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Country: Libya

Project Initiation Plan (Revision 1)

Project Title: Improved Water Security in Libya

Expected UNDAF/CP Outcome(s): By 2025, all people in Libya, including the most vulnerable and marginalized, have increased resilience to the impacts of climate change, water scarcity, and environmental degradation.

Expected CPD Output(s): Output 3.2 Capacities to improve water security and water energy nexus are enhanced.

Initiation Plan Start/End Dates: 01/01/2023-30/06/2024

Implementing Partner: UNDP

In response to evolving national priorities, the UNDP-supported project to improve Libya's water security aligned with the UNDP CPD 2023-2025 and UNSDCF Outcome 4, has undergone a significant revision in scope. Initially, the Project Initiation Plan (PIP) focused on supporting the Man-Made River Authority (MMRA) in the assessment and preparation of the tender documents for the assessment and rehabilitation of al-Jdabya reservoir and is now expanding in response to the changing priorities of the MMRA and upon a request from the Ministry of Planning. UNDP is mobilizing technical assistance for the development of a comprehensive national water security strategy, marking a shift towards influencing evidence-based policy making for long-term water security needs. Following MMRA's successful acquisition of funds for the Ajdabiya Reservoir's rehabilitation, the project's focus has pivoted from direct infrastructure support to a broader strategic role. This PIP is now structured around two main outputs as follows:

Output 1: Strengthen national water resource planning and governance by fostering collaboration among stakeholders, enhancing institutional governance, and integrating the water-energy nexus into decision-making processes.

Output 2: Maintain and enhance the national water infrastructure through a comprehensive management strategy that accounts for synergies with the water-energy nexus, prioritizing maintenance and operational efficiency.

These outputs reflect an upscaling of the project’s objectives, aligning them more closely with Libya's national priorities and the emerging context of water management challenges. The PIP budget and duration are also being revised to adequately respond to the new priorities, expanding the project’s impact and relevance in Libya’s journey towards sustainable water security.

Programme Period:	2023-2025
Atlas Project Number:	00147259
Atlas Output ID:	00133966
Gender Marker:	2

Total resources required	USD 2,174,040
Total allocated resources:	USD 2,174,040
• Regular	__________
• Other:	
○ Donor	Italy
○ Donor	__________
○ Government	__________
Unfunded budget:	__________
In-kind Contributions	__________

Approved By:

Dr. Christopher Laker, Resident Representative a.i,

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01-Dec-2023

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1. BACKGROUND: THE CHALLENGE OF WATER SUSTAINABILITY

Libya is grappling with a pressing water crisis, primarily due to its predominantly arid desert landscape. Most of its population resides in coastal regions, where arable land is limited, while central and southern areas face severe aridity and have smaller populations. The country heavily relies on groundwater, resulting in over-extraction, seawater intrusion, and a projected water deficit of 4,200 million cubic meters by 2025. Agriculture consumes a significant 85% of the water supply, putting immense pressure on this precious resource. Additionally, urban and industrial usage further strains water resources. The challenges are compounded by factors such as climate change, political instability, and governance issues, exacerbating the water crisis.

Climate change is having multiple deleterious impacts on Libyan water resources. Lower precipitation rates reduce water recharge while increased temperatures increase water demand, evaporation and salinity. Given the capacity of higher temperatures to hold water vapor, the intensity of precipitation is increasing resulting in flooding and water runoff. These trends will only strengthen with time.

Libya's water management system is currently inadequate to meet the pressing challenges it faces. This shortfall is largely due to a lack of a comprehensive water security strategy at the national level. Recognizing the critical importance of this issue and the time required to develop a sustainable water management approach, the United Nations Development Programme (UNDP), in collaboration with its partners, is gearing up to launch a multi-faceted water security program. This initiative aims to stabilize Libya’s existing water infrastructure in the short term while gradually introducing more rational water usage practices. In parallel, it will focus on investing in alternative water supply sources, including wastewater treatment and desalination, to address the long-term needs of the country.

