

PROJECT DOCUMENT



Project Title: Resilient Skopje: Scaling-up for Sustainability, Innovation and Climate Change

Project Number: 00109163

Implementing Partner: City of Skopje

Start Date: 09 July 2018 End Date: 31 December 2019 PAC Meeting date: 05 July 2018

Brief Description

One third of the total population of the country lives in the City of Skopje, and significant numbers also commute daily into the capital from the region and beyond. Meeting the needs of such a large and fluctuating population of residents and commuters is a major challenge for the city administration. City personnel have their hands full trying to meet day-to-day challenges and little time for forward planning.

Rapid urban growth on this scale poses two main challenges: environmental sustainability and public service delivery. The city's ecological footprint is unfavourable, and air pollution has emerged as a dramatic health threat with no easy solution. Moreover, residents are demanding public services that are timelier and of higher quality than in the past. Although the city has been striving to address these challenges, its resources are limited. The current governance system is not configured to respond promptly to these increased demands and provide services that satisfy residents' rising standards and expectations.

To respond to these challenges, UNDP will assist the City of Skopje to become more resilient to climate change and other environmental threats, and to work with the public administration to help it design and deliver better services for its citizens. The project will pursue these aims by assisting the City of Skopje in implementing a set of priority measures identified in the Climate Change Strategy – Resilient Skopje and the Skopje Innovation Framework, both of which were previously developed with UNDP support.

Contributing Outcome (UNDAF/CPD, RPD or GPD):
 4. By 2020, individuals, the private sector and state institutions base their actions on the principles of sustainable development, and communities are more resilient to disasters and environmental risks.
Indicative Output(s) with gender marker:
 4.2 Public and private actors have improved capacities to implement, monitor and evaluate policies related to environment, climate change and nature protection.
Gender marker: 2

Total resources required:	US\$ 719,536	
Total resources allocated:	UNDP:	US\$ 65,040
	Donor:	
	Government: City of Skopje	MKD34,800,000 US\$654,496 (1USD = 53,1707 MKD)

Agreed by (signatures):

Government	UNDP	Implementing Partner
 Petre Shilegov Mayor of the City of Skopje	 Louisa Vinton Resident Representative	
Date:	Date: <i>06/7/2018</i>	Date:

I. DEVELOPMENT CHALLENGE ¹

The City of Skopje is the capital and the country's political, cultural, economic, and academic center. At the time of the 2002 census, the city had 506,926 inhabitants; since then the number is believed to have surged to over 600,000, concentrating at least one-third of the country's population. There is also significant daily migration into the capital from the region and beyond.

Being the capital and largest city, Skopje enjoys a particular status granted by law. Since 2004, the City of Skopje has been divided into 10 municipalities which all have a council and a mayor. The City itself also has a council and a Mayor. Municipalities deal with matters specific to their territory, while City of Skopje deals with matters that concern all of them, or that cannot be divided between two or more municipalities. In practice the division of responsibilities sometimes causes confusion.

Rapid urban growth poses two main challenges: environmental sustainability and public service delivery. Although the city has been striving to address these challenges, its resources are limited.

As to the first challenge, **environmental sustainability**, the city's ecological footprint is highly unfavourable. Air pollution has emerged as a lethal environmental health threat and in 2017 Skopje was ranked among the top ten most-polluted cities in Europe. Harmful particle concentrations in the city during the winter period regularly exceed the maximum threshold by a factor of ten, with UNDP research pinpointing household heating as a major cause.² As a result, the prevalence of respiratory diseases, particularly among children and the elderly, is on the rise³.

The city contains several parks and gardens that together cover a total area of 4,361 hectares. Among these are the City Park (Gradski Park), the Žena Borec Park located in front of the Parliament, the University arboretum and Gazi Baba forest. However, citizens frequently complain that there are not enough green areas within the city boundaries that can mitigate the problems with air pollution and provide cooler places of respite during the summer heat.

The city's boasts rich fauna and flora and hosts two main nature-protected areas: Vodno Mountain and Matka Canyon, both of which are popular leisure destinations. However, the city's biodiversity and natural assets are threatened by rapid urbanization and the intensification of agriculture.

In addition, the city is facing new threats from the weather extremes that accompany climate change. The city's micro-climate already features very hot summers. Over the last ten years, the number of heat waves has increased steadily. A lack of climate-sensitive urban planning has left residents with little protection from the heat. There is a high level of exposure of buildings with west and south-west orientation, as well as of boulevards and pedestrian areas to solar radiation. "Heat islands" in some neighbourhoods experience temperatures of 5-7 C degrees higher than other areas owing to the density of buildings, a lack of aeration and insufficient green areas.

Erosion and deforestation heighten the threats. A study on erosion conducted by UNDP for the Skopje agglomeration spotlighted locations at high risk of erosion and landslides, particularly on the slopes of Vodno Mountain and Skopska Crna Gora. The flash floods of 2016 were particularly catastrophic owing to high levels of deforestation driven by largely illegal logging.

Responding to these threats, the City of Skopje in 2017 adopted its first climate change strategy, which was developed with support of UNDP. The Strategy identifies the key problems that need to be addressed in order to increase the city's climate resilience. It provides an assessment of the potential for reducing greenhouse gas emissions and of the vulnerability of various sectors, and encompasses an action plan with specific measures and actions that should be realized as part of the annual programme of the City of Skopje over the next five years. The Strategy builds on

¹ State Statistical Office

² <http://www.skopjesezagreva.mk>

³ Public Health Institute

numerous actions already undertaken in various areas, including energy efficiency, transport, air pollution, water, public health, utility services and public greenery.

As to the second challenge, **public service delivery**, the country's current governance system is not structured in a way to deliver top-quality services able to satisfy users' rising standards and expectations. The city administration is trying to respond, but a cumbersome bureaucracy staffed by more than 450 people operating in a complex economic and political situation is somehow still failing to deliver high-quality services to city residents in a timely fashion. Extremely rapid population growth over the last 15 years, as new residents have flocked to Skopje from rural areas, has tended to make policies and services outdated even before they can be implemented.

Moreover, a lack of clarity about the administrative division of roles and tasks among the city of Skopje and the ten component municipalities creates confusion, leaving some residents wandering administrative hallways in search of the right counterpart. A survey on citizen satisfaction with services that was conducted as part of the situation analysis for the innovation framework prepared for the City of Skopje showed that almost all respondents (95%) were unaware of the division of tasks and unfamiliar with the services on offer to the citizens. Internal communication and collaboration among the sectors in the City of Skopje is another problem; currently the sectors tend to design their projects in isolation and with only minimal cross-sector communication.

In line with its legal obligations, the City administration invites citizens to public debates, forums and consultations, but these tend to be *pro forma* affairs, with only a small number of stakeholders participating and providing meaningful contributions. City staff are generally unfamiliar with co-design or user-centered design, and only sporadic use is made of these approaches in creating new policies and services. Finally, there are no functional online communications channels for cooperation or outreach. In the end, then, service users are largely excluded from service design. The Skopje Lab created with UNDP support in July 2017 has helped to address some of these challenges, but a more sustained approach is needed to complete a user-centered transformation.

To address these issues, this project will provide support in two main areas. It will assist in conducting research and implementing pilots to make the City of Skopje more resilient to climate change, and other environmental threats (such as air pollution); and it will assist the public administration in designing and delivering more efficient services for its citizens in innovative ways. As a result, city citizens will benefit from a healthier environment and better-quality public services.

II. STRATEGY

This project strategy is focused on two main challenges: environmental sustainability and public service delivery. For the first challenge, the project will provide environmental information and data that has been missing and is needed for informed decision making, and it will create field models for enhancing urban resilience. For the second, the project will address the constraints faced by the city administration in delivering faster and high-quality services to its citizens, and develop tools to consult and involve local stakeholders during program design and implementation.

