed of the progress of the OP. The MoEPP will build on this experience and the lessons learned to ensure similar efficient coordination mechanisms.

4.2 Description of the programme

4.2.1 Intervention Logic

This OP will enhance the implementation of the Green Agenda by contributing to water protection, increasing the efficiency of waste management and accelerating investment in the environment. Results will be achieved through improving wastewater infrastructure, upgrading the waste management system, supporting water tariff implementation and enhancing the capacity in the environmental sector which will enable North Macedonia to gradually meet EU requirements.

The **Overall Objective (Impact)** is to enhance the implementation of the Green Agenda in North Macedonia.



Area of support 1 – Water

The **Specific Objective (Outcome) 1** is to reduce the amount of untreated wastewater discharged into recipients and improve wastewater management in compliance with EU requirements including reduction of GHG emissions.

The **Outputs** to be delivered in the Area of support 1 contributing to the corresponding Specific Objective (Outcome) are:

- 1.1. Constructed wastewater collection and treatment infrastructure meeting the requirements of the UWWT Directive, and GHG emission reduced.
- 1.2. Public Communal Enterprises for management of new constructed WWTP equipped.

Area of support 2 – Waste

The **Specific Objective (Outcome) 2** is to reduce environmental deterioration and increase recycling by improving the regional waste management system and ensuring compliance with EU requirements, including the reduction of GHG emissions.

The **Output 2.1** to be delivered in the Area of support 2 contributing to the corresponding Specific Objective (Outcome) is:

- 2.1. Improved Integrated Waste Management System in East and Northeast regions – II phase including reduction of GHG emission.

Area of support 3 – Other support

The **Specific Objective (Outcome) 3** in the Area of support 3 is to increase readiness of North Macedonia for EU accession negotiations under Chapter 22.

The **Outputs** to be delivered in the Area of support 3 contributing to the corresponding Specific Objective (Outcome) is:

- 3.1. Improved management, implementation, and control of the EU financial assistance, including through development of human capital, in accordance with EU *acquis* and requirements and Member States' best practices.

4.2.2 Detailed description of each area of support

Area of support 1–Water

Rationale

Despite the country's efforts, the existing developed wastewater collection coverage and treatment capacity is insufficient to meet EU requirements. Due to insufficient funding from national resources for investments in wastewater infrastructure, the sector has benefited largely from the support of the EU and other donors.

During the implementation of the Operational Programme for Regional Development 2007-2013 (OPRD), projects' documentation for the construction of WWTPs and rehabilitation and upgrading of the sewerage network was prepared for agglomerations above 10,000 inhabitants. This included Prilep, Tetovo, Strumica, Bitola, Radovish, Kichevo, Veles and Shtip municipalities. Also, 4 WWTPs were constructed for Prilep, Strumica, Radovish and Kichevo. Under the Sector Operational Programme for Environment and Climate Action 2014-2020 (OPECA), a procurement procedure is underway to implement construction works for the technically matured projects of the municipalities of Bitola and Tetovo. Also, with Swiss Government support, a WWTP was constructed for Kochani in 2019.

The interventions included in this OP will build on the results of the IPA I and II operational programmes.

Namely, the construction of the WWTPs and the extension and rehabilitation of the sewerage network shall be implemented for the municipality of Veles. The technical documentation related to wastewater interventions in the municipality of Veles was first prepared under OPRD 2007-2013. Still, due to price increases and in order for the WWTP to be energy efficient and reach carbon neutrality, there was a need to revise the technical documents. These documents require further revision. The municipality of Veles (48,463 inhabitants) is in the Vardar River Basin that shared with the Republic of Greece. The existing sewerage networks cover over 80% of the population in Veles. However, more than 50% of it 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. The intervention envisages the extension of the sewerage coverage by constructing approximately 54.2 km and constructing the WWTP Veles with a capacity for about 53,100 p.e. To counteract the negative effects related to the increase of GHG emissions, the WWTP in Veles will be built considering the best available techniques not entailing high costs to obtain a near-zero carbon footprint of the WWTP operation.

Also, the newly developed wastewater infrastructures built under IPA I and IPA II and with support of other donors in the preceding multiannual financial frameworks are in immediate need of a significant increase in the capacity of the PCEs and the municipal administrations to operate and maintain them. Purchasing of WWTPs' and sewerage maintenance equipment is crucial to ensure the improvement of wastewater service quality, optimising the costs, and revenue collection and improving the efficiency and management of the respective PCEs. Accordingly, equipment shall be provided to these PCEs to ensure proper implementation of the new water tariff methodology, appropriate management of the new infrastructure, and to increase the quality of water services provided to the citizens. The WWTPs in the PCEs of the municipalities of Radovish, Kichevo, Strumica, Prilep, Berovo, and Kumanovo, built under EU and other donors' (Swiss government for Kumanovo) support, as well as the new ones expected to be built in the municipalities of Bitola and Tetovo. Needs assessment and technical specifications for the equipment shall be developed within the project "Technical audit of existing wastewater collection and treatment systems in North Macedonia and preparation of necessary documentation for Supply of Water Equipment for the Municipalities of Radovish, Kichevo, Strumica, Prilep, Berovo, Kumanovo, Bitola and Tetovo", funded under the IPA II SOPECA 2014 – 2020. Complementary activities shall be implemented to support the Regulatory Commission for Energy and Water, MoEPP, local authorities and the PCEs regarding improvement of the water tariff system implementation. MoEPP and other relevant authorities additionally shall be supported in the EU approximation process of the water sector.

The Government of North Macedonia included establishing wastewater collection and treatment infrastructure as one of the structural reform measures in the Economic Reform Programme 2022-2024. Consequently, for securing further investments in wastewater infrastructure in this Operational Programme, two additional interventions as reserve projects have been included: rehabilitation and extension of the sewerage network and construction of the WWTP in Kavadarci and extension of the sewerage network and upgrading of the WWTP in Tetovo. The Government is committed to increasing its national contribution to these two projects, searching for additional donors, or committing to loan agreements with IFIs to enable their financing.

The municipality of Kavadarci is on the NSPP for the Environment as a city in the most important vinery region of North Macedonia. Apart from Bitola and Prilep (the Prilep WWTP is constructed under IPA I), the municipality is the largest polluter of the Crna Reka river, the biggest tributary of the Vardar River. According to the DSIP for the UWWTD the planned capacity of the Kavadarci WWTP is app. 42,342 p.e., and the need for sewerage extension is about 15.5 km for sewer, 6.0 km for the transit network and about 42.5 km for the reconstruction of the wastewater network. Under this OP, it is planned to first prepare the technical documentation for the design of the rehabilitation of the sewerage system and for the WWTP construction in Kavadarci, followed by the execution of the construction works. However, to speed up the preparation and implementation of this intervention, the

MoEPP will explore the possibility of the technical documentation to be prepared from other funding resources or donors.