The Man-made River Authority (MMRA) serves as the backbone of Libya's water supply, being the predominant provider of fresh water in the country. Initially designed with a lifespan that extends only until the 2030s, the MMRA's role has become even more critical due to the scarcity of alternative water sources. Therefore, stabilizing and prolonging the operational life of the MMRA is of paramount importance. This extension will afford Libya the essential time needed to develop and implement a more sustainable and long-term water management strategy, ensuring the continued provision of this vital resource to its population.

2. PURPOSE AND EXPECTED OUTPUT

After successfully securing funding for the rehabilitation of the Ajdabiya Reservoir, the UNDP and the Man-made River Authority (MMRA) have agreed to prioritize several key areas to enhance water management and infrastructure in the country shifting the focus from the originally planned activities in support to al-Jdabya reservoir towards sustaining the integrity of the extensive pipeline network managed by MMRA, which is crucial for the consistent and safe delivery of water across vast distances. Recognizing the potential of modern technology in optimizing water resource management, there will be a concerted push to digitalize the existing water supply management system of MMRA. This digital transformation aims to improve efficiency, and enable more effective monitoring and control of MMRA water resources. Additionally, UNDP will mobilise technical support to the strategic planning and organizational development of MMRA. This will involve capacity building, developing robust management strategies, and ensuring that MMRA is well-equipped to handle the challenges of water management in a region with unique needs and constraints. The overarching goal of these initiatives is to ensure a sustainable, reliable, and efficient water supply system that can meet the current and future demands of the region.

Further, UNDP received a request from the Ministry of Planning (MoP), Government of National Unity, Libya, seeking support in formulating a national strategy for the water and sanitation sector though the Water Security Committee established though the PM Decree. The MoP's letter, dated 18th April 2023, emphasizes the need for a collaborative approach to develop and promote public

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services. Key elements of the request include the engagement of an international consulting firm to assess water reserves and pollution risks, development of policies for water security, and identification of sustainable wastewater treatment technologies. The MoP also invites the UNDP to participate in the committee tasked with this strategy development, highlighting the importance of joint efforts to achieve sustainable development goals in Libya.

This project embodies a comprehensive multi-track water security program, encompassing both strategic and operational tracks, designed to stabilize Libya's existing water system. It falls under the UNDP's Energy and Environment Pillar, and UNDP, in collaboration with its partners, is gearing up for its implementation. This initiative represents a coordinated effort to enhance Libya's water infrastructure and ensure its stability for the future.

The project is now structured around two main outputs:

Output 1- Strengthen national water resource planning and governance by fostering collaboration among stakeholders, enhancing institutional governance, and integrating the water-energy nexus into decision-making processes.
Output 2- Maintain and enhance the national water infrastructure through a comprehensive management strategy that accounts for synergies with the water-energy nexus, prioritizing maintenance and operational efficiency.

The revised objectives of this project imply a significant escalation in its scope, ensuring better alignment with Libya's national priorities and addressing the evolving challenges in water management. In response to these enhanced goals, the Project Initiation Plan (PIP) is undergoing modifications in both its budget and duration to effectively meet these new priorities. These adjustments are crucial for broadening the project's influence and relevance, contributing more substantially to Libya's pursuit of sustainable water security. This expansion not only caters to immediate needs but also lays a foundation for long-term water management solutions, adapting to the dynamic environmental and socio-economic landscape of Libya.

This update includes an extension of the project timeline by an additional six months, now set to conclude on June 30th, 2024. This extension is facilitated by the generous financial support received from Italy, which has significantly increased the project's budget to EUR 2,000,000. This increased budget and extended timeframe will allow for a more thorough and impactful implementation of the project's objectives. The additional funds and time will enable a deeper engagement with the project's goals, potentially allowing for more comprehensive development and execution of water management strategies, further aligning with Libya's needs for sustainable water security and infrastructure development.