The project is aligned with the Sustainable Development Goals:

- It will help advance SDG 11, *Sustainable Cities and Communities*, particularly target 11b, which requires that cities adopt and implement integrated policies and plans aimed at increasing inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and the development and implementation of holistic disaster risk management at all levels in accordance with the Sendai Framework for Disaster Risk Reduction 2015-2030.
- It will also contribute to achieving SDG 13, *Climate Action*, which demands urgent action to combat climate change, focusing on adaptation and resilience capacities and mitigation, both at national level and for cities and communities. This echoes the Paris Agreement, which demands the inclusion of cities, regions, businesses and civil society in the realization of national contributions to combat and prepare for climate change.

- Finally, the project will contribute to the achievement of SDG 16, *Peace and Justice and Strong Institutions*, particularly targets 16.6 and 16.7, which call for the development of effective, accountable and transparent institutions at all levels, and ensuring responsive, inclusive, participatory and representative decision-making at all levels.

At the national level, the project will contribute to Outcome 4 of the *Partnership for Sustainable Development: UN Strategy 2016-2020* (PSD): "By 2020, individuals, the private sector and state institutions base their actions on the principles of sustainable development, and communities are more resilient to disasters and environmental risks." It will also contribute directly to Output 4.2 of the UNDP Country Programme: "Public and private actors have improved capacities to implement, monitor and evaluate policies related to environment, climate change and nature protection."

The project will also support progress towards Outcome 2 of the PSD: "By 2020, national and local institutions are better able to design and deliver high-quality services for all users, in a transparent, cost-effective, non-discriminatory and gender-sensitive manner." This outcome is likewise echoed in the UNDP Country Programme, which calls for strengthening capacities of national and local institutions to design and deliver better services, including on environmental and nature protection.

UNDP has a strong track record in both environmental sustainability and public service delivery. It has long experience in supporting national partners with both policy advice and implementation support, particularly in nature protection, water basin management, climate change and disaster risk reduction. This dual role has built considerable credibility for the organization as a major environmental actor at both the central government and local level. Moreover, UNDP is one of the few organizations to have been engaged for more than 15 years in supporting decentralization and stronger local governance in the country. UNDP has also shown it can harness innovative technologies to improve service quality and access for citizens, while integrating the principles of transparency, accountability and openness into the work of local governments.

For this project, UNDP will apply both types of expertise. In order to build urban resilience to climate change and other environmental challenges, UNDP will support the City of Skopje in completing a range of necessary studies to help shape municipal policies for environmental protection, risk reduction and biodiversity preservation. The joint research agenda will include studies on water habitats, underground springs and sources of groundwater, in an effort to identify sources of pollution and other threats (real and potential), and to propose science-based solutions. Drawing on this and other recently completed research work, UNDP will then work directly with the city to design, test and pilot measures aimed at reducing environmental threats. These pilots are meant to provide "proof of concept" so that the city can with confidence apply the measures on a much larger scale. These will include pioneering a "green roof"; promoting alternatives to burning waste and other polluting sources of heat; and protecting and expanding the city's green spaces.

At the same time, UNDP will help the City of Skopje apply innovative principles to overhaul its approach to public services. One approach that shows particular promise for reforming local governance is the "innovation lab," a new institutional form that takes a fresh approach to policy and public sector challenges, and tries to look past incremental change to stimulate far more sweeping reforms. Such labs offer governments a way to create a dedicated space – whether real or virtual – and assign dedicated resources to make innovation happen.

With this aim in mind, UNDP in July 2017 worked with the City of Skopje to establish the Skopje Innovation Lab. This is a dedicated space designed to promote cooperation between citizens, the business sector, civic, public and educational organizations and institutions, and the city administration. With premises within the City of Skopje compound, it has since become an integral part of the city administration, working and supporting all 17 administrative sectors. The Lab's primary goal is to design innovative services or solutions that will improve the quality of life in Skopje, enhance existing city services and their delivery or design and apply human-centered design to develop new policies and projects. It is also meant to improve communication within the City and between the City and citizens to ensure that services reflect community needs. The policy areas to which Skopje Lab has so far contributed include air pollution and waste management.

This project will see the further development of the Skopje Innovation Lab as an experimental and collaborative space where citizens and front-line public servants can join forces to design, prototype and test public services or products to help Skopje improve its sustainability and urban resilience. The long-term aim is to transform the facility into the City of Skopje Policy Lab, which will draw on new approaches, from data science to user-centered design, to design and test policy innovations.

The Lab will use the innovation process developed and defined in the City of Skopje innovation framework. The main principles that will guide the Lab's work include:

- A focus on systemic problems (addressing root causes rather than symptoms);
- Application of "change methodologies" such as design thinking;
- Putting users in focus, and tailoring solutions to citizens' needs;
- Reliance on qualitative and quantitative evidence;
- Direct engagement with all stakeholders, including voices from outside the system;
- Organizing work in collaborative multidisciplinary teams; and
- Developing solutions that can be scaled up.

This approach will draw on global experience and lessons learned, including in labs supported by UNDP in Moldova and Georgia. UNDP will also rely on the good practices and lessons learnt from previous and ongoing relevant projects implemented in partnership with the City of Skopje.

In a nutshell, the project's ambition is to inspire a fundamental change in outlook and behaviour among policy makers, public administration of the City of Skopje, citizens and NGOs regarding the application of innovation aimed at better service delivery, and strengthening the urban resilience, as a shared responsibility of local administrations, the private sector and ordinary citizens.

III. RESULTS AND PARTNERSHIPS

Project Objective, Outcome and Outputs

The **long-term objective** of the project is to assist the City of Skopje to become more resilient to climate change and other environmental challenges, and to build a public administration that will design and deliver innovative and more efficient services for its citizens.

The **immediate objective** of the project is to assist the City of Skopje in the implementation of a set of priority measures identified in the Climate Change Strategy – Resilient Skopje, and the Skopje Innovation Framework.

Project Outcome:

Citizens of Skopje benefit from increased adaptive capacity to climate change, and improved capacities of the city administration to apply innovative approaches and deliver better services.

Project Outputs and Activities:

Output 1: City of Skopje is well prepared to introduce innovative approaches in its everyday work and design and deliver better and more efficient services to its citizens

- 1.1 Building capacities of the City of Skopje administration in new approaches and techniques of service design and delivery and collecting citizens feedback*
- 1.2 Creating an enabling environment for enhanced cooperation with citizens and businesses for improved public services delivery*
- 1.3. Designing or re-designing two services to increase the satisfaction of citizens that are using that service*

Output 2: The City of Skopje has completed necessary studies to determine future actions that will advance the local environmental agenda

- 2.1 Development of a Biotope Map for the Skopje Region*
- 2.2 Development of an Inventory of Riparian Habitats (water habitats) and an Action plan for Skopje agglomeration*
- 2.3. Development of a basic design for establishment of a green corridor along the Serava River*
- 2.4. Development of a Groundwater Study of the Skopje agglomeration*
- 2.5 Identifying possible transmission paths of six-valent chrome in Zeden Mountain underground waters and their impact on Rashce spring*

Output 3: The City of Skopje has established models for enhancing urban resilience and has tested number of those models to provide proof of concept

- 3.1. Upgrading the Skopje Green Cadastre through inventorization of additional trees and shrubs – Phase III*
- 3.2. Construction of Green Roofs*
- 3.3. Greening of slopes of the Skopje Fortress*
- 3.4. Designing and implementing public awareness activities for waste burning and using polluting heating sources*

NARATIVE ELABORATION OF THE PROJECT ACTIVITIES

Output 1. City of Skopje is well prepared to introduce innovative approaches in its everyday work and design and deliver better and more efficient services to its citizens

Under this output the project will support implementation of interlinked activities that will advance the City of Skopje's commitment to become a more user-centred local government by fundamentally changing the ways in which the city administration operates in order to meet citizens' needs. The philosophy and practice of user experience design (or "design thinking"), wherein a tool, service, or other solution (digital or non-digital) is designed around the needs of users, and tested with them to make refinements both before and after the solution is brought into the world has gained traction among the employees seeking to move away from the pitfalls of bureaucratic design. Likewise, in the search to truly understand what users' needs are, the framework of human-centred design has emerged as an effective and empathetic way to conduct user research, identify and frame problems, and prototype solutions.