Extension of the sewerage network and the construction of a secondary wastewater treatment plant for around 95,000 p.e. for the Municipality of Tetovo is envisaged under IPA II, and the procurement process is about to start. However, due to the price increase and the need to improve energy efficiency and sludge management, this OP is envisaged as an intervention for extending the sewerage network and upgrading the WWTP. This intervention will improve the WWTP operation in order to achieve a net-zero carbon footprint, improve excess sewage sludge treatment and, depending on availability of funds, reusing reclaimed wastewater in agriculture.

Applicable EU legislation

The OP in the Area of Support #1 contributes to the implementation of the following EU water *acquis*:

- Urban Wastewater Treatment Directive (UWWTD) (91/271/EEC)
- Sewage Sludge Directive (86/278/EEC)
- Framework Water Directive (FWD) (2000/60/EC)
- Bathing Water Directive (76/160/EEC)

Specific objective (Outcome) 1

Reduced amount of untreated wastewater discharged into recipients and improved water management in compliance with EU requirements.

Typologies of outputs

Output 1.1: Constructed wastewater collection and treatment infrastructure meeting the requirements of the UWWT Directive, and GHG emission reduced.

This output will be achieved by investments in agglomerations with over 10,000 inhabitants, where the effects on the population and environment are the greatest and improve their performance to achieve a zero-net carbon footprint gradually.

Output 1.2: Public Communal Enterprises for management of newly constructed WWTP equipped.

This output will include PCEs with newly constructed WWTP to increase their performance, operation and maintenance, and energy efficiency.

Impact, outcome and output indicators (incl. baselines and targets)

	Indicator	Baseline	Target	Source of verification
Impact	Progress in implementation of Green Agenda	EU Progress Report 2023 - the country needs to accelerate the implementation of the Green Agenda for the Western Balkans over the upcoming period.	Progress in implementation of Green Agenda action plan	Commission Reports ²⁷
Outcome 1	Population equivalent (p.e.) with wastewater secondary treatment	590,000 p.e. (2022) (24.5 %)	1,400,800 p.e. (2032) (67%)	State Statistical Office
Output 1.1	Number of new WWTP constructed meeting EU requirements	25 WWTP (2022)	27 WWTP	MoEPP and PCEs
	Length of new or upgraded sewerage pipes	0 km (2022)	54.2 km	MoEPP and PCEs

²⁷ https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/strategy-and-reports_en

	Indicator	Baseline	Target	Source of verification
	for the public network for collection of wastewaters			
Output 1.2	Number of PCEs with new equipment for sewerage and WWTP maintenance	0 (2022)	Minimum 6 PCEs (2032)	MoEPP and PCE reports
	Improved performance of the PCEs – decrease the nonrevenue water quantity	62.42 % average nonrevenue water (2022)	Minimum 10 % decrease in nonrevenue water (2032)	Regulatory Commission for Energy and Water Services (ERC) and PCE reports

Type of activities

The activities will support project implementation, purchase of equipment and physical works within the selected municipalities at the most advanced level of preparation, following the water sector priorities and fulfilling the selection criteria. The proposed projects for construction, upgrading or extension of the sewerage network must demonstrate that the environment is protected at the highest possible extent from adverse effects of the discharge of untreated wastewater. Support in the EU approximation process of the water sector and further improvement of the implementation of water tariffs will be implemented considering the development of the EU negotiation process and performance needs of the PCEs.

Eligible activities, including major project:

- Upgrading and establishing wastewater collection and treatment infrastructure, meeting EU requirements of selected projects at the most advanced level of preparation above 10,000 population equivalents (p.e.).
- Improving water management and cost efficiency aiming to achieve carbon neutrality.
- Rehabilitation and extension of sewerage network; construction/upgrading of WWTP; water reclamation and reuse.
- Planning/developing/revising technical and tender documentation for improving sustainable water management and creating conditions for new investments in water management.
- Supervision of works contracts.
- Equipment for sustainable management of urban wastewater systems.
- Support EU approximation in the water sector.
- Support implementation of the water tariffs

Delivery method:

- Services, supply, works and grant (e.g., twinning) contracts.

Selection Criteria:

- Projects included in the National Single Project Pipeline.
- Consistency with the EU, national and regional policies.
- Project maturity for implementation.
- Impact on population and the environment.
- Environmental benefits are expressed in the amount of pollution reduction.
- Coverage of sewerage system expressed in % of the population covered.
- Adequate management capacity of the final beneficiary.
- Sufficient financial ability of the beneficiary and available co-financing.
- Relevance to the objectives of the Directive Specific Implementation Plan for the EU UWWTD.
- Relevance to the National Water Strategy.
- Relevance to the EU integration process for Chapter 27.

End recipients and target groups:

End recipients

- MoEPP
- Municipalities

- Public Communal Enterprises in the targeted municipalities
- Regulatory Commission for Energy and Water Services

Target groups

- Local community: The projects will benefit the local communities living in the targeted municipalities and downstream municipalities by improving their surface water quality.

Conditions:

- The MoEPP shall ensure that project documents, such as the Feasibility Study, Cost-Benefit Analysis, Environmental Impact Assessment, and Detail Design, are prepared per EU requirements.
- The project documents must also respect the special requirements deriving from national legislation and relevant standards requested by the legislation, including by-laws.
- For a project with an estimated budget of over EUR 15 million, the MoEPP needs to ensure that Major Project Applications are prepared in the template prescribed by the respective IPA Financing Agreement, as required by the EU.
- Using the “Green procurement” approach should be considered to promote the EU’s Green Agenda.

Area of support 2 – Waste

Rationale

The Waste Framework Directive implies implementing waste prevention and reduction policies and increasing separation at source and recycling. This requires improvements in waste collection practices by establishing separation at source schemes and by developing secondary separation and waste recycling capacities that contribute to achieving the targets foreseen in the Directive. The only waste that cannot be recovered or recycled will be disposed of in regional landfills that need to comply with the Landfill Directive. Current waste disposal practices in the country do not comply with technical and/or environmental standards. Most municipal non-compliant landfills must be closed since site conditions do not allow upgrading to EU requirements at reasonable costs.

The East and Northeast waste regions face significant challenges related to waste management, including inadequate infrastructure, many non-compliant landfills that are used by municipalities, numerous dumpsites, limited technical equipment for waste separation and collection, almost no facilities for waste recycling or composting, limited capacity of the PCEs, limited funding, and insufficient public awareness of the importance of proper waste disposal. To address these challenges, investment in integrated waste management is essential. Consequently, under the IPA I OPRD 2007-2013, technical documentation, including FS, EIA, CBA, design, and tender documentation for establishing an integrated and financially self-sustainable waste management system in the East and Northeast regions phase I, were completed in 2017. The project covers the Northeastern part of North Macedonia, comprising two administrative regions (East and Northeast) and the Municipality of Sveti Nikole. The East region includes 11 municipalities²⁸ and covers an area of 3.537 km² (14% of the country’s territory), while the Northeast region includes six cities²⁹ and covers an area of 2.306 km² (9% of the country’s territory). Also, located within the territory of these regions is the Municipality of Sveti Nikole, which covers an area of 480 km² (1,8% of the country’s territory). The total population of the project area is about 260,000 citizens. The system was designed to be implemented in two phases: the first phase under IPA II and the second phase under the next perspective, IPA III.