Moreover, the extension of the project timeline will provide a valuable opportunity to develop a comprehensive project document that thoroughly addresses the requirements of various national institutions. This extended period will enable a more in-depth analysis and understanding of the specific needs and challenges faced by these institutions, ensuring that the project's objectives and strategies are fully aligned with their goals. Additionally, this additional time will be instrumental in fostering support and collaboration from a wider range of stakeholders, thereby enhancing the project's overall impact and effectiveness. The aim is to create a well-rounded project that not only meets immediate water management needs but also lays a solid foundation for long-term sustainability and resilience in the face of Libya's evolving environmental and socio-economic challenges.

3. MANAGEMENT ARRANGEMENTS

The Project under the Initiation Phase will be managed directly by UNDP as per policy on Initiation Plan modalities through the support of a National Water Specialist and Project Manager (TOR attached) and will be managed as part of the UNDP Libya CO Energy and Environment Pillar.

The management arrangements offer value for money through cooperation and cost-sharing with other UNDP projects for example cost-sharing of staff, overhead, expenses, and implementation of

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activities. This not only decreases project implementation costs, but also amplifies the reach and effects of project activities. The project will be managed effectively and in accordance with UNDP Programme and Operations Policies and Procedures to ensure as far as practicable, progress towards the project outcome. The management will be updated, and all reports produced on time to ensure the smooth flow of communications between project partners.

4. MONITORING, EVALUATION & AUDIT

Monitoring will be done against targets and indicators through field visits and studies, and progress will be reported in the narrative report.

Project will be evaluated and audited in accordance with the UNDP evaluation and audit policies.

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5. Project Work Plan & Budget

Period[1]: 01/01/2023-30/06/2024

EXPECTED OUTPUTS *And baseline, indicators including annual targets*	**PLANNED ACTIVITIES** *List activity results and associated actions*	**TIMEFRAME**						**RESPONSIBLE PARTY**	**PLANNED BUDGET**		
		Q 1	Q 2	Q 3	Q 4	Q 5	Q 6		Funding Source	Budget Description	Amount
Output 1- Strengthen national water resource planning and governance by fostering collaboration among stakeholders, enhancing institutional governance, and integrating the water-energy nexus into decision-making processes. *Baseline: 0 (2022)* *Indicators: development of the national strategy initiated* *Targets: 1* *Related CP outcome:* By 2025, all people in Libya, including the most vulnerable and marginalized, have increased resilience to the impacts of climate change, water scarcity, and environmental degradation	1.1 Development of National Water Security Strategy				x	x	x	UNDP	Italy		$500,000
	1.2. Support to MMRA Strategic Planning.					x	x	UNDP	Italy		$350,000
Output 2- Maintain and enhance the national water infrastructure through a comprehensive management strategy that accounts for synergies with the water-energy nexus, prioritizing maintenance and operational efficiency Baseline: Outdated national water infrastructure, including low operational efficiency, and high energy consumption among water operators. Indicators: The percentage improvement in operational efficiency and reduction in energy consumption among water operators. Targets: Achieve a 10% increase in operational efficiency and a 5% reduction in energy consumption among water operators by 2025. Related CP outcome: By 2025, all people in Libya, including the most vulnerable and marginalized, have increased resilience to the impacts of climate change, water scarcity, and environmental degradation	2.1 Maintenance of Pipe Integrity study				x	x	x	UNDP	Italy		$250,000
	2.2 Study on utilising seismic waves technology in detecting pipe integrity defects.				x	x	x				$82,000
	2.3 Development of Smart Digital Transformation Roadmap for MMRA water supply management system.				X	X	X	UNDP	Italy		$150,000
National Water Specialist											$75,000
Project Manager											$286,000
General Operating and Other Direct Costs											$320,000
Indirect costs (8%):											$161,040
Total											$2,174,040

[1] Maximum 18 months