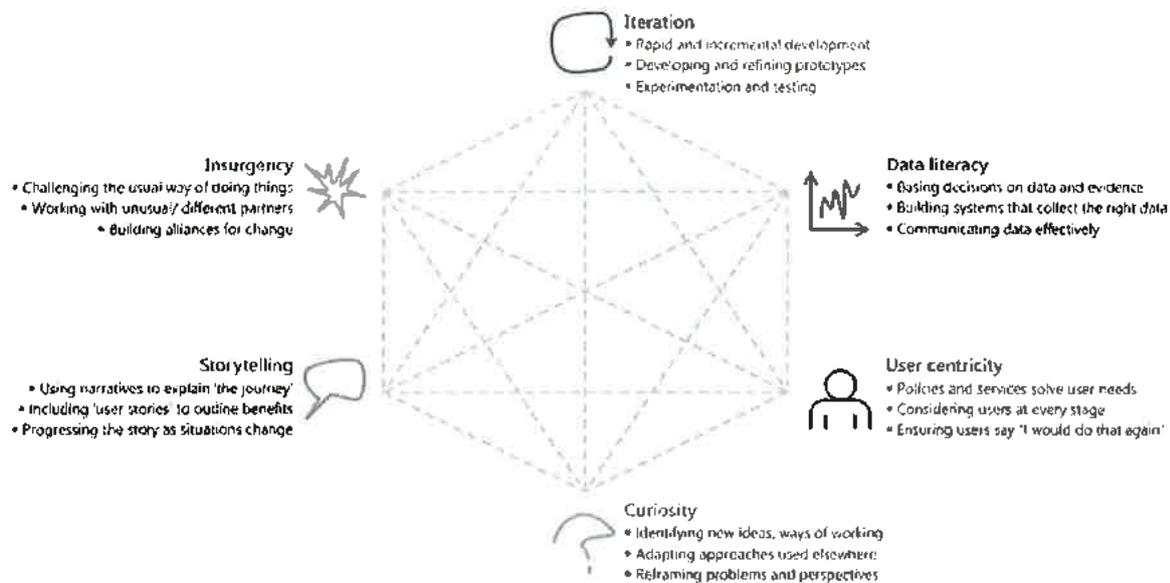
The Skopje Lab which was established with the support of UNDP in 2017, will serve as an important enabler of the processes that will help the City of Skopje to apply new methods, technology and tools that shall foster open innovation to solve challenges, create value for its citizens and business in order to become smart city (with smart citizens).

Building on the lessons learned so far, and following the practices and experiences of many of the city labs worldwide, the activities under this output will be based on the three-tier approach of: supporting city employees to build capacities for innovation; creating an enabling environment for co-design with citizens; and piloting and testing the approach of design thinking to a selected number of services or products.

Activity 1.1 Building capacities of the City of Skopje administration in new approaches and techniques of service design and delivery and collecting citizen feedback

In addition to the continued use of innovation specialists and external experts, the City of Skopje will increasingly need to improve the skills and capabilities of their public administration. Recently, NESTA and OECD developed an innovation skills framework, where they identified six skills areas in which public sector employees need to develop capacity. These are six skills areas that with

proper promotion/advocacy and development can enable a wider adoption of innovation practices. A number of other skills that are already covered in existing public-sector competency frameworks are also relevant for innovation, such as collaboration, strategic thinking, political awareness, coaching. Others are less known, such as story-telling, brokering and entrepreneurship.



April 2017

Core skills for public sector innovation in beta mode!

Source: OECD Core Skills for Public Innovation

Based on this framework, in combination (based on the needs of the employees) with other learning frameworks, the Skopje Lab team will support a core group of up to 20 employees of the City of Skopje public administration, and few interested members of the municipal council to gain advanced knowledge, skills and competencies necessary for innovation. This will be done through crash-courses on different methods, tools or approaches, development of a human-centred design tool-box in Macedonian and Albanian languages and creation of an online repository of English language relevant materials that will be handy to use as needed.

A study tour to one advanced City Lab in Europe with similar scope and mandate will be organized for representatives of the public administration, to support the exchange of experience and learn from best practices, as well as to identify opportunities for collaboration between the City of Skopje and other cities. An effort will be made to operationalize the collaboration by signing of a MoU with another City Lab for mentorship and knowledge exchange.

Activity 1.2 Creating an enabling environment for enhanced cooperation with citizens and businesses for improved public services delivery

This activity will aim at fostering a community-led, collaborative environment by involving a diverse mix of thought leaders, decision makers, technologists, citizens in improving the co-designing environment. All interested citizens will be encouraged to join.

The traditional means of city government's public engagement such as community input meetings and public hearings remain necessary but are not sufficient. To achieve greater public engagement and improve services, the City of Skopje must add new methods, including digital and mobile technologies. Truly improving service provision requires the city to reach beyond the "frequent flyers" who appear at most traditional public meetings and to engage non-traditional and harder-to-reach groups of people.

Learning from the previous year activities, both from the successful and not so much successful initiatives, the project will organize activities that will help in bringing on board different stakeholders. These will include *TEDxSalon-like events* - space for networking and exchange of knowledge and ideas on topics of interest for the city that are not usually discussed at different occasions, such as public sector innovation, new technology for city development, smart cities digitalization, blockchain technologies and artificial intelligence for public services, inclusion of socially vulnerable groups in the public policies design, innovation in education, urban resilience and public spaces, climate change, etc. These events will help to bring all relevant sectors of the city together in one place to discuss ideas, needs, and problems and enable establishment of future partnership between the city and the business and the civil sector and the academia.

Citizen challenges, demo days for the citizens' ideas and thematic workshops with the City of Skopje administration, as well the campaign "Meet the people of Skopje," which was initiated in 2017, will contribute to more effective and meaningful citizen engagement in designing public services, products and projects thus improve the citizens' trust in the city as a public institution.

Activity 1.3 Designing or re-designing two services to increase the satisfaction of citizens that are using that service

Useful, intelligent design can find solutions to very complex problems. This is because design naturally starts with the end user, rather than with the product itself. This means redesigning services to work completely differently, altering the fundamentals of how they work and how they are organized. It requires asking a series of questions to the customers or in design terms, end-users, of the services themselves. Is this service necessary? Is it delivered properly? Can this service be accessed and served by residents themselves?

If the costs of public services are to be reduced dramatically, they need substantial redesign that reshapes services rather than simply revamps them. If the City of Skopje wants to substantially reduce the cost of the City, the administration should get residents to co-design it. In this context, the project will support design or redesign of two services that will be selected jointly with the public administration. These will build on the work and experience gained from the implementation of the initiatives for co-designing solutions for solving air pollution and waste collection challenges done in 2017.

Provided that the user-led design process results in several potential solutions, the project will support the testing of one of the designed solutions. If the testing confirms potential for success, the tested solution will be designed for scale up and suggested to the relevant public enterprise for implementation.

In addition, redesigning over 20 small abandoned spaces into revived historically enrooted and fully functional green spaces will provide the city with designs of each of the spaces that will be agreed by all users and meet their needs and desires.

Output 2: The City of Skopje has completed necessary studies to determine future actions that will advance the local environmental agenda

This output comprises a set of interlinked activities aiming at improving the scientific information and data in the field of environment and biodiversity protection that will enhance the evidence based decision making in the City of Skopje.

2.1 Development of a Biotope Map for the Skopje Region

Biotope is an area of uniform environmental conditions providing a living place for a specific assemblage of plants and animals. It is a geographical region in which the biological environment is uniform, and the flora and fauna distribution is also uniform. The biotopes of ecological importance in urban environments worldwide are under pressure from many negative factors such as urbanization, air pollution and human disturbance. Biotope mapping is an important tool for urban planning and management and of importance for the protection of biotopes for future generations.