The **first phase** under the IPA II operational program for 2014-2021, includes the establishment of a central waste facility in Sveti Nikole, construction of 6 waste transfer stations (Berovo, Makedonska Kamenica, Vinica, Stip, Rankovce and Kumanovo), provision of waste collection equipment, and the closure in full or partly of 17 non-compliant landfills and dumpsites in the East and Northeast regions. Equipment for the waste collection for all PCEs of both regions has been delivered, and the project for closure of non-compliant landfills/dumpsites in the East region is currently under implementation. The works contract for constructing one central waste management facility, the closure of non-compliant landfills/dumpsites in the Northeast region, and six waste transfer stations with facilities is expected to start with the implementation at the beginning of 2025.

In order to establish a fully operational and self-sustainable waste management system it is necessary to further improve the regional waste management system by completing the second phase projected under IPA III. The

²⁸Berovo, Pehčevo, Delčevo, M. Kamenica, Vinica, Kočani, Zrnovci, Češinovo - Obleševo, Probištip, Karbinci, Štip

²⁹Kriva Palanka, Rankovce, Kratovo, Staro Nagoričane, Kumanovo, Lipkovo

second phase, leaning on the results of the first phase, includes measures such as expanding waste collection services to more communities, closure of the remaining non-compliant landfills/dumpsites (currently used by municipalities until a new central waste facility is constructed), supplying waste separation and collection equipment for the municipalities/PCEs and supply of equipment for the main waste facility and transfer station. The finalisation of the second phase will enable the municipal waste separation system to be established, which will increase waste recycling in both regions.

Approximation with the EU *acquis* in the waste sector needs actions in alignment of the EU *acquis* and in implementation of the *acquis*' requirements that involves several authorities on national and local level. Also, implementing the waste tariff system will enhance the PCEs operations. Therefore, support is envisaged to the MoEPP in the approximation process of the EU waste *acquis* and support to the relevant authorities in further improvement of implementation of the waste tariffs and the legislation relevant for implementation of the Green Agenda.

Applicable EU legislation

The OP in the Area of Support #2 contributes to the implementation of the following EU waste *acquis*:

- Waste Framework Directive 2018/851/EU
- Landfill Directive 1999/31/EC
- Packaging and Packaging Waste Directive 94/62/EC
- Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU
- Waste Batteries and Accumulator Directive 2006/66/EC
- Single Use Plastic Directive 2019/904/EU

Specific objective (Outcome) 2

Reduced environmental deterioration and increased recycling by improving the regional waste management system and ensuring compliance with EU requirements, including the reduction of GHG emissions.

Typologies of output: To achieve the stated outcome within this area of support, one output will be accomplished:

Output 2.1: Improved Integrated Waste Management System in the East and Northeast Regions – phase II including reduction of GHG emissions.

Impact, outcome, and output indicators (incl. baselines and targets)

	Indicator	Baseline	Target	Source of verification
Impact	Progress in implementation of Green Agenda	EU Progress Report 2023 - the country needs to accelerate the implementation of the Green Agenda for the Western Balkans over the upcoming period.	Progress in implementation of Green Agenda action plan	European Commission Report
Outcome 2	Number of people benefitting from an improved urban waste collection and disposal service supported by the investment, disaggregated by sex and age where relevant	0 (2022)	260,000 (2032)	State Statistical Office
Output 2.1	Amount of biodegradable waste diverted from landfilling	280,000 t (2022)	70,000 t (2032) (< 25 %)	State Statistical Office, MoEPP
	Amount of GHG emission reduction	0 Gg CO ₂ (2022)	-3.5 Gg CO ₂ (2030)	State Statistical Office, MoEPP
	% of communal waste recycled	0.2 % (2022)	27 % (2032)	State Statistical Office

Type of activities

This activity will be implemented in the Northeast and East Planning Regions, which are at the most advanced level in the establishment of one regional waste management system and are expected to be the first regions in North Macedonia with waste management infrastructure (source and secondary separation infrastructure, composting sites, landfill, etc.) in compliance with EU requirements. The activity will support projects' implementation, purchase of equipment and physical works in the two regions related to the closure of non-compliant landfills, supply of equipment for separate waste collection from households, supply of equipment for waste transportation and supply of equipment for operation of the central waste management facility and transfer stations.

Eligible activities, including major project:

- Construction/upgrading of the integrated regional waste management system and avoid further deterioration of the environment by uncontrolled waste management.
- Supporting inter-municipal cooperation in waste management.
- Improving waste tariff setting and implementation.
- Planning and developing technical documentation for improving waste management and creating conditions for new investments.
- Closure of non-compliant landfills.
- Supervision of works contracts.
- Procurement of needed equipment/vehicles for integrated waste management. Equipment for separate waste collection and transportation and the operation of the central waste facility and transfer stations.
- Support EU approximation in the waste sector.
- Support implementation of waste tariff system.

Delivery method:

- Services, supply, works and grant (e.g., twinning) contracts.

Selection Criteria:

- Project included in the National Single Project Pipeline.
- Consistency with the National Waste Management Plan.
- Compliance with Regional Waste Management Plans for East and Northeast regions.
- Consistency with EU policies.
- Maturity and relevance of the project.
- Impact of the project on population and nature.
- Environmental benefits are expressed in the amount of waste recycled.
- Adequate management capacity of the final beneficiary.

End recipients and target groups:

End recipients

- MoEPP.
- Municipalities of the East and Northeast regions: Berovo, Pehčevo, Delčevo, M. Kamenica, Vinica, Kočani, Zrnovci, Češinovo - Obleševo, Probištip, Karbinci, Štip, Sveti Nikole.
- Public Communal Enterprises in the targeted municipalities.
- Regional Waste Management Company.
- Regional Waste Management Boards of East and Northeast regions.
- Centres for Development of Planning Regions – Organizational Units for Regional Waste Management.
- Regulatory Commission for Energy and Water Services

Targeted groups

- Local community: The projects will benefit the communities in the targeted municipalities by improving their waste management services and environment.
- Private companies that work in the field of waste recycling.

Conditions:

- The MoEPP must ensure that Phase I of the project is completed or close to completion before starting Phase II.

