



00089307

ICT for Urban Resilience of the City of Skopje

Substantive Project Revision #1

March 2017





SUBSTANTIVE PROJECT REVISION

Project Title: ICT for Urban Resilience

UNDAF Outcome(s): 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

Expected CP Outcome(s): 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

Expected Output(s): Output 4.4: Communities, supported by a strong framework of national policies and infrastructure, are better prepared to prevent and respond to disasters, including the human displacement they can cause

Executing Entity: UNDP

Implementing Agencies: UNDP

Expected Project Output:

- Increased capacities of the city administration for planning and provision of services with use of ICT solutions aimed at increased urban resilience of Skopje

Substantive Revision Justification

The purpose of this revision is to reflect the continuation of the national level activities of the project. Therefore, the project revision envisages removal of Outputs 1, 2, 3 and 4 and formulating of a new Output 1 under the same project outcome. This shall better reflect the impact of the results to be achieved. In addition, the revision extends the project duration until the end of 2017. The funds for implementation of the activities is increased by 217,836 USD to meet the cost of the requirements under the new Output. Accordingly, the Results and Resources Framework (RRF) is updated to reflect the new project reality. Within the framework of that period the activities as per the AWP for 2017 shall be implemented.

Programme Period: 2014-2017 Key Result Area (Strategic Plan): Disaster Risk Reduction Atlas Award ID: 00089307 Start date: 03 December 2014 End Date: 31 December 2017 Management Arrangements: Support to NIM	Total resources required: 522,836 \$ Previous budget: 228,726 Revised budget: 294,110 Parallel financing: 9,196 \$ Unfunded budget: In-kind Contributions: 15,000 \$
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Agreed by (City of Skopje): Mr. Koca Trajanovski, Mayor

Agreed by (UNDP): Mrs. Louisa Vinton, Resident Representative



1. BACKGROUND

The project “Enhancing Capacity, Knowledge and Technology Support to Build Urban Disaster and Climate Resilience in ARM, MKD and MDA (ICT for Urban Resilience)” was implemented regionally by the UNDP Istanbul Regional Hub and three national components in three countries. The main project objective was to build disaster and climate resilience by increasing institutional capacity, mobilizing knowledge and transferring appropriate best-practice innovation technologies. The project was focused on piloting/testing a number of innovative techniques and methodologies. Accordingly, there were three original project outputs of the national component:

- Capacities of the City of Skopje to develop and implement integrated disaster and climate risk reduction plans and programmes strengthened.
- Concept of Smart City solution for the rapid urbanization and climate change challenges developed.
- Improved availability of information and increased public awareness on disaster and climate risk in urban areas by implementation of regional and country level ICT solutions/mobile application.

The regional project was finalized in December 2016, as well as the national project components in Moldova and Armenia. However, the City of Skopje expressed interest to continue the collaboration with UNDP to further advance the city urban resilience agenda, and committed additional funding in their annual budget for 2017.

Therefore, it is necessary to revise the project outputs with removal of existing three and formulation of a new output, as well as update the Results and Resources Framework (RRF) to reflect the new realities of the project implementation. The duration of the project should be extended till the end of 2017.

2. PROGRESS UPDATE

In 2016 the project achieved the following results:

- Draft version of the Integrated Urban Resilience Action Plan of the City of Skopje was developed through participation of representatives of the City of Skopje and municipalities on the territory of the city. It lays ground for strengthening the capacities of the local government to design and implement integrated disaster and climate risk reduction plans and programmes.
- First ever Skopje Green Cadaster framework established for better management with the public greenery enhancing the urban resilience of the city. In total 650 ha of urban greenery were geodetically surveyed, mobile app for trees inventorization developed and foundations of GIS platforms for improved management of the public greenery established, including mobile solution for citizens crowdsourcing of data on trees and shrubs.
- The first ever Climate Change Strategy – Resilient Skopje developed. The strategy includes an Action Plan with defined timeframe for implementation of mitigation and adaptation measures and actions.