The project will support the development of the first biotope map in the Skopje agglomeration in order to determine major biotope sites and their distribution, assess their sensitivity. In addition, recommendations for better management and protection of the key biotopes will be provided.

2.2 Development of an Inventory of Riparian Habitats (water habitats) and an Action plan for the Skopje agglomeration

Riparian habitats are one of the most endangered forms of ecosystem because they are under constant threat due to the expansion of agricultural land and recreational areas and the use of rivers for electricity production. In addition, water bodies near cities and settlements are usually a recipient of untreated waters from sewage networks and/or wastewater from industrial facilities.

Water habitats within the Skopje agglomeration can be found in the River Vardar, its tributaries River Treska and River Lepenec, as well as smaller water streams and artificial lakes.

The biodiversity of the riparian habitats has not yet attracted the attention of the scientific community and therefore there is very little or no information and reliable data about the value of these habitats and measures for their eventual protection and use. Moreover, an inventory of riparian habitats and their valorisation is also needed as an input for development of detailed urban plans.

The project will support the development of an Inventory of Riparian Habitats in Skopje agglomeration, along the river Vardar and the inflow of the rivers Treska and Lepenec into the river Vardar, and an Action Plan for their protection and sustainable use. The work shall include the following tasks: description and characterization of the riparian habitats; rapid assessment of their values, threats and priority habitats for protection; recommendations and proposals for incorporation of the water habitats in the new Spatial (Land Use) Plan for the City of Skopje, as well as in the General Urban Plan and the detailed urban plans of the municipalities of the Skopje agglomeration.

2.3. Development of a basic design for establishment of a green corridor along the Serava River

Green corridors are thin strips of land that provide sufficient habitat to support wildlife, often within an urban environment, thus allowing the movement of wildlife along it. Common green corridors include railway embankments, river banks and roadside grass verges. They have quite diverse characters, the common characteristics being their linearity, for the most part, the lack of development and the waterbodies which exist within them. The Green Corridors are important in a planning context as well as a leisure and wildlife resource. Each of them forms a strategic corridor through the urban area, providing links with the surrounding countryside and providing visual relief from the conurbation's built environment. Recognised today as an important recreation and townscape resource, these corridors have been affected by past patterns of development which frequently turned its back on the open space, or ignored its presence, and they continue to come under development pressure.

In 2016, the City of Skopje financed a study on the establishment of green corridors along the rivers Serava and Lepenec as a component of the concepts for creation of a network of green areas and green infrastructure in the city. The study determined the land area for establishment of green corridor, defined the conditions for realization of the functions of the corridors and provided directions for harmonisation of the General Urban Plan and Detailed Urban Plans that include the Serava and Lepenec Rivers.

Based on the study, the project will support the design of technical documentation for establishment of a green corridor along the Serava River. The technical design will include both sides of the river and focus on ensuring best protection of the natural status of the green corridor. The green corridor should be designed in a way to provide integration of nature and biodiversity protection with spatial planning, ensure interaction of the population and possibilities for recreation (walking, biking, roller-skating).

2.4. Development of a Groundwater Study for the Skopje agglomeration

Groundwater is one of the least studied components of the overall water balance in the country and at the same time, it is an increasingly exploited resource, primarily for satisfying irrigation demands. This also applies to the situation with the groundwaters in the Skopje agglomeration.

Groundwater extraction is generally unregulated and therefore its impact on the ground- and other related resources is unknown. The real potentials and limitations of the resource cannot be estimated because of the lack of reliable monitoring data. A pioneering attempt to 'quantify' the resource was made with the inventarization and establishment of a registry of underground wells on the territory of the City of Skopje in 2017.

The sustainable management of groundwater resources is of critical importance not only for providing irrigation water, but also for the water supply, maintaining environmental flows in the rivers, supporting wetlands and other related ecosystems. Therefore, the project foresees developing a groundwater study with the aim of better understanding the quantity and quality of groundwater resources and their spatio-temporal availability and limitations, and to provide input data for development of a master water balance study which is expected to be funded in the near future. The study, which will capitalize on the key findings of the wells mapping/inventorization exercise, will analyse the availability of groundwater resources for irrigation and other needs, taking into consideration the multitude of other environmental purposes (e.g. water supply, maintaining environmental flows, wetlands and other). Moreover, measures for the protection and sustainable use of groundwater, along with a cost-effective monitoring programme will also be part of the study.

2.5 Identifying possible transmission paths of six-valent chrome in Zeden Mountain underground waters and their impact on Rashce spring

Rashce spring is critical resource for the supply of drinking water for the City and thus it is extremely important to ensure that the quality of the water is up to standard, and that no polluting and/or harmful substances are jeopardizing the spring. Some rapid assessments done in the last years suggested that six-valent chrome from the Jugohrom Ferroalloys DOO plant might get to the spring through the Zeden Mountain underground waters system. Therefore, the project will commission a study which will identify possible transmission paths of the six-valent chrome through the Zeden Mountain, and determine if this harmful substance is jeopardizing the spring.

Output 3: The City of Skopje has established models for enhancing urban resilience and has tested number of those models to provide proof of concept

The activities that are part of this output will directly support the City of Skopje in moving ahead with the implementation of priority measures of the Climate Change Strategy - Resilient Skopje

3.1. Upgrading the Skopje Green Cadastre through inventorization of additional trees and shrubs – Phase III

This activity will directly contribute to the implementation of the new Law on Urban Greenery (parks, park-forests, green squares, green corridors, protective greenery and other types of greenery on open public spaces) which, among others, prescribes an obligation for the local authorities to establish green cadastres. The cadastre should contain information on all trees and shrubs, including their number, type and status. The Law also introduces a standard of 25 m² green area/person as part of the development of the General Urban Plan, and 20% of green areas for the construction plots, as part of the detailed urban plans.

As part of the previous collaboration with the City of Skopje, the first ever Skopje Green Cadastre framework was established for better management of the public greenery. In total 650 ha of urban greenery were geodetically surveyed, covering more than 100,000 trees and 30,000 shrubs. Moreover, technical capacities of the City of Skopje and the Public Enterprise "Parkovi i Zelenilo" were strengthened through designing of a mobile app for tree inventorization and designing GIS platforms for improved management of the public greenery, including mobile solution for citizens' crowdsourcing of data on trees and shrubs.

Building upon the previous two phases of the Green Cadastre, the project will support the inventorization of an additional 80,000 trees, and will pilot the citizens' crowdsourcing of data on trees. In addition, possibilities for establishment of collaboration with other municipalities within the Skopje agglomeration, e.g. the Municipality of Centar, will be explored.

3.2 Construction of a Green Roof

As the built area in the city continues to expand due to population growth and urbanization, the necessity to recover green space is becoming increasingly critical to maintain environmental quality. Installing green roofs is one option that can reduce the negative impact of development while providing numerous environmental, economic, and social benefits. Green roofs can improve storm water management by reducing runoff and improving water quality, mitigate urban heat islands, reduce noise and air pollution, sequester carbon, increase urban biodiversity by providing habitats for wildlife, provide space for urban agriculture, provide a more aesthetically pleasing and healthy environment in which to work and live, and improve return on investment compared to traditional roofs.

Through this activity, the City of Skopje aims to continue piloting models for urban ecology started in the previous period with the construction and installation of pilot green towers in several locations in the centre of the city. The project will pilot construction of a green roof in the central part of the city as well as in other areas identified as heat islands. On "Gradski Trgovski Centar" (GTC) which is located near the main city square, a green roof will be constructed. It will be partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. Moreover, additional locations will be identified for development of green roofs, possibly in areas identified as urban heat islands within the Resilient Skopje Strategy. They should remain green throughout the year and will require minimal maintenance.

3.3. Greening of slopes of the Skopje Fortress

In 2011, there were 12.17 m² per person of green areas in the City of Skopje but unfortunately public green areas are decreasing due to rapid urbanization and conversion of such areas into construction sites. Also, there is 45.60 ha decrease of urban boundaries of the city. In 2015, the City of Skopje financed a study for greening the City and the wider Skopje agglomeration which gave directions and recommendations for improvement of the policies of the City that will provide for greener public areas. This study was coupled with an erosion study which elaborated the erosion hot spots within the city boundaries.