- The MoEPP shall ensure that all project documents are prepared on time and in line with EU requirements.
- The project documents must also respect the special requirements deriving from national legislation and relevant standards requested by the legislation.
- The MoEPP, respective PCEs, and Regional Companies should ensure that the project's results will remain sustainable over the long term, both financially and environmentally.
- Using the “Green procurement” approach should be considered to promote the EU’s Green Agenda.

Area of support 3 – Other support

Rationale

The administrative capacity at the national and local levels remains weak, with insufficient human and financial resources to implement and enforce the legislation. To support the implementation of environmental policies, the capacity of the relevant institutions at the national and local levels should be in place. Within the MoEPP, the IPA structure for the environmental sector is crucial in planning and managing water and waste management infrastructure projects. Consequently, strengthening their capacity will positively impact the country’s efforts to meet EU requirements in these two areas, including on issues such as planning, technical documentation preparation, and investment work implementation. Knowledgeable and capable public administration will ensure that the projects’ implementation phases are prepared and completed within the agreed timelines. Therefore, this area of support includes providing training and support for the IPA structure staff and end beneficiaries’ staff during the projects’ preparation and implementation, establishing clear roles and responsibilities, and developing robust monitoring and evaluation systems to ensure that the OP, environmental policies and projects are being implemented effectively. It will also support developing projects’ technical documentation, as needed during the projects’ implementation, thus, preventing delays in the implementation of the OP.

The support shall be built on the results achieved under the technical assistance within SOPECA 2014-2020 (expected to start in Q4 2023). Capacity building to the IPA operational structure and other end-beneficiaries of the support envisaged under the OP shall be provided to ensure the sustainability of the support areas and in order to improve the infrastructure management. Implementing infrastructure projects requires skills not often found in public administration; thus, part of the support shall be dedicated to implementing relevant retention policy measures to ensure that knowledgeable and skilled employees continue to be part of the administration. The 2023 Commission report for Chapter 22 noted that North Macedonia is *moderately prepared* in regional policy and coordination of structural instruments. Consequently, the intervention aligns with one of the recommendations: to “upgrade the institutional, administrative and technical capacity for the management of the EU funds by adopting an overall staff retention policy, strengthening the capacity-building mechanism”. By building a strong and capable operational structure, North Macedonia can ensure that environmental policies are implemented effectively and efficiently. Therefore, this area of support shall provide technical support to the IPA structure and end beneficiaries in the implementation of the OP on Environment, thus increasing their capacity and capabilities for planning and managing of EU and other donors’ funds in the environment and climate sector and establishing the ground for management of the European Structural and Investments Funds.

Applicable EU legislation

- The Commission Report Chapter focus on strengthening preparations for participation in the European Social Fund (ESF). This includes enhancing capacities within state bodies to ensure that they are ready to manage the Fund effectively, which are planned to be addressed by the type of activities foreseen under this area of support.
- Supporting Public Administrations in EU Member States to Deliver Reforms and Prepare for the Future (Commission Staff Working Document SWD (2021/101).
- EU Public Administration toolbox.

Specific objective (Outcome) 3

Increased readiness of North Macedonia for EU accession negotiations under Chapter 22.

Typologies of outputs

To achieve the stated outcome within this area of support, one key output will be accomplished:

Output 3.1: Improved management, implementation, and control of the EU financial assistance, including through development of human capital, in accordance with EU requirements and best practices.

Impact, outcome, and output indicators (incl. baselines and targets)

	Indicator	Baseline	Target	Source of verification
Impact	Progress in implementation of Green Agenda	EU's Progress Report 2023: the country needs to accelerate the implementation of the Green Agenda for the Western Balkans over the upcoming period.	Progress in implementation of the Green Agenda action plan	EU's Country progress report
Outcome 3	% of EU funds absorbed under OP	0 (2023)	≥ 90% (2033)	Annual reports on programme implementation
Output 3.1	Number of completed OP projects	0 (2023)	≥ 7 (2033)	Annual reports on programme implementation
	Staff turnover rate ³⁰	0 (2023)	≤ 10% (2028)	Annual reports on programme implementation

Type of activities

The activities will include technical support targeting all staff of the IPA operational structure, staff of the end-beneficiaries, such as PCEs and municipalities, staff from the MoEPP as well as staff from other national authorities that are relevant for the implementation of the Operational Programme for the Environment, such as the Ministry of Transport and Communication, the Ministry of Finance – CFCD, the Ministry of Economy, the Secretariat of European Affairs, etc. Retention policy measures shall be implemented mainly for the IPA structure in the MoEPP, the Department for Implementing the Instrument of Pre-accession Assistance, the NIPAC and the CFCD. Complementary technical support shall be provided for Chapter 27 approximation considering the EU negotiation process and requirements. Also, the technical audit shall be performed within this activity.

Eligible activities:

- Planning and developing technical documentation supporting investment project implementation.
- Technical assistance for the implementation of infrastructure projects.
- Improving project planning and management capacity and capabilities.
- Conducting monitoring, evaluations, audits and verifications.
- Delivery of training and the on-the-job support to the IPA structure within the MoEPP, the PCEs and the municipalities targeted by the OP, other ministries, and the IPA structure (MoEPP, SEP, CFCD) relevant for programming, planning and implementation of infrastructure projects in environment.
- Supporting retention policy for the IPA structure.
- Communication and visibility.
- IT and other equipment that is needed for implementation of the OP on Environment.

Delivery method:

- Service, twinning, supply contracts, grant (e.g. twinning) contracts.

Selection Criteria:

- Relevance of the operations and their added value for the smooth implementation of the OP.

³⁰ Staff Turnover Rate (%) = (Number of staff who left the organisation during the period (year)/ Average number of staff during the period(year)) x 100. "Number of staff who left the organisation during the period" can be calculated by looking at the number of departures (whether voluntary or involuntary) over a specific period, such as a financial year. The "average number of staff during the period" is typically calculated by adding the number of staff at the start of the period to the number of staff at the end of the period, and then dividing by two.

End recipients and target groups:

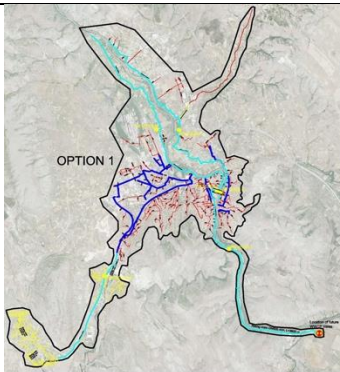
- Ministry of Environment and Physical Planning and relevant administration within for management of OP.
- Secretariat of European Affairs/NIPAC office.
- Ministry of Finance – Management structure and Central Financing and Contracting Department (CFCD).
- Audit Authority
- Regulatory Commission for Energy and Water Services.
- PCEs of the targeted municipalities.
- Targeted municipalities’ administration.
- Regional Waste Management company for East and Northeast.
- Centre for Development of Planning Regions – Organizational Units for Regional Waste Management.
- Ministry of Economy.
- Ministry of Transport and Communication.
- Ministry of Health.
- Ministry of Agriculture, Forestry and Water Economy.
- CSOs active in the environment sector.