- Floods hazards and risks for the City of Skopje identified and modelled for better prevention and response including the preliminary estimation of damages and losses. This type of GIS modelling supports the flood risk assessment process through improved preparation of scenarios and plans for floods on the territory of the City of Skopje. In addition, the activities for establishment of the registry of underground wells on the territory of the City of Skopje were initiated.
- Furthermore, the interconnectivity with the Crisis Management Centre was improved through development of spatial services (wells, water supply systems, reservoirs, water treatment facilities, as well as temporary facilities). This approach shall be replicated with data collection in all other municipalities in the country strengthening the analysis of the exposure and vulnerability of additional critical infrastructure facilities.
- In partnership with USAID, Swedish Embassy, the Ministry of Environment and Physical Planning, MilieuKontakt Macedonia, the Social Innovation Hub and FINKI, the “It Depends on You” challenge was organized for second year in row. The challenge engaged citizens and broader public to propose solutions for climate change adaptation and increasing the urban resilience. The winning solution was ReBoot – smart recycling. In addition, several other ideas were awarded and possible support: Treebook – crowdsourcing of trees and better public greenery management and air purifying billboards.
- Draft version of the National Integrated Risk and Hazard Assessment was updated with the data and information from recent disastrous events, including the Skopje torrential flooding from 06 August 2016. This can support better understanding of the hazards and exposure and vulnerability of critical infrastructure and population on the territory of the City of Skopje and the country.

3. DESCRIPTION OF REVISION

In the view of the above mentioned, the Project has been revised in order to envisage the new activities to be implemented within the new Output framework, to extend the necessary period for implementation, as well as to increase the project budget and adjust the RRF and the AWP to the new project reality.

Reset of the project outputs is recommended with removal of existing project outputs and formulating of a new Output under the same Outcome. This shall better reflect the impact of the results to be achieved. Accordingly, the new Output 1 is formulated as following: *Increased capacities of the city administration for planning and provision of services with use of ICT solutions aimed at increased urban resilience of Skopje*. Consequently, the Results and Resources Framework of the project is updated and it is enclosed as Annex I.1.

Within this project framework following results shall be achieved:

- Integrated Urban Resilience Action Plan for the City of Skopje finalized;
- Climate Change Strategy for the City of Skopje – Resilient Skopje promoted;
- Priority measures and activities for adaptation and mitigation to climate change in accordance with the Action Plan of the Strategy on Climate Change of the City of Skopje implemented;



- Sustainability Module of the Skopje Smart City Strategy and roadmap for its implementation developed;
- Vision and goals of the Skopje Smart City Strategy defined;
- Skopje Green Cadaster upgraded through inventorization of additional trees and shrubs;
- Registry of underground wells on the territory of the GUP of Skopje established;
- Review of existing legislative and institutional framework for preparation of internal and external plans for emergency management of dangerous substances completed and a roadmap for development of the external plan for the City developed;
- Skopje GHG Inventory with data for 2013, 2014 and 2015 updated;
- Heating study for the specific planning needs of the City of Skopje adjusted;
- Erosion study for the City of Skopje including an Action Plan prepared.

In order to implement these modifications, extension of the project time-framework is necessary until 31 December 2017.

The project will continue to be implemented under the Support to NIM Modality implementation arrangements.

Annual Work Plans for each individual year for the period 2015 – 2017 shall be considered as a part of this project document and the Results and Resources Framework. The Annual Work Plans for 2015 and 2016 are part of the Project Document, whether the Annual Work Plan for 2017 is integral part of this revision as Annex I. II.

All other terms and conditions of the Project Document, except as mentioned herein, shall remain unchanged and shall continue in full force and effect.

Intended Outcome as stated in the UNDAF/Country [or Global/Regional] 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: *Economic loss from natural hazards and disaster as share of GDP*

Baseline: *0,68% (2015)*

Target: *0,20% (2020)*

Applicable Output(s) from the UNDP Strategic Plan: *5.2 Effective institutional, legislative and policy frameworks in place to enhance the implementation of disaster and climate risk management measures at national and sub-national levels*