Based on the recommendations of both studies, the project will carry out activities for greening one of the oldest pieces of the city history and famous tourist landmark, Skopje Fortress. Protecting the slopes of the fortress with proper land management and greenery that prevents the erosion and is drought resistant, shall advance the urban protection and increase city's resilience to the extreme weather events, such as heavy rain, flash floods and droughts

3.4. Designing and implementing public awareness activities for waste burning and using polluting heating sources

Air pollution has become the single largest environmental health risk for the citizens of Skopje with conditions worsening tangibly and measurably in over the past five years. A series of studies conducted in the last two years determined that 32 percent of air pollution is coming from household heating; 19 percent to transport emissions; 19 percent to construction; and 18 percent to industry. Importantly, upwards of 90 percent of the harmful particles measured in high concentrations were attributed to burning wood and other biomass fuels.

In 2016 a detailed Air Quality Improvement Plan for Skopje Agglomeration was adopted by an inter-sectoral group led by the Deputy Minister of Environment and Physical Planning. One set of measures and actions to tackle the air pollution is aimed at increasing the public awareness and knowledge and the project will support the designing and implementing public awareness activities targeting unacceptable waste burning practices and use of polluting heating sources.

Over the short term, the project will help develop a series of cost-effective, targeted specific communication activities to raise awareness and catalyse action amongst key stakeholders. Target audiences will include municipal officials, both in leadership positions and in specific municipal services; households; workplaces; and, crucially, all types of schools.

Discussions would be organized with representatives of the target audiences in order to identify the most critical attitude barriers, the level of awareness and motivation and the corresponding desired attitude change. The objective will be to "co-design" with those directly affected by pollution a short list of successful activities that promote and deliver lasting change that develops new habits/behaviours that could be scaled-up country-wide.

Resources Required to Achieve the Expected Results.

Fundamental to the achievement of the project results will be input from the relevant project partners, particularly the City of Skopje administration and the Public Enterprise "Parkovi and Zelenilo", as well as technical consultants where foreseen. From the UNDP office, in addition to the Project management team, and the Operations team will lead implementation processes, supported by the Monitoring, Evaluation and Innovation focal point at the office, and the Deputy Resident Representative leading the Project Board. The associated resources to support this are budgeted accordingly.

Partnerships

The project will further nurture the partnership established in the previous period with the City of Skopje which will remain the main UNDP partner. A systematic approach to communication and awareness-raising will be applied to mobilize additional stakeholders and resources, and to extend partnerships for the implementation of the key project activities.

As part of its attempt to broaden environmental awareness beyond policy circles, UNDP will deepen its ties with civil society organizations and research and academic institutions, and the Skopje Lab will be the key instrument for their engagement.

Close coordination will be established with other international organisations in the country that are funding projects of similar scope and nature. Moreover, synergies will be sought with other ongoing UNDP projects where the City of Skopje is a partner and or a beneficiary, e.g. the EU-funded nature protection project.

Other projects which have been identified as having the greatest synergetic potential are:

ROCK (Regeneration and Optimization of Cultural Heritage) focuses on historic city centres as extraordinary laboratories to demonstrate how Cultural Heritage can be a unique and powerful engine of regeneration, sustainable development and economic growth for the whole city. ROCK aims to develop an innovative, collaborative and systemic approach to promote the effective regeneration and adaptive reuse in historic city centres by implementing a repertoire of successful heritage-led regeneration initiatives related to 7 Role Model selected cities: Athens, Cluj-Napoca, Eindhoven, Liverpool, Lyon, Turin and Vilnius.

EU.CA.NET, European Agencies Network for citizenship, inclusion involvement and empowerment of communities through the urban transformation process. EUCANET sustains active citizenship, enlarging civic involvement and commitment to the decision-making processes. Inspired by the Pact of Amsterdam for EU Urban Agenda, this project explores how the urban political process can contribute to tighten the connection between the local and EU level, reframing the interaction between Urban Authorities, local communities, civil society, business and knowledge institutions.

EPICURO, European Partnership for Innovative Cities within an Urban Resilience Outlook. The main objective of EPICURO is to promote the sharing of good practices in urban prevention and facilitate the access to specific knowledge and expertise on the issue of climate change adaptation. In addition, the project will enhance Civil Protection teams' specialisation and enhance policy and institutional commitment for increasing public support and citizens' capacities for building resilience within their communities.

SINERGI, Social Integration through Urban Growth Strategies. The SINERGI is focused on establishing a network of cooperation between city administration, experts, civic organizations and will work on promoting and exercising EU knowledge and experience in citizen's participation in the field of urban planning and development with promotion of good practices from partner cities Skopje, Turin, Lisbon and Zagreb. The aim of the project is to create a platform for exchange of knowledge that should be brought together in a creative and open debate and communication

between local authorities, Universities and research community, civil organizations and civil activist and citizens. This platform should enable use of novel and digital tools for better analysis and understanding the processes that are shaping our cities but most of all should enable different social and interest groups to take an active participation and exchange of knowledge with experts, researchers and activist in a joint effort to create strategies, projects and communication tools that will reinforce the process of city management. This complex network of different stakeholders will enable decision makers to challenge their perception of the contemporary city and will legitimize policies of urban management with new and integrated urban knowledge.

Risks and Assumptions

The key risks to the project's success and mitigation strategies include:

Risks	Mitigation strategies
The leadership of the City of Skopje fails to commit to a forward-looking and action-oriented innovation framework, and integration of innovation into the City of Skopje development strategies and plans.	UNDP will pursue a constant dialogue and work with the City administration to address institutional bottlenecks and build partners' capacities to ensure that opportunities for innovation are considered during the planning phases and integrated into key strategic documents. Moreover, the Skopje Lab shall be utilized for creation of a supportive culture and an enhanced innovative and learning environment.
Insufficient capacities to plan, design and implement an integrated approach for environment protection that will be results and impact oriented and will ensure sustainability	UNDP will continue supporting and advising the City of Skopje in development of comprehensive environmental policies, strategies and tools based on evidence, research and quality analysis. In the long run, these efforts are expected to lead to development of evidence-based policy-making and more transparent and participatory dialogue about environmental issues
Lack of openness by the public administration to establish timely and genuine dialogue with the other players, particularly private sector and CSOs.	UNDP shall encourage strengthen relationships of the City administration with other non- government entities like the citizens, private and civil sector to tap into their innovative ideas and to benefit from their innovation capacity.

The key assumptions that will underpin the project's success include:

- The City of Skopje demonstrates a strong political will to put environmental protection and innovation at the heart of the City's development agenda and allocates sufficient financial resources to ensure that the Climate Change Strategy – Resilient Skopje and City of Skopje Innovation Framework do not remain mere words on paper but are translated into actions and investments.
- Public in Skopje seeks to expand their knowledge and understanding about sustainable development and innovation, and CSOs and citizens become more active in efforts to decrease their ecological footprint and to actively contribute to co-design of the solutions.

- City of Skopje demonstrates its commitment and devote the human and financial resources to disaster risk reduction and resilience building and undertakes to integrate climate change and risk resilience into policies, plans and programmes and City budget.
- City of Skopje is committed to pursue evidence-based policies combined with innovative, feasible and cost-effective implementation solutions that will make a difference in the people's lives and help deliver needed services to all residents of the City of Skopje.

Stakeholder Engagement

The project team will create mechanisms for effective stakeholder engagement, and will ensure the meaningful participation of targeted groups. Various tools will be used for stakeholder engagement, including design thinking, behavioural science, and foresight. Skopje Lab will be a collaborative space where citizens and local officials will join forces to design, prototype and test concrete actions that will improve the public services, improve the environment and increase resilience.

The table below presents an initial list of key stakeholders. In the inception phase of the project, the list will be further expanded.