4.2.3 Indicative List of major projects per each area of support

A Major Project comprises a series of works, activities or services and is intended, in itself, to accomplish a definite and indivisible task of a precise economic or technical nature, which has identified goals, and which has a total cost exceeding EUR 15 million as specified in Article 16(6) of the Financial Framework Partnership Agreement (FFPA) and the respective financing agreement between the Commission and the Government of North Macedonia.

The indicative list of major projects is as follows:

1. Rehabilitation and extension of sewerage network and construction of WWTP in the Municipality of Veles

Project title:	Rehabilitation and extension of sewerage network and construction of WWTP in the Municipality of Veles
Area of support	#1 Water
Lead project Beneficiary:	Ministry of Environment and Physical Planning (MoEPP)
Institution that is the author of the project proposal	MoEPP
Location/Map	
Brief description of its aim and intended results	Extension of the sewerage coverage by construction of about 54.2 km length in total: construction of i) main trunk sewers Ø300 – Ø1000 in 9.3 km length; ii) extension of the network Ø200 – Ø400 in 35.1 km length and iii) reconstruction Ø300 – Ø1000 in 9.8 km, as well as construction of a WWTP for 53,100 p.e., supervision of the works contract and technical audit for the works contract. The project aims to prevent pollution of surface and underground waters, reduce the risk of illness due to untreated urban wastewater and improve the service and quality of life of the population in the Municipality of Veles.

Project Value and funding sources	<p>Total Project Value: EUR 36 500 000</p> <ul style="list-style-type: none"> • EUR 34 000 000 – Construction works • EUR 2 000 000 – Design review and Supervision • EUR 500 000 – Technical audit for the works contract <p>Funding sources:</p> <ul style="list-style-type: none"> • EUR 25 925 000 – EU IPAIII contribution • EUR 10 575 000 – national co-financing
Implementation period	2026– 2030
Stage of preparation	<p>Technical documentation, FS and CBA were prepared in 2017. However, to reflect the new developments and the situation with increased market prices, revision of the technical documentation started in 2021 within the service contract funded by the EU (EU for modern wastewater system - SIEA 2018) but was suspended in 2022 due to the unavailability of the selected location site and of the hydrological study. The revision was used to improve the design and operational performance of the WWTP by introducing measures for energy efficiency and reach net-zero carbon footprint. Based on the FS and the design for the WWTP Veles in revision, during the first 15 years of operation, wastewater treatment will be with carbon (C) and phosphorus removal (P). After that period, the WWTP will be upgraded for tertiary treatment providing full nutrient removal (both nitrogen and P). Reduction of GHG emissions at the WWTP Veles will be achieved by on site electricity generation through the following means: 1. Biogas produced during anaerobic digestion of primary and excess sludge will be utilised for electricity generation at the gas motor of the Combined Heat and Power (CHP) unit; 2. Photovoltaic installation will generate electricity. As a result, the WWTP in Veles will be carbon neutral in terms of electricity consumption, with carbon free electricity supply on an annual basis. The EIA procedure has been completed and the environment declaration for project implementation was issued in 2018.</p> <p>As a result of the changed location site of the WWTP, in March 2023, the MoEPP in close cooperation with the Municipality of Veles selected another plot close to the previous site and resolved issues related to land acquisition and the right to build for the WWTP site. Due to lack of a reliable hydrological study and the changed location, development of a new hydrological study was required. The land acquisition procedure caused delay of the documentation revision thus the completion might not be accommodated within the same service contract. Consequently, the MoEPP in cooperation with the EUD are exploring the possibility for the current service contract extension or a new service contract will need to be procured.</p> <p>All the technical documentation is expected to be finalized by the end of 2024 and should be ready for procurement in the second quarter of 2025.</p> <p>However, in order to proceed smoothly with the implementation of the entire project, it is necessary to start with the expropriation of the land as a prerequisite for the construction of the sewerage system. In order to reach the required maturity of this project it is of utmost importance for the MoEPP to coordinate this task with representatives of Veles and the relevant PUC.</p>
Maturity level	Tender dossiers and technical documentation is expected to be finalised at the latest by the end of 2024. It shall be ready for procurement in the second quarter of 2025 and start with implementation mid-2026.

2. Completion of the Integrated Waste Management System in the East and Northeast regions – Phase II

Project title:	Completion of the Integrated Waste Management system in the East and Northeast regions - Phase II
Area of support	#2 Waste

Lead project Beneficiary:	Ministry of Environment and Physical Planning (MoEPP)
Institution that is the author of the project proposal	MoEPP
Location/Map	
Brief description of its aim and intended results	Expanding waste collection services to more communities, closure of non-compliant landfills, supply of waste collection equipment for the municipalities, supply of equipment for the central waste facility and in the new waste transfer stations. The project's aim is to reduce the volume of municipal solid waste disposed in non-compliance landfills and increase the share of waste separated, composted and recycled in the East and Northeast regions.
Project Value and funding sources	<p>Total Project Value: EUR 33 200 000</p> <ul style="list-style-type: none"> • EUR 31 500 000 – Closure of non-compliant landfills and supply of waste collection equipment for the municipalities and equipment for the central waste facility and the waste transfer stations. • EUR 1 200 000 – Supervision of the works on the closure of non-compliant landfills project. • 500 000 EUR – Technical audit for the works contract. <p>Funding sources:</p> <ul style="list-style-type: none"> • EUR 27 716 000 – EU IPAIII contribution • EUR 5 484 000 – national co-financing
Implementation period	2026– 2032
Stage of preparation	<p>This project is a continuation of the first phase and its implementation depends on the progress of this phase. Namely, under the already prepared document for establishment of a Regional Integrated waste management system for the East and Northeast regions, indicative assessment was made of the activities and total costs that are needed for the second phase. Thus, within this OP the technical documentation will be prepared considering the level of development and implementation completed under the first phase.</p> <p>For this major project there is no need of an EIA since all environmental aspects were included in the prepared technical documents in the first phase. Only the Elaborate for protection of the environment, required under the Law on Environment, is needed for the closure of the remaining non-compliant landfills.</p> <p>Preparation of the technical documentation (Detailed Design) for the closure of non-compliant landfills and the technical specification for waste equipment for the Integrated Waste Management system in the East and Northeast regions – Phase II, will be completed under this separate project and it is expected that the procurement procedure for this will start in Q1 of 2025 provided that the implementation of the first phase would be in an advanced</p>