Project title and Atlas Project Number: *ICT for Urban Resilience 00089307*

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)					DATA COLLECTION METHODS & RISKS	
			Value	Year	Q1	Q2	Q3	Q4	Year 2017 FINAL		
Output 1 <i>Increased capacities of the city administration for planning and provision of services with use of ICT solutions aimed at increased urban resilience of Skopje</i>	1.1 <i>First integrated Urban Resilience Action Plan of the City of Skopje finalized as a practical tool for improved resilient planning and programming</i>	<i>City of Skopje document acceptance letter</i>	0	2014	1					1	<i>Reporting/Project records</i> <i>No risks.</i>
	1.2 <i>Number of measures from the Climate Change Strategy - Resilient Skopje prioritized and implemented in 2017</i>	<i>CC Strategy Resilient Skopje Action Plan</i>	0	2014		2		1	3	6	<i>Reporting/Project records/City of Skopje documents/Evaluations</i> <i>Risks: Financial – some contracts may exceed the available budget.</i>
	1.3 <i>City of Skopje budget for urban resilience activities as share of total annual budget</i>	<i>City of Skopje budget</i>	<i>City of Skopje budget</i>								<i>Reporting/City of Skopje budget review</i> <i>No risk.</i>

<p>1.4 Capacities of the employees in the relevant departments increased by better programming and planning of activities for urban resilience</p>	Survey	TBD					TBD		Reporting/Survey No risks.
<p>1.5 Simulation exercise for testing of the Plan successfully implemented and strengthened coordination and communication of key entities and resources</p>	Exercise evaluation form	0	2014	0	1			1	Reporting/Interviews/Project records Risk: Possible delay in executions due to the upcoming local elections.
<p>1.6 Registry of underground wells of legal entities on the territory of the GUP of the City of Skopje established for better management and affordability of water resources</p>	Questionnaire for inventorization on GIS Registry	0 (36 wells inventoried)	2016	0	1 (150 new wells inventoried)			1 (186 wells inventoried)	Survey/Reporting/Project records/Verification of the GIS Registry by the City of Skopje Risk: Accessibility for inventorization of underground wells operated or owned by legal entities.
<p>1.7 Smart City Concept including visions and objectives and the Sustainability chapter from the Strategy developed laying a ground for finalization of the first ever Skopje Smart City strategy</p>	Smart City Concept with Sustainability Chapter document	0	2014	1				1	Reporting/Acceptance by the City of Skopje
<p>1.8 Erosion Study of the City of Skopje with Action Plan developed</p>	Erosion Study	0	2016				1	1	Reporting/Project reports/City of Skopje acceptance

ANNEX 1.2 - ANNUAL WORK PLAN FOR FY 2017 – 00089307 ICT FOR URBAN RESILIENCE

EXPECTED OUTPUT	PLANNED ACTIVITIES	Planned Budget by Year 2017				RESPONSIBLE PARTY	PLANNED BUDGET			
		Q1	Q2	Q3	Q4		Funding Source	Budget Description	Amount	
Output 1: Increased capacities of the city administration for planning and provision of services with use of ICT solutions aimed at increased urban resilience of Skopje Gender marker: 2	1.1 Finalization of the Integrated Urban Resilience Action Plan of the City of Skopje	x				UNDP, City of Skopje, CMC, PRD, municipalities, consultant	04000	71300	4,077	
							30072	72100	47	
	1.2 Implementation of a simulation exercise for testing the plan			x			UNDP, City of Skopje, CMC, PRD, relevant ministries and agencies, local authorities, Red Cross, private sector	30071	71200	1,500
								30071	72100	6,500
	1.3 Finalization of the inventORIZATION of underground wells on the territory of GUP of the City of Skopje and establishment of a Registry		x	x			UNDP, City of Skopje, CMC, MOEPP, relevant ministries and agencies, local authorities, public enterprises, private companies, contractor	30071	72100	12,000
1.4 Preparation of the Sustainability Module of the Skopje Smart City Strategy and roadmap for its implementation		x	x			UNDP, City of Skopje, Microsoft, local authorities, academia	30071	72100	6,500	
		x					04000	71300	3,965	