Stakeholder	Role
1 City of Skopje	<ul style="list-style-type: none"> • Protection of the environment, nature and space regulation: measures for protection and prevention of water, atmosphere and land pollution, protection of nature, protection against noise and ionizing radiation; • Urban and rural planning: urban planning and issuing of technical documentation for construction and issuing construction permits; regulation and maintenance of construction land; • Local economic development: local economic development planning; determining development and structural priorities; running the local economic policy; support for the development of small and medium-sized enterprises and entrepreneurship at local level and in that context participation in the establishment and development of a local network of institutions and agencies; promotion of partnership; • Municipal utility activities: potable water supply; technological water supply; drainage and purification of wastewaters; public illumination; drainage and treatment of precipitation; collection, transport and treatment of municipal solid and technological waste;
2 JP "Parkovi i Zelenilo"	<ul style="list-style-type: none"> • Maintenance of green areas and parks (51,110,295m² out of which 3,784,295 m² are within the boundaries of the City, and 47,326,000m² are outside the boundaries of the City); • Maintenance of the Green Cadastre.
3 Ministry of Environment and Physical Planning (MoEPP)	<ul style="list-style-type: none"> • Observing the condition of the environment; • Protection of waters, soil, flora, fauna, air and ozone; • Protection from noise, radiation, protection of bio-diversity, geo-diversity, national parks and protected areas; • Restoration of polluted areas of environment; • Proposing measures for solid waste management; • Physical planning; • Physical informative system; • Supervision within its competencies
4 Skopje Lab	<ul style="list-style-type: none"> • Co-designing and co-creating with citizens; • Experimenting and testing prototype services and solutions; • Data and deep understanding of target group needs; • Active inclusion of all interested parties;

5 NGO/CSO

- Partnerships building;
- Scaling the successful prototype solutions into larger projects.
- Awareness raising, communication and education activities;
- Knowledgeable about conservation and environment protection issues
- Partner in co-design of innovative solutions that will increase resilience and improve environment protection.

Compliance and response mechanisms

UNDP shall also ensure that potentially affected people have access to and are aware of mechanisms to submit concerns about the social and environmental impacts of a project. The key instruments which will be used are UNDP's Social and Environmental Compliance Review and Stakeholder Response Mechanism (<http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm.html>).

UNDP's Social and Environmental Standards (SES) underpin its commitment to mainstream social and environmental sustainability in its Programmes and Projects to support sustainable development. The objectives of the Social and Environmental Standards Procedure are to: (a) integrate the SES Overarching Principles (human rights, gender equality and environmental sustainability); (b) identify potential social and environmental risks and their significance; (c) determine the project's risk category (Low, Moderate, High); and (d) determine the level of social and environmental assessment and management required to address potential risks and impacts. The Social and Environmental Compliance Review is mandatory for all UNDP projects worth more than USD 500,000, and therefore the project must undergo this process.

The Stakeholder Response Mechanism (SRM), on the other hand, provides a supplemental, formal avenue for stakeholders to engage with UNDP. The SRM will be available to project-affected stakeholders, government agencies and other partners to jointly resolve concerns and disputes when they believe that the project may have adverse social or environmental impacts; they have raised their concerns with UNDP through standard channels for stakeholder consultation and engagement; and they have not been satisfied with the response. This mechanism can help the concerned parties to start or restart dialogue, facilitate discussions, mediate disputes, enhance understanding of the facts, and undertake other activities that might help resolve concerns and disputes.

Knowledge

Effective knowledge creation and sharing is particularly important given the role that Skopje Lab plays in the project. In the course of the project, the Lab will utilize the best examples from other similar public and policy labs and encourage peer-to-peer sharing of experience. Moreover, efforts will be made to take stock of what is working well and what is not in the interaction with the citizens, in order to register and share promising ideas and practices for immediate incorporate in the project. All lessons learned will be captured, evaluated and shared with other relevant stakeholders, particularly the municipalities that are part of Skopje agglomeration and public enterprises established by the City of Skopje.

The existing web site of the City of Skopje and the Skopje Lab will be used to promote studies that will be produced and data that will be generated during the project implementation. Results from the project will be disseminated both among project stakeholders and more widely through existing information sharing networks in the country and globally.

Sustainability and Scaling Up

Sustainability is a core principle of the project strategy. The project design is addressing the capacity gaps of the public administration of the City of Skopje to design and deliver innovative and more efficient services for its citizens, using the Skopje Lab as a main instrument to achieve

this result. The project will work with a core team of public servants but it will also be open for other interested employees of the local administration to join. These employees shall become innovation champions that are expected to maintain and expand the innovation spirit across all departments of the local government. The learning programs for public sector innovation for the city administration, the online depository of learning materials established in 2017 and development of an award programme for most innovative employees and departments should keep the interest of the public servants to participate in the programme and to should contribute to city innovation culture with an aim to provide better services to all citizens of the country capital. The Lab is located within the premises of the City of Skopje, and upon completion of project it is projected to be completely internalized within the public administration structure, and to be run by public servants of the local government thus sustaining the results. The Lab has also a potential to scale up its services to other municipalities that are part of Skopje agglomeration.

Furthermore, the project is also designed to fill in the scientific data and information gap necessary to make informed decision about possible investment on the field of environment and nature protection, as well as to test models that for enhancement of urban resilience and as such have a great scale-up potential.

All activities that will be implemented are part of the action plan of the Climate Change Strategy - Resilient Skopje which further ensures the ownership of the City of Skopje.

The project is also designed to enable significant stakeholder participation and promote broad awareness about the urban resilience in the medium and long term. This is considered crucial to the social sustainability of all results. The Skopje Lab shall be the key instrument for ensuring partnerships, co-management and active participation.

IV. PROJECT MANAGEMENT

Day-to-day implementation will be carried out by a project team composed of a Project Manager, full time, and a Project Assistant that will be shared with other ongoing UNDP projects. The same project team will manage the ongoing project ICT for Urban Resilience (Resilient Skopje).

The Project Manager's prime responsibility is to ensure that the project produces the results (outputs) specified in the project document, to the required standard of quality and within the specified constraints of time and cost. S/he shall work with national counterparts to build common understanding and coordination on project activities.

The Project Assistant will be responsible for the project administrative support including finance, procurement and general administration. The cost for the Project Assistant shall be shared with other ongoing projects in the energy, environment and disaster management portfolio.

The cost for the salary of the project staff shall be covered by UNDP funding while the funds for the activities shall be covered by the City of Skopje. UNDP and the City of Skopje shall sign a Cost-Sharing Agreement which will determine the flow of the funds.

In addition to the project staff, depending on the nature of the work and complexity a number of technical and administrative roles and services are covered by the UNDP Country Office and will be considered as Direct Project Costs (DPC).

The Programme Officer in charge of the Energy, Environment and Disaster Risk Management Portfolio will provide strategic guidance, policy advice and technical input essential to deliver development results. She will also create synergies with other complementary interventions which contribute to the achievement of the overall project goal. She will oversee the project implementation, monitor and report to the donor, review and approve the TOR (programmatic aspects), serves as a Chair of the Evaluation Committee, and will facilitate decision making to ensure project implementation proceeds in a flexible but efficient manner. She will be the key focal point for coordination between the Project, UNDP, and the national partner authorities and other key Project stakeholders.

The Monitoring, Evaluation and Innovation Associate will facilitate application of innovative tools in the design phases of the Action and will also prepare a Project Monitoring Plan and develop tools for indicators' monitoring. She will also work on development of methodology for impact assessment of the existence of the City of Skopje Innovation Lab and support the development of

the lessons learned at the end of the project. Percentage of the salary of the Monitoring, Evaluation and Innovation Associate shall be DPC.

The Communication Officer will ensure that proper visibility of the project, and will also cultivate good working relationships with participating organizations and entities and ensure a regular exchange of information, including progress reports, among participants.

The UNDP Operations team will provide administrative support in terms of procurement, operations management, human resources, financial management, and other required administrative support. Percentage of the salaries of the operational cost will be DPC.

UNDP's Direct Project Cost costs will be charged in line with its rules and regulations, as outlined in the project document and the respective budget.