	<p>stage of implementation by then. Afterward, with the major project, the purchase of equipment and works for closure of the non-compliant landfill projects can start with procurement in Q1 of 2027. Part of this major project will also be a technical audit and supervision of the works contract.</p> <p>The tender dossier should include green procurement elements. All EU-required standards should be properly addressed in the technical documentation and in the tender dossiers.</p>
Maturity level	<p>The technical documentation (Detailed Design) for closure of non-compliant landfills and the technical specification for waste equipment for the Integrated Waste Management system in the East and Northeast regions – Phase II and the Major project application, shall be finalised by the end of 2026. The procurement of the project for purchasing of equipment will start in Q1 2027 while the procurement of the works contract for closure of non-compliant landfills will start in Q3 of 2027. Consequently, the implementation of the major project will start first with purchasing of the waste equipment in Q1 2028 followed by the start with implementation of the works project for closure of non-compliant landfills in Q3 2028.</p>

4.3 Mainstreaming

Investing in wastewater infrastructure ensures that everyone, without discrimination, has access to safe, hygienic, and secure wastewater facilities. This includes socially and culturally acceptable infrastructure, upholding the principles of dignity. Throughout the entire process, from design to implementation and operational phases, all activities related to integrated waste management will prioritise social justice and environmental justice. Stringent controls will be implemented to prevent discrimination and protect the most vulnerable communities from harm during the project implementation.

4.3.1 Environmental Protection, Climate Change and Biodiversity

This OP aims to support the implementation of the Green Deal and the European Green Agenda for the Western Balkans, with all planned interventions contributing to achieving the country's climate change objectives and saving natural resources. Environmental impact assessment procedures have been completed for the WWTP Veles, the WWTP Tetovo, and the East and North-East waste management regions. The EIA for the Wastewater Treatment Plant in Kavadarci will be prepared as part of the OP implementation. The EIA for the East and North-East waste management region was prepared five years ago, and its validity period has expired. Hence, a revision is currently underway.

The results of the already prepared EIAs and the upcoming EIA for the WWTP Kavadarci will be considered during the project design and implementation to reduce, avoid, or offset any potentially adverse environmental impacts of the investment activities. The EIAs' findings will be utilised to maximise the project's benefits and minimise undesirable effects.

The primary benefit of upgrading waste management infrastructure is reducing greenhouse gases emitted from waste management facilities. During the technical documentation preparation, focus will be placed on designing effective waste management systems that reduce emissions while promoting sustainability.

4.3.2 Gender equality and empowerment of women and girls

As per the OECD Gender DAC codes identified in section 1.1, this programme is labelled as G0. This implies that gender will be mainstreamed, but there will be no specific component related to gender.

The Government is committed to taking up the principles and approach stipulated in the EU Gender Strategy 2020 – 2025 and applying those in all sector reforms and support measures. Gender Equality, meaning equal participation of men and women in the OP implementation – will be considered in each intervention. Gender mainstreaming into the project should be considered as a means of support for the fulfilment of the OP objectives. Each activity, when implemented, shall be gender mainstreamed, thus indicating measures to enhance gender balance and neutrality. Stakeholder decisions related to programme activities will only be made with a balanced representation of genders. The gender perspective should be included to facilitate equal access to resources and opportunities; promote the participation of women in planning processes and awareness activities by introducing gender-sensitive tools; foster equal opportunities through economic activities, including farming, tourism, forestry, and infrastructure projects.

4.3.3. Human Rights

The OP implementation will analyse and integrate the rights perspective into the planned interventions, based upon existing EU and legislation of North Macedonia but considering more progressive standards. Extensive non-discriminatory consultation and participation are foreseen in the projects' activities with allocated time and budget within the planning process. Specific emphasis is placed on identifying and involving vulnerable groups within the stakeholder analysis and consultation schedule concerning the human rights-based approach (HRBA). Some interventions will support an inclusive partnership with local organisations to ensure empowerment and inclusive participation of people, including the most vulnerable and marginalised groups, to expand their democratic ownership over policies and the development of initiatives that affect their lives.

4.3.4. Disability

As per OECD Disability DAC codes identified in section 1.1, this programme is labelled as D0. This implies that the OP is not considered relevant for including persons with disabilities.

4.3.5. Disaster Risk Reduction

Wastewater and Waste management infrastructure can be vulnerable to flooding due to climate changes and more extreme weather events. For this reason, exposure of water and waste infrastructure to and the probability of extreme situations will be considered, with relevant adaptation measures to be developed. Such measures will contribute to making this infrastructure resilient. Wastewater management infrastructure provides a critical service to society and is classified as vulnerable to climate change impacts, mainly flooding, which can cause service disruption; damage to infrastructure, requiring maintenance and repair; adverse impact on human health; negative impact on the environment and with large financial losses suffered by many residents, property owners. All relevant risks will be considered during the preparation phase, and mitigation measures will be introduced during the operational phase of the WWTPs.

4.4 Risks and Assumptions

Category	Risks	Likelihood (High/ Medium/ Low)	Impact (High/ Medium/ Low)	Mitigating measures
People and the organisation	Weak sector coordination may hinder progress, since implementation of several activities relies on the inter-institutional coordination between the MoEPP and targeted municipalities.	M	H	Strengthening of the sector working groups channelling the coordination and policy dialogue, and inclusion in the Steering Committee of the projects of all the relevant stakeholders playing a role at national and at local level. Support to the IPA structure by high officials from the MoEPP, in particular at the beginning of the OP implementation. Implement regular coordination meetings with relevant stakeholders and targeted municipalities.
People and the organisation	Lack of willingness of the main stakeholders (e.g. municipalities) to implement the national water sector reform, sector policies in waste management and regulatory obligations	M	H	To engage in continuous policy dialogue with institutions and authorities of North Macedonia mainly through the SWGs, with a strong ownership and leadership by the relevant Ministry.
People and the organisation	Weak administrative capacity, limited	M	H	Establishment of project implementation units (PIUs) for infrastructure projects' implementation composed by relevant

	commitment/buy-in from municipalities and the PCEs.			representatives from municipalities and the PCEs will ensure policy dialogue, decision making and knowledge transfer.
Planning process and system	Limited absorption capacity, lack of human resources to carry out technical and organisational processes, and frequent staff turnover may hinder the impact of the capacity-building measures for the IPA OS	H	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. Introducing and implementing retention policy measures for staff within the IPA OS. Technical guidelines, on-the-job support and training will be prepared for project management and implementation that will guide new staff that become involved in the IPA OS.
Planning process and system	Poor cost recovery for environmental services by the PCEs	H	M	The use of energy efficiency measures, such as solar PV will reduce the incidence of the running costs in tariff setting for environmental services. To involve the targeted municipalities and the PCEs in capacity development to further support the reform in the water sector and new methodology for waste tariff and with supply of equipment to improve performance.