	1.5 Definition of the vision and goals of the City of Skopje Smart City Strategy					UNDP, City of Skopje, consultant, local authorities, academia			
	1.6 Promotion of the Climate Change Strategy of the City of Skopje – Resilient Skopje	x				UNDP, City of Skopje, consultants, local authorities, academia	30071	71200	1,000
							30071	74200	1,500
	1.7 Identification and implementation of priority measures from the Resilient Skopje strategy		x	x	x	UNDP, City of Skopje, relevant ministries and agencies, local authorities, consultants, academia	30071	71300	8,000
							30071	71600	2,000
							30071	72100	43,992
	1.8 Finalization of the 1 st Phase of the Skopje Green Cadastre with census of at least 40,000 trees and shrubs and GIS platform established	x	x	x	x	UNDP, City of Skopje, local authorities, PE Parkovi Zelenilo, consultants	30071	71600	3,000
							30071	72100	59,172
							30071	72800	4,000
	1.8 Review of existing legislative and institutional framework for internal and external plans for emergency management of dangerous substances and roadmap for development of the external plan for the City of Skopje		x	x	x	UNDP, City of Skopje, CMC, MoEPP, PRD, relevant ministries and agencies, local authorities, consultants, academia	30071	71300	12,000
							30071	71600	3,000
							30071	71200	18,500
							30071	74200	2,000
	1.9 Preparation of the Erosion study for the City of Skopje including Action Plan		x	x	x	UNDP, City of Skopje, CMC, consultants, MoEPP, MFWA, PRD, relevant	30071	71300	8,000
							30071	72100	39,090
							30071	74200	2,500

						ministries and local agencies, authorities, academia			
	1.10 Update of the Skopje GHG Inventory with data for 2013, 2014 and 2015					UNDP, City of Skopje, local authorities, consultants, academia	30071	71300	10,000
							30071	72100	6,000
							30071	72400	1,000
	1.11 Adjustment of the heating study for the specific planning needs of the City of Skopje					UNDP, City of Skopje, local authorities, consultants, academia	30071	71300	3,000
							30071	72100	5,000
	1.12 Project Management Support						30071	64300	1,670
							30071	72400	1,212
							30071	74500	730
							04000	64300	334
						UNDP	04000	71300	2,000
							04000	71400	16,000
							04000	72400	1,200
							04000	73100	1,500
							04000	74500	924
							30071	72400	500
	Sub-Total for Output 1								
Evaluation	EVALUATION								n/a
GMS 3%							3071	75100	4,275
TOTAL									294,110

ANNEX I.1 - RESULTS RESOURCES FRAMEWORK – 00089307 ICT FOR URBAN RESILIENCE

Intended Outcome as stated in the UNDAF/Country [or Global/Regional] 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: Economic loss from natural hazards and disaster as share of GDP

Baseline: 0,68% (2015)

Target: 0.20% (2020)

Applicable Output(s) from the UNDP Strategic Plan: 5.2 Effective institutional, legislative and policy frameworks in place to enhance the implementation of disaster and climate risk management measures at national and sub-national levels

Project title and Atlas Project Number: ICT for Urban Resilience 00089307

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)					DATA COLLECTION METHODS & RISKS	
			Value	Year	Q1	Q2	Q3	Q4	Year 2017 FINAL		
Output 1 Increased capacities of the city administration for planning and provision of services with use of ICT solutions aimed at increased urban resilience of	1.1 First Integrated Urban Resilience Action Plan of the City of Skopje finalized as a practical tool for improved resilient planning and programming	City of Skopje document acceptance letter	0	2014	1					1	Reporting/Project records No risks.
	1.2 Number of measures from the Climate Change Strategy - Resilient Skopje prioritized and implemented in 2017	CC Strategy Resilient Skopje Action Plan City of Skopje budget	0	2014		2	1	3	6		Reporting/Project records/City of Skopje documents/Evaluations Risks: Financial – some contracts may exceed the available budget.