The project team (Project Manager, Project Assistant) will be located in the UNDP premises. The City of Skopje will make available the premises of the Skopje Lab for relevant project related activities free of charge.

All purchased equipment and major supplies (assets) necessary for the realization of the project will be transferred to the City of Skopje as the key project beneficiary. Matters relating to the transfer of ownership by UNDP to the national partners will be processed in accordance with the relevant policies and procedures of UNDP

The project might be selected for an audit in accordance with UNDP rules and regulations.

The project will be implemented in the period of 18 months which is considered as optimal for completion of all project activities.

V. RESULTS FRAMEWORK

Intended Outcome as stated in the UNDAF/Country Programme Results and Resource Framework:

By 2020, individuals, the private sector and state institutions base their actions on the principles of sustainable development, and communities are more resilient to disasters and environmental risks

Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets:

Greenhouse gas (GHG) emissions (CO₂ eq kT), Baseline (2012): 12,707.74 Target (2020): 11,309.89

Economic loss from natural hazards and disasters as a share of GDP, Baseline (2013): 0.68% Target (2020): 0.20%

Number of hectares of land that are managed sustainably as protected areas under a conservation, sustainable use or access- and benefits-sharing regime, Baseline (2014): 79,433 Target (2020): 120,000

The activities under this project will also contribute to SDGs 11, 13 and 16

Applicable Output(s) from the UNDP Strategic Plan:

Project title and Atlas Project Number: Resilient Skopje: Scaling-up for Sustainability, Innovation and Climate Change

EXPECTED OUTPUTS	OUTPUT INDICATORS ⁴	DATA SOURCE	BASELINE		Targets			DATA COLLECTION METHODS & RISKS
			Value	Year	2018	2019	FINAL	
Output 1: City of Skopje is well prepared to introduce innovative approaches in its everyday work and design and deliver better and more efficient services to its	Number of employees trained to use human-centered design, tools and methods for public service improvement	Project monitoring reports	5	2017	20 city employees 5 city councils		25	Data collection: Workshops attending list
	Number of services redesigned and improved		1	2017	3		3	
	Number of private sector engagement	Project monitoring	1	2017	3		3	Project team and Skopje Lab will collect the

⁴ It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

EXPECTED OUTPUTS	OUTPUT INDICATORS ⁴	DATA SOURCE	BASELINE		Targets			DATA COLLECTION METHODS & RISKS
			Value	Year	2018	2019	FINAL	
citizens		reports						information and data No risks
	Number of learning products developed	Project monitoring reports	1	2017	4		4	Project team and Skopje Lab will collect the information and data No risks
	Number of people that have engaged through the events organized	Project monitoring reports	500	2017	2000		2000	Project team and Skopje Lab will collect the information and data No risks
	Level of citizens satisfaction with the services received (focused on the redesigned services)	"Oceni me" Citizens satisfaction survey tool	tbd	2018	Increase by 10%		Increase by 10%	Project team and Skopje Lab will collect the information and data; Survey No risks
Output 2: The City of Skopje has completed necessary studies to determine future actions that will advance the local	Biotope Map for the Skopje Region	City of Skopje web site www.skopje.gov.mk	0	2017		1	1	Project team No risks
	Inventory of Riparian Habitats and an Action Plan	City of Skopje web site www.skopje.gov.mk	0	2017		1	1	Project team No risks

EXPECTED OUTPUTS	OUTPUT INDICATORS ⁴	DATA SOURCE	BASELINE		Targets			DATA COLLECTION METHODS & RISKS
			Value	Year	2018	2019	FINAL	
environmental agenda	Basic design for establishment of a green corridor	City of Skopje web site www.skopje.gov.mk	0	2017	1		1	Project team No risks

EXPECTED OUTPUTS	OUTPUT INDICATORS ⁴	DATA SOURCE	BASELINE		Targets			DATA COLLECTION METHODS & RISKS
			Value	Year	2018	2019	FINAL	
	Groundwater Study of the Skopje agglomeration	City of Skopje web site www.skopje.gov.mk	0	2017		1	1	Project team No risks

EXPECTED OUTPUTS	OUTPUT INDICATORS ⁴	DATA SOURCE	BASELINE		Targets			DATA COLLECTION METHODS & RISKS
			Value	Year	2018	2019	FINAL	
	2.5 Identifying possible transmission paths of six-valent chrome in Zeden Mountain underground waters and their impact on Rashce spring	City of Skopje web site www.skopje.gov.mk	0	2018		1	1	Project team No risks
Output 3: The City of Skopje has established models for enhancing urban resilience and has tested number of those models to provide proof of	Upgraded Green Cadastre	www.skopje.gov.mk/zk	20,000 Points	2017	40,000 points	90,000 points	90,000 points	Project staff Data from the green cadastre software Risks: Malfunctions of the green cadastre software department.

EXPECTED OUTPUTS	OUTPUT INDICATORS ⁴	DATA SOURCE	BASELINE		Targets			DATA COLLECTION METHODS & RISKS
			Value	Year	2018	2019	FINAL	
concept	Green Roof	City of Skopje web site www.skopje.gov.mk	0	2017	1 green roof	At least 1 green roof	at least 2 green roofs	Site verification visits; as build designs and supervision engineer reports No risks
	One green slope of the Skopje Fortress	City of Skopje web site www.skopje.gov.mk	0	2017	1		1	Site verification visits; as build designs and supervision engineer reports No risks
	# of public awareness activities	City of Skopje web site www.skopje.gov.mk Media reports	0	2017	3	3	6	Media reports

VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans:

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Quarterly, or in the frequency required for each indicator.	Slower than expected progress will be addressed by project management.		
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. Audits will be conducted in accordance with UNDP's audit policy to manage financial risks.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.		
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	At least annually, and at the end of the project	Relevant lessons are captured by the project team and used to inform management decisions.		
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.		
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	At least annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.		
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual	Annually, and at the end of the project (final report)			

	<p>targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures.</p>				
<p>Project Review (Project Board)</p>	<p>The Project Board will hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure realistic budgeting over the life of the project. In the project's final year, the Project Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.</p>	<p>At least once a year</p>	<p>Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.</p>		

VII. MULTI-YEAR WORK PLAN

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget			RESPONSIBLE PARTY	Funding Source	PLANNED BUDGET	
		USD		Budget Description			Amount (in USD)	
		Total	2018					2019
Output 1: The public administration of the City of Skopje is well prepared to introduce innovative approaches in their every-day work, and to design and deliver better and more efficient services to its citizens	1.1 Building capacities of the City of Skopje administration in new approaches and techniques of service design and delivery and collecting citizens feedback	14,378	14,378	0	City of Skopje	71300 -Local Consultants	8,885	
						71600 - Travel	2,000	
						72100 - Contractual services Companies 74200 - Audio Visual & Print Prod Costs	2,531 962	
	1.2 Creating an enabling environment for enhanced cooperation with citizens and businesses for improved public services	14,000	14,000	0	UNDP	71300 -Local Consultants	6,000	
	1.3 Designing or re-designing two services to increase the satisfaction of citizens that are using that service	16,103	16,103	0		72100 - Contractual services Companies	8,000	
Sub-Total for Output 1		44,481	44,481	0			44,481	
<i>Gender marker: Gen2</i>								

<p>Output 2: The City of Skopje has completed necessary studies to determine future actions that will advance the local environmental agenda</p> <p><i>Gender marker: Gen2</i></p>	2.1 Development of a Biotope Map for the Skopje Region	37,615	19,000	18,615	UNDP	City of Skopje	72100 - Contractual services Companies 74200 - Audio Visual & Print Prod Costs	28,000
	2.2 Development of an Inventory of Riparian Habitats (water habitats) and an Action plan for Skopje agglomeration	18,807	15,617	3,190	UNDP	City of Skopje	72100 - Contractual services Companies 74200 - Audio Visual & Print Prod Costs	14,807 4,000
	2.3. Development of a basic design for establishment of a green corridor along the Serava River	50,146	20,000	30,146	UNDP	City of Skopje	72100 - Contractual services Companies 71300 -Local Consultants	43,000 7,146
	2.4 Development of a Groundwater Study of the Skopje agglomeration	18,807	18,807	0	UNDP	City of Skopje	72100 - Contractual services Companies 74200 - Audio Visual & Print Prod Costs	15,000 3,807
	2.5 Identifying possible transmission path of six valent chrome in Zeden underground waters and Rashce	63,844	20,000	43,844	UNDP	City of Skopje	72100 - Contractual services Companies 71300 -Local Consultants	40,000 13,844
	Sub-Total for Output 2	189,219	93,424	95,795				10000 189,219