External Assumptions

The OP on Environment is based on the following external assumptions:

- On a more significant political term, the Government is committed to advancing the approximation of the EU *acquis* in the Environment and Climate Change sector and the implementation of the European Green Agenda for the Western Balkans and the related national strategic and planning documents so that it will be able to meet EU requirements and global and regional commitments.
- Municipalities are committed to creating a better environment and healthy conditions for their citizens, thus will ensure adequate maintenance and management of water and waste infrastructure by the PCEs.
- As per the involved institutions, it is assumed that the MoEPP, its subordinate bodies and the municipalities that are beneficiaries of related water and waste management interventions under this OP, will have consolidated human and financial capacities to implement the projects, complete operational management and reporting obligations and enforce the legislation.

1. Overview of the consultation process for the preparation of the Operational Programme

The MoEPP has ensured a consultative approach to improve and safeguard partnerships and transparent decision-making processes. This process guarantees that stakeholders relevant to the sector, beneficiaries, national and local institutions, NGOs, and other economic and social partners are consulted at different stages of programming.

In March 2023, the MoEPP initiated the preparation of the OP on Environment by holding discussions with relevant departments within the Ministry, the Administration for Environment, the respective municipalities, and with NIPAC, the EU Delegation, and other donors. Several meetings were conducted to discuss different policy options, projects, and activities for implementation.

Consultative process during sector analysis

The critical document consulted when initiating the OP on Environment preparation is the National Single Project Pipeline (NSPP), revised in 2022. All primary and reserved projects supported with the OP on Environment are included in the NSPP of North Macedonia. They are all recognised as priority projects that contribute to meeting EU water and waste management requirements.

Preparation of the documentation for rehabilitation and extension of the sewerage network and construction of the WWTP in Veles started in 2016 with the municipality's and the respective PCE's active participation. The same is valid for Tetovo, a project that started with documentation development under the IPA I and will continue with construction under the IPA II. For the waste management project, municipalities from the East and Northeast regions have been actively supported by the EU since 2013 with the development of the regional waste management plans until the final stage of beneficiaries of waste collection and closure of non-compliant landfills. Municipalities from different political backgrounds were involved and supported all activities that led to the completion of the establishment of an integrated waste management system for both regions.

After the first draft of the OP was prepared on May 10, 2023, the MoEPP, in close coordination with the NIPAC, organised a meeting of the Sector Working Group of Environment and Climate Change (SWGEC) to strengthen inter-institutional cooperation and ensure efficient coordination of activities related to programming and monitoring of EU funds, as well as other bilateral and multilateral donors. The SWGEC meeting was opened by the Minister of Environment and Physical Planning, demonstrating the commitment of the MoEPP and the Government to implement the OP. Representatives from the Secretariat of European Affairs and lead donors in the country, such as the EU Delegation and other bilateral donors, municipalities, NGOs, and representatives from other relevant ministries and associations, were also present. The draft OP with intervention and possible projects were presented and discussed. The SWGEC will be essential in coordinating with different donors where needs for assistance and available resources shall be discussed and agreed upon in the future.

On May 11, 2023, a separate meeting regarding the socio-economic and SWOT analysis was held with the main beneficiary departments from the MoEPP, mainly the Department for Water, the Department for Waste and the Department for IPA implementation; in this meeting, the current status of the areas of support was discussed.

On May 29, 2023, a consultative meeting with the CFCD about the procurement strategy was held.

In June 2023, the MoEPP sent the draft OP for official consultation to the relevant municipalities, the Ministry of Economy, the Ministry of Health, the Ministry of Transport and Communication and the Ministry of Agriculture and Water Economy to receive their opinions and proposals for programme improvement. The MoEPP also organised consultation meetings with the administration of the respective municipalities and the PCEs included in the OP intervention.

The MoEPP is committed to ensuring that the OP on Environment reaches out to all relevant stakeholders during its implementation. Future meetings of the SWGEC and separate meetings with essential stakeholders will be organised for this purpose. NGOs, public institutions, municipalities, and other stakeholders that can contribute to formulating the projects envisaged in the programme are considered important stakeholders for the programme's successful implementation.

2. Implementation arrangements

4.5 Financing Agreement

In order to implement this programme, it is envisaged to conclude a financing agreement between the European Commission and North Macedonia.

4.6 Methods of implementation

The Commission will ensure that the appropriate rules and procedures of the EU for providing financing to third parties are respected, including review procedures, where appropriate, and compliance of the programme with the EU's restrictive measures³¹.

Indirect Management with an IPA III beneficiary

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

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

³¹ www.sanctionsmap.eu

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 within the Ministry of Finance. It shall ensure the legality and regularity of expenditure.

The NIPAC and the NIPAC office, as well as the Management structure from the Ministry of Finance, are part of the IPA structure, having their responsibilities as deriving from the Framework Financial Partnership Agreement.

4.7 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 responsible authorising officer 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 programme impossible or exceedingly difficult (Article 28(10) NDICI-Global Europe Regulation).

3. Financial tables by areas of support and by year (including co-financing rates if applicable)

	Year 2024			Year 2025			Year 2026			Year 2027			TOTAL		
	EU contribution	North Macedonia co-financing	Total expenditure	EU contribution	North Macedonia co-financing	Total expenditure	EU contribution	North Macedonia co-financing	Total expenditure	EU contribution	North Macedonia co-financing	Total expenditure	EU contribution ³²	North Macedonia co-financing	Total
Area of Support 1	3 564 400	485 600	4 050 000	9 894 100	2 355 900	12 250 000	10 157 500	4 192 500	14 350 000	10 157 500	4 192 500	14 350 000	33 773 500	11 226 500	45 000 000
Area of Support 2	797 800	822 000	1 619 800	500 700	479 500	980 200	6 207 400	1 332 600	7 540 000	21 508 600	4 151 400	25 660 000	29 014 500	6 785 500	35 800 000
Area of Support 3³³	2 937 800	492 000	3 429 800	1 199 178	246,000	1 445 178	1 165 500	246 000	1 411 500	1 909 522	304 000	2 213 522	7 212 000	1 288 000	8 500 000
TOTAL	7 300 000	1 799 600	9 099 600	11 593 978	3 081 400	14 675 378	17 530 400	5 771 100	23 301 500	33 575 622	8 647 900	42 223 522	70 000 000	19 300 000	89 300 000

³² The Union contribution shall not exceed 85% of the total eligible costs of the programme.

³³ Evaluation, Audit and Strategic Communication and Public Diplomacy are covered by the budget of Area of Support 3 – Other Support, as indicated in Section 4.2.2

4. Performance Measurement

4.8 Monitoring and reporting

Monitoring of the implementation of the OP will aim at collecting and analysing data to inform on the progress towards achievement of planned results, to feed decision-making processes and to report on the use of resources.

The day-to-day technical and financial monitoring of the implementation of this Operational Programme will be a continuous process and part of the implementing partner's responsibilities. To this end, the implementing partner shall establish a permanent internal, technical and financial monitoring system for the programme and elaborate regular progress reports (not less than annual) and final reports.

Every report shall provide an accurate account of the implementation of the Operational Programme, difficulties encountered, changes introduced, as well as the degree of achievement of its Outputs and contribution to the achievement of its Outcomes, and if possible, at the time of reporting, contribution to the achievement of its Impacts, as measured by corresponding indicators.

The Commission may undertake additional monitoring visits through its own staff and 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 Managing Authority for the OP shall in particular: design adequate monitoring and reporting procedures, considering the internal reporting division of roles and responsibilities.

The overall progress will be monitored through participation of various stakeholders, such as the European Commission/ EU Delegation, the NIPAC, the NAO, Management structure, MA, IB, Final Beneficiaries, AA, and other institutions and civil society organisations.

The OP Environment identifies measurable **indicators at the level of general and specific objectives** and outputs indicators at the measures level for the three support areas for 2023– 2027. The progress in implementing the OP will be monitored at the sector level through the established 2021 Performance Assessment Framework (PAF), which includes outcome and impact indicators, targets, and baseline data. The PAF is established as a web-based application backed up by the Government's decision on responsibilities and deadlines, allowing regular electronic data input, processing, and analytics. The PAF data will be used and discussed in the Sector Working Group on Environment and Climate Change, which is also the inclusive platform for all stakeholders, national authorities, donors, civil society organisations, etc., to monitor the implementation of the sector priorities. This setup implies that the Ministry of Environment and Physical Planning, with the support of the NIPAC, is the key institution assuming the role of supervising the implementation of the OP and organising policy dialogue to discuss challenges and results.

At the **output level**, data about each project and contract implementation will be collected in OPSYS. They will be based on the data from official documents such as reports, acceptance certificates or equivalent documents.

The Sectoral Monitoring Committee, as foreseen in Article 53 of the Financial Framework Partnership Agreement, plays a key role in the monitoring and reporting on the implementation of the Operational Programme. Based on the reports provided by the Managing Authority before the meetings, it shall in particular:

- Review the effectiveness, efficiency, quality, coordination, and compliance of the implementation of the programmes.
- Review the progress towards meeting the objectives, achieving the planned outputs and results, and assessing the impact and sustainability of the IPA III assistance, while ensuring coherence with the policy dialogue, the related central and regional sector strategies and multi-country or regional activities in North Macedonia.
- Review annual implementation reports, including financial execution of the programmes.
- Examine relevant findings and conclusions as well as proposals for remedial follow-up actions stemming from the on-the-spot checks, monitoring, evaluations, and audits if available.
- Discuss any relevant aspects of the functioning of the management and control systems.
- Discuss any problematic issues and actions.
- If necessary, consider or make proposals to amend programmes and take any other corrective action to ensure the achievement of the objectives and enhance the efficiency, effectiveness, impact, and sustainability of the IPA III assistance.
- Review information, publicity, transparency, communication, and visibility measures taken.

4.9 Evaluation

Having regard to the importance of the programme, a mid-term and a final evaluation will be carried out for the areas of support falling under this Operational Programme contracted by North Macedonia and should be included in the Area of Support #3 –Other support, as indicated in Section 4.2.2.

The evaluations will be carried out by experts or bodies, internal or external, functionally independent from the management and control system.

The mid-term evaluation will be carried out for problem-solving, in particular with respect to the progress towards achieving the programme's objectives, including assessing whether the programme is meeting its targets and whether adjustments need to be made to the programme design; the use of resources, project management, and coordination between stakeholders; the quality and reliability of data collection and analysis, and the usefulness of the information for decision-making; the effectiveness of the measures put in place to ensure environmental and social sustainability; and the impact of external factors such as political, economic, and social changes that may have affected programme implementation and outcomes and how these can be addressed.

A final evaluation will be carried out for accountability and learning purposes at various levels (including for policy revision), taking into account in particular the fact that transfer of knowledge and information is shared.

The evaluation reports shall be shared with all relevant parties. North Macedonia and the European Commission shall analyse the conclusions and recommendations of the evaluations and jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the support.

Indicative evaluation and timing

The mid-term evaluation will be carried out halfway through the programme's implementation to assess progress towards achieving the programme's objectives and targets. It will also identify any issues that have arisen and make recommendations for their resolution.

The final evaluation shall be carried out at the end of the programme to assess its overall achievements, effectiveness, efficiency, and impact. It shall also identify lessons learnt and make recommendations for future programming.

4.10 Audit and Verifications

Technical audits for major projects are mandatory during the implementation.

Financial provisions related to audit and verifications, including technical audits if applicable, carried out by North Macedonia should be included in the Area of Support #3 –Other support, as indicated in Section 4.2.2.

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

5. Strategic communication and public diplomacy

All entities implementing EU-funded external actions have the contractual obligation to inform the relevant audiences of the Union's support for their work by displaying the EU emblem and a short funding statement as appropriate on all communication materials related to the actions concerned. To that end they must comply with the instructions given in the 2022 guidance document [Communicating and raising EU visibility: Guidance for external actions](#) (or any successor document).

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 administration's entrusted entities, contractors, and grant beneficiaries. Appropriate contractual obligations shall be included, respectively, in financing agreements, delegation agreements, and procurement and grant contracts.

Visibility and communication measures specific to this Programme 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.

6. Sustainability

The OP on environment has high sustainability potential at the policy, institutional and financial levels.

The OP envisages investments in water infrastructure, which will improve living conditions and decrease pollution discharge levels in the Vardar River basin, having a transboundary impact on the environment of North Macedonia and the neighbouring country of Greece. Also, the OP envisages investment in establishing integrated waste management systems in the East and Northeast regions that will significantly decrease pollution and the negative impact of waste on the environment and human health and will improve the living conditions of the population in these regions. The OP implementation will contribute to environmental protection and to the implementation of the National Strategy on Environment and the relevant strategies in the fields of waste and water management.

The OP on Environment has an important leverage effect as it directly contributes to the implementation of the obligations arising from the EU environmental *acquis* and provides substantial support to the EU integration process of North Macedonia. The entry into force of the water tariffs legislation creates the legislative framework for ensuring the maintenance of the new facilities. The MoEPP will develop a new tariff system for waste management that will ensure that waste management services will cover all operational costs of the PCEs and provide sustainability of the waste management. 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 investments' costs. Investments in renewable energy solutions will decrease maintenance costs and increase sustainability prospects.

The end recipients are obliged to ensure the sustainable use of the outputs in line with the Operational Programme, the contract or the equivalent. The end recipients are obliged to allocate a budget for ensuring the functioning and maintenance of the outputs and cover the costs of their operation and maintenance. The end recipients should restore the outputs to their initial condition in case of their damage or replace the outputs with those of minimum equal quality and functionality in case of their destruction.

The breach of the conditions for sustainability may lead to a refund of the EU contribution in case the end recipients fail to take the necessary corrective measures for removing the deficiencies that occurred.

Capacity-building interventions foreseen under this action will decrease the risk of such failure and ensure proper utilities management.