Skopje	1.3 City of Skopje budget for urban resilience activities as share of total annual budget	City of Skopje budget								Reporting/City of Skopje budget review
	1.4 Capacities of the employees in the relevant departments increased by better programming and planning of activities for urban resilience	Survey	TBD					TBD		No risk. Reporting/Survey
	1.5 Simulation exercise for testing of the Plan successfully implemented and strengthened coordination and communication of key entities and resources	Exercise evaluation form	0	2014	1	1			1	Reporting/Interviews/Project records Risk: Possible delay in executions due to the upcoming local elections.
	1.6 Registry of underground wells of legal entities on the territory of the GUP of the City of Skopje established for better management and affordability of water resources	Questionnaire for inventorization on GIS Registry	0 (36 wells inventoried)	2016	1 (150 new wells inventoried)	0	1		1 (186 wells inventoried)	Survey/Reporting/Project records/Verification of the GIS Registry by the City of Skopje Risk: Accessibility for inventorization of underground wells operated or owned by legal entities.
	1.7 Smart City Concept including visions and objectives and the Sustainability chapter from the Strategy developed laying a ground for finalization of the first ever Skopje Smart City strategy	Smart City Concept with Sustainability Chapter document	0	2014	1	1			1	Reporting/Acceptance by the City of Skopje
	1.8 Erosion Study of the City of Skopje with Action Plan developed	Erosion Study	0	2016	1			1	1	Reporting/Project reports/City of Skopje acceptance

ANNEX I.2 - ANNUAL WORK PLAN FOR FY 2017 – 00089307 ICT FOR URBAN RESILIENCE

EXPECTED OUTPUT	PLANNED ACTIVITIES	Planned Budget by Year 2017				RESPONSIBLE PARTY	PLANNED BUDGET		
		Q1	Q2	Q3	Q4		Funding Source	Budget Description	Amount
Output 1: Increased capacities of the city administration for planning and provision of services with use of ICT solutions aimed at increased urban resilience of Skopje Gender marker: 2	1.1 Finalization of the Integrated Urban Resilience Action Plan of the City of Skopje	x				UNDP, City of Skopje, CMC, PRD, municipalities, consultant	04000 30072	71300 72100	4,077 47
	1.2 Implementation of a simulation exercise for testing the plan		x			UNDP, City of Skopje, CMC, PRD, relevant ministries and agencies, local authorities, Red Cross, private sector	30071	71200	1,500
	1.3 Finalization of the inventORIZATION of underground wells on the territory of GUP of the City of Skopje and establishment of a Registry	x				UNDP, City of Skopje, CMC, MoEPP, relevant ministries and agencies, local authorities, public enterprises, private companies, contractor	30071 30071	72100 72100	6,500 12,000

	1.4 Preparation of the Sustainability Module of the Skopje Smart City Strategy and roadmap for its implementation	x	x				UNDP, City of Skopje, Microsoft, local authorities, academia	30071	72100	6,500
	1.5 Definition of the vision and goals of the City of Skopje Smart City Strategy	x					UNDP, City of Skopje, consultant, local authorities, academia	04000	71300	3,965
	1.6 Promotion of the Climate Change Strategy of the City of Skopje – Resilient Skopje	x					UNDP, City of Skopje, consultants, local authorities, academia	30071	71200	1,000
								30071	74200	1,500
	1.7 Identification and implementation of priority measures from the Resilient Skopje strategy		x	x	x		UNDP, City of Skopje, relevant ministries and agencies, local authorities, consultants, academia	30071	71300	8,000
								30071	71600	2,000
								30071	72100	43,992
	1.8 Finalization of the 1 st Phase of the Skopje Green Cadastre with census of at least 40,000 trees and shrubs and GIS platform established	x	x	x	x		UNDP, City of Skopje, local authorities, PE Parkovi I Zelenilo, consultants	30071	71600	3,000
								30071	72100	59,172
								30071	72800	4,000
	1.8 Review of existing legislative and institutional framework for internal and external plans for emergency management of dangerous substances and roadmap for		x	x	x		UNDP, City of Skopje, CMC, MoEPP, PRD, relevant ministries and agencies, local	30071	71300	12,000
								30071	71600	3,000
							30071	71200	18,500	
							30071	74200	2,000	

development of the external plan for the City of Skopje										
1.9 Preparation of the Erosion study for the City of Skopje including Action Plan		x	x	x			30071	71300	8,000	
							30071	72100	39,090	
							30071	74200	2,500	
1.10 Update of the Skopje GHG Inventory with data for 2013, 2014 and 2015		x					30071	71300	10,000	
1.11 Adjustment of the heating study for the specific planning needs of the City of Skopje		x					30071	72100	6,000	
1.12 Project Management Support		x	x	x			30071	71300	3,000	
							30071	72100	5,000	
							30071	64300	1,670	
							30071	72400	1,212	
							30071	74500	730	
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