<p>Output 3: The City of Skopje has established models for enhancing urban resilience and has tested number of those models to prove concept</p> <p><i>Gender marker: Gen2</i></p>	3.1. Upgrading the Skopje Green Cadaster through inventorization of additional trees and shrubs – Phase III	18,087	18,087	0	UNDP	City of Skopje	72100 - Contractual services Companies 71300 -Local Consultants 74200 - Audio Visual & Print Prod Costs	10,000 5,000 3,087
	3.2. Construction of a Green Roofs	366,147	150,000	216,147	UNDP	City of Skopje	72100 - Contractual services Companies 72400 - Communication services 71300 -Local Consultants 74200 - Audio Visual & Print Prod Costs	327,500 6,647 20,000 12,000
	3.3. Greening of slopes of the Skopje Fortress	5,642	5,642	0	UNDP	City of Skopje	72100 - Contractual services Companies	5,642
	3.4. Designing and implementing public awareness activities for waste burning and using polluting heating sources	11,284	11,284	0	UNDP	City of Skopje	72100 - Contractual services Companies 71300 -Local Consultants 74200 - Audio Visual & Print Prod Costs	5,000 5,000 1,285
	Sub-Total for Output 3	401,161	185,014	216,147				401,161

Project Management Costs	Project Manager	36,000	12,000	24,000			71400 - Contractual services individuals	47,650
	Project assistant (20%)	11,650	2,400	9,250				
	Monitoring and Evaluation and Innovation Associate (10%)	9,000	3,000	6,000			64300 Direct Project Costs – Staff	9,000
	Rental and Maintenance	3,720	1,560	2,160	UNDP	UNDP	73100 – Rental and Maintenance	3,720
	Communication and Audio-Visual Equipment	1,500	500	1,000			72400 – Communication and AV Equipment	1,500
	Direct project Costs – GOE	3,170	2,400	770			74500 Direct project Costs - GOE	3,170
	Subtotal for management costs	65,040	21,860	41,410				65,040
General Management Support 3%								19,635
	TOTAL	719,536	344,779	353,352				719,536

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

The project will be implemented under the Support to National Implementation Modality (NIM) with the City of Skopje as the main partner and beneficiary. The UNDP Country Office will be responsible for developing and managing the project, and ensuring that the project results are delivered as planned and that the project resources are used efficiently and effectively.

A Project Board (PB) will be established as the main body responsible for the overall direction and management of the project. It will consist of high level representatives from the City of Skopje (the Mayor of Skopje), representative from the Public Enterprise "Parkovi I Zelenilo", and the UNDP Country Office (the Deputy Resident Representative). The same Project Board will supervise and guide the ongoing ICT for Urban Resilience project which will ensure complementarity and synergies.

The Project Board is the group responsible for making management decisions by consensus when guidance is required by the Project Manager, including approval of project work plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions are made in accordance with standards that ensure management for development results, best value-for-money, fairness, integrity, transparency and effective competition.

Project reviews by the Project Board are made at designated decision points during the running of the project, or as necessary when raised by the Project Manager or by the Project Assurance. The Project Board shall meet at least once a year but it could meet virtually and more often as needed. Based on the approved multi-year or annual work plan (AWP), the Project Board may review and approve project quarterly plans when required and authorizes any major deviation from these agreed plans. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems between the projects and external bodies.

In the course of project implementation Project Board assumes the following specific duties:

- Overall guidance and direction to the project;
- Review of each stage and approval of progress to the next; and
- Review and approval of work-plans and any exception plan.

At the end of the project, the PB will:

- Assure that all expected outputs have been delivered in a satisfactory manner;
- Approve the Final Project Report; and
- Approve the Lessons Learnt Report.

The representatives of the Beneficiaries in the Project Board represent the interests of those who will ultimately benefit from the project. Their primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries.

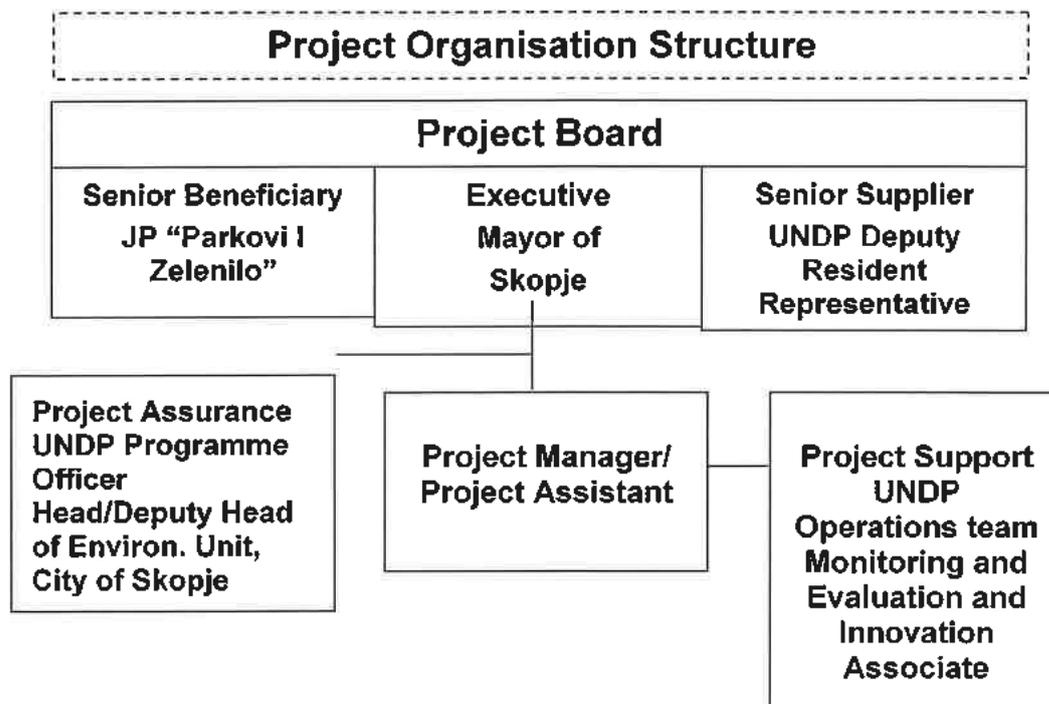
Project Assurance is the responsibility of each Project Board member. However, the role can be delegated. The project assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures that project management milestones are met.

A UNDP Programme Officer holds the Project Assurance role on behalf of UNDP. She/he ensures that funds are made available to the project and are managed efficiently and in line with their

stated purpose; ensures that the project makes progress towards intended outputs; and performs regular monitoring activities, such as periodic monitoring visits and “spot checks.”

The Head of Department for Environment Protection will have the role of Project Assurance on behalf of the City of Skopje.

The role of UNDP Deputy Resident Representative is to ensure that: resources entrusted to UNDP are utilized appropriately; the project makes progress towards intended outputs; and national ownership, ongoing stakeholder engagement and sustainability are addressed appropriately.



IX. LEGAL CONTEXT

This project document shall be the legal instrument as referred in Article 1 of the Standard Basic Assistance Agreement (SBAA) between the Government of FYR Macedonia and the United Nations Development Programme, signed by the parties on 30 October 1995. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by the City of Skopje ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

X. RISK MANAGEMENT

Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).

The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised

through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement.

